

**THE IMPACT OF CULTURAL TIME PERCEPTION IN
ECONOMIC BEHAVIOR**

A Reinforcement of Max Weber's Thesis

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Abstract

The individual and collective perception of time, which is culturally transmitted, molds significantly the way individuals and societies behave and perform in economic matters. The overall aim is to explore how time (as a resource and an institution) is thought-out and how it is one of the most preponderant factors to influence, for instance, consumption, preferences, economic growth and development. The investigation aims to further corroborate and strengthen Max Weber's 1904-1905 *The Protestant Ethic and the Spirit of Capitalism*. This is done by showing that the perception of time comes forward as an important cause of the differences between the ascetic Protestant and Catholic mentalities, and consequently their economic behavior and decision-making processes. In other words, it aims to prove that cultural time is a variable (albeit often neglected) that plays a central role in the way the "capitalistic spirit" appeared among certain Protestant doctrines and helped construct the economic paradigms of our times.

Keywords: Time, Max Weber, Economic Sociology, Cultural Economics.

JEL Classification: J22, N33

Resumo

A percepção individual e coletiva de tempo, que é transmitida por via cultural, molda consideravelmente a forma como os indivíduos e as sociedades agem e como é o seu desempenho em termos económicos. O principal objetivo da presente tese é abordar a forma como o tempo (como um recurso e uma instituição) está presente como um dos fatores que mais influência tem sobre o consumo, as preferências, o crescimento económico e o desenvolvimento. Pretende-se, nesse sentido, corroborar e consolidar a obra *A Ética Protestante e o Espírito do Capitalismo* de Max Weber (1904-1905). Tal faz-se ao demonstrar que a percepção de tempo assume um papel central no contraste entre as formas de pensamento e concepções protestantes e católicas, e conseqüentemente o seu comportamento económico e processos de tomada de decisão. Por outras palavras, pretende-se provar que o tempo cultural é uma variável (ainda que frequentemente negligenciada) que assume um papel central na forma como o “espírito capitalista” surgiu em determinadas doutrinas protestantes e ajudou a construir os paradigmas económicos dos nossos tempos.

Palavras-Chave: Tempo, Max Weber, Sociologia Económica, Economia da Cultura.

Classificação do JEL: J22, N33

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List of Abbreviations

CTP	Cultural Time Perception
F	Future (orientation)
GDP	Gross Domestic Product
GLOBE	Global Leadership and Organizational Behaviour Effectiveness Research Program
GNI	Gross National Income
IBM	International Business Machines (Corporation)
IDV	Individualism Versus Collectivism
IND	Indulgence Versus Restraint
LTO	Long Term Orientation
MAS	Masculinity Versus Femininity
PDI	Power Distance Index
PF	Present Fatalistic (orientation)
PH	Present Hedonistic (orientation)
PN	Past Negative (orientation)
PP	Past Positive (orientation)
R&D	Research and Development
SVS	Schwartz Value Survey
UAI	Uncertainty Avoidance Index
WVS	World Values Survey
ZTPI	Zimbardo Time Perspective Inventory

1. Introduction

1.1. Executive Summary

Time is a vast and mysterious concept. There is a wide array of definitions for it between natural and social sciences, social formations and even individuals. It is difficult to reach a consensus on how to define it, how to establish its boundaries and what could be the methods more adequate to study it. Therefore, this investigation starts out by defining in chapter 2 what is to be understood as Cultural Time Perception (CTP) and distinguish it from all the other eventual conceptions of time. We establish a guiding model with three different dimensions to delimitate the concept. Next, we conclude that CTP is an institution and as such has an impact on economic phenomena. In particular, we demonstrate the pathway through which this institutional phenomenon ends up affecting economic behavior. The historical evolution of CTP is then described, from the way time was regarded in Antiquity until the globalization of the Western CTP, profoundly carved by the Judeo-Christian civilization and the First Industrial Revolution.

In chapter 3, a cross-cultural analysis is presented, as part of Hofstede's Cultural Dimensions Theory. It aims to correlate differing cultures' time orientation with economic behavior and performances around the world.

Chapter 4 aims to prove that there is a causal relationship between CTP and economic behavior. In order to do so, it begins by confirming the existence of a cultural causality on which the economic science is supported. That is, culture influences the economy and is a cause of its outcomes. To confirm this causal relationship, we make use of Max Weber's *The Protestant Ethic and the Spirit of Capitalism* (1904-1905). The specific Protestant work ethic created the conditions for capitalism to appear as it did, but we aim to prove that the same goes for the time perception embedded in that ethic. In other words, we demonstrate that a different time perception engraved in the culturally transmitted religious ethos created two different approaches towards work and wealth. Followingly, we present a study derived from the Zimbardo Time Perspective Inventory (ZTPI), which shows through surveys that there are remarkable differences of CTP among different creeds.

Chapter 5 enumerates and goes further into the practicability of these ideas in various areas, including the very economic thought of recent times. For instance, we explore how CTP became at a great extent, and roughly after the Industrial Revolution in the eighteenth century, a consequence of the economic activity (instead of a direct cause). The new hegemony of the clock time, the urge for efficiency, speed and productivity are examples of factors that appeared in the age of industrialization, became standardized and globalized until this day. This led to CTP being shaped by economic activity, and not the otherwise, as had been observed until the industrial era began. This remarkable realization opens many avenues of research.

The investigation finishes with a chapter dedicated to major conclusions. These are mostly taken by inference. We note that CTP as an object of study is in reality vital to understand the base of the scientific paradigm followed by the discipline of Economics, as it is deeply integrated in uncertainty, progress, growth and sustainable development.

1.2. Justification and Contextualization

What is time perception? And why study it in Economics? Time perception can be understood as the cultural way of perceiving time that is inherent to all individuals. It encompasses their ideas of past, present and future. It also includes the concepts of beginning and end, as well as those of efficiency, sustainability and even procrastination. Time perception is also about how these notions end up affecting behavior. The way time is felt and managed will dictate one's actions regarding their work, their psychology of saving or even their political ideologies. Therefore, time is transversal to the individual work and life, as well as to all societies, without the concept of which nothing could be considered.

This investigation aims to offer a new insight into a cultural phenomenon often neglected and/or taken for granted, but at the same time constitutes an economic variable both at a macro and micro level. Time is an object of the process of allocation, in analogy to any other resource, even though this allocation differs between individuals and societies. Time is explicitly limited and the base of any decision-making process. Therefore, this phenomenon is of utter importance in the study of Economics.

For instance, time orientation could explain why in South American countries or North Africa time tends to be perceived as flexible and not so much allocated to the pursuit of linear and well-defined goals (Alon & Bret, 2007, in Craver, 2012; Hofstede & Minkov, 2010; Fulmer et al., 2014), in opposition to the intense economic activity in, let us say, North Europe. In Scandinavia, time perception is extensively influenced by its culturally transmitted protestant work ethic, which by itself entails a certain perception of time that is different from the perception of time of a Mediterranean country, with its highly catholic atmosphere. This could seem enough for the North Europe-Mediterranean contrast if we did not also take into account that societies with a faster pace of life (and planning and forward-thinking mentality) are significantly more likely to display stronger economies (Levine and Norenzayan, 1999; Zimbardo & Boyd, 2008: 140). It could explain East and Southeast Asia's explosive economic growth over the last three decades as a result of Confucian philosophy and its specific concept of time (Hofstede and Minkov, 2010). It could also explain to a great extent how the linear way of perceiving time in Anglo-Saxon-influenced countries paved the way to processes such as Fordism or Taylorism in a first stage, where time efficiency, task-

orientation and the existence of future goals prevailed (Adam, 1990). By analogy, all these factors persuaded the work culture of their tertiary sector nowadays to mimic these virtues. This is possible to see, for instance, in the United States of America, a nation where Calvinism and Puritanism, along with their respective work ethics were highly spread (Weber, 1992: XXI-XXII).¹ This conjuncture was one of the factors that led to the rapid economic growth, development and elevated quality of life in Central and Northern Europe and North America. Finally, time is also a plausible factor to why Japan became so economically developed, as a result of its obsession with punctuality, work ethic and strict way of allocating time, seen almost as a tangible scarce resource (e.g. Just-in-time manufacturing strategy) (Freeman & Louçã, 2001: 287).

The study of time perception is crucial in our epoch, since after the Industrial Revolution, which started out in the eighteenth century, time acquired characteristics similar to those of a commodity. It started being possible to trade it for an income in specific markets or fragmenting it to better serve the industrial and technological needs (Adam, 1995: 120; Giddens, 1981, in Adam, 1995: 90). For instance, the working hours heavily converged, especially in the second half of the nineteenth century (Ammannati, 2012), so the rationalization and allocation of time became omnipresent in the workplace. Therefore, it is preponderant in a vast array of social issues, and connected to a vast array of debates in Labor and Behavioral Economics, as well as Political Economy.

In that multidisciplinary context, CTP has been gaining notability in many sciences, such as psychology, hence the motivation to associate this issue with Economics. According to the International Research Network on Time Perspective, Philip Zimbardo and John Boyd are two authors in psychology who are heavily responsible for time perception to be relied on by the scientific community. A vast array of different approaches formed up around their psychological time theory. They highlight the understanding of CTP as something that is so omnipresent and powerful to the meaning of reality, but still too neglected and scientifically underrated to study human behavior (Zimbardo & Boyd, 1999, in Klicperová-Baker et al., 2015). They created a standardized matrix to measure and scrutinize time perspective, called the

¹ Hall and Hall (1990: 14) state that the monochronic and logical, future-oriented time perception dominates the United States of America, being simultaneously arbitrary and imposed. It was a “learned product” of northern European culture and could be seen as “an artifact” of the Industrial Revolution in England, which was decisive in shaping the way Americans perceive time.

Zimbardo Time Perspective Inventory (ZTPI) (1999) (Zimbardo & Boyd, 2008: 53-61).

The present investigation's contribution to knowledge is also justified by the need to give emphasis to the understanding of culture (in specific) as fundamental to the understanding of Economics. It is imperative to go deep into the roots of economic phenomena in the cultural context where these phenomena take place. This should come simultaneously with the ordinary analysis of their consequences and outcomes, their nature and their predictability. However, cultural studies and Economic are still two fields whose study is systematically conducted in an independent manner (Throsby, 2001). In other words, Economics is still not methodologically associated with a strong "cultural context", often not willing to get a clear insight into the nature of the causes that truly drive and explain the economy both at a micro and macro level (Throsby, 2001: 7-8).

In the current economic theory, preferences are considered as being exogenous and stable. The aim of this research is to explore on what cultural and social grounds preferences are shaped. In that sense, we are supported by the idea that humans are culturally-oriented beings and that the culture inherent to a society is embedded in all social spheres and individual experiences. (Terblanche-Greeff et al., 2018). Although it should always be reminded that cultural factors are strongly of quantitative nature, they can and should be held into account whilst modeling in Economics, instead of neglected for being considered too volatile (Inglehart and Welzel, 2010). The context, or paradigm, of contemporary economics and the conventional economic theory are still too largely dependent upon theoretical abstraction, as well as the placement of economic theory as an almost exclusive function of mathematical and statistical tools (Sedláček, 2011). Economists and economics as a science have slowly understood how cultural factors have been uncared for across the times. In fact, they started to pay closer attention to it since the beginning of the twentieth century, which coincided with the formal appearance of Institutional Economics. Moreover, the strong connection between Economics and culture has long been a basilar goal for institutionalists (Hodgson, 2004).

In addition to this, a growing realization of the cultural impact on economic performance is noticeable over the last quarter of a century, hence many ideas imported from sociology, history, anthropology and psychology have gained importance in the

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way economics is studied (Hodgson, 2004).

All this comprises the academic context on which this investigation is conducted.

1.3. Literature Review

It is part of the human nature to search for the definition, meaning and nature of time, which is why it has always been a matter of reflection for both philosophers and scientists. In this investigation, there will not be a philosophical or physical debate on the core or definition of time. Instead, this research only explores time as a social-binding factor and its subsequent characteristics and effects in human action. This view of time is by far not well represented in the literature of the discipline of Economics, as its consideration in the construction of many economic models, hence the innovativeness of this research.

Sir John Richard Hicks's book entitled *Causality in Economics* (1979) proved remarkable to show the relationship between economics and causality and was very enriching because it aims to go to the roots of the economic science and the meaning of its deepest functioning in the light of time (mostly the philosophical notion of it). This book also takes the same stand as we do in this research regarding the approach to explain economic phenomena: it is only possible by discovering and dissecting its cause. Hicks further states that one of the problems involving economic methodology is that this discipline tries to imitate that of a natural science, which studies phenomena *out* of time and context in the search for immutable and universal laws, whilst economic facts happen and *should* be analyzed *in* time, that is, in a specific context, with a specific environment presenting certain unique properties. It is under this ideological axiom that this research is conducted.

The interest then turned to exploring the social implications of differences in time perception, fulfilled by the text *Cross-Cultural Perspectives on Time* (2014), by Ashley Fulmer (National University of Singapore) and Brandon Crosby and Michele Gelfand (University of Maryland). This paper is somewhat groundbreaking because it is one of the very few investigations that explores institutionalized time in the economic activity and how it explains economic diversity around the world in terms of growth and development. It explores both the individual and collective action as a cause of CTP. Its stance is probably the most consistent with that of the present thesis.

The detailed analysis of Max Weber's *The Protestant Ethic and the Spirit of Capitalism* plays a central role in this investigation. Max Weber's thesis is, for all the

appraisal and criticism imbued to it since its very publication, considered one of the most influential and debated books in sociology and political economy. It is essential to the understanding of the nature of capitalism roughly since the end of the Middle Ages until the beginning of the twentieth century. It is a historical and sociological tool that confirms how culture is intertwined with economic theory. That is the reason why revisiting this text is relevant oeuvre. In fact, this research fills a gap in the literature, which is to seek the presence and effects of CTP in *The Protestant Ethic*.

Pierre Jaccard offers a powerful insight on what regards the history of work and its social implications, especially with the book *Histoire Sociale du Travail de l'Antiquité à Nos Jours (1960)*. He explores the characteristics of the work ethic after the Reformation, namely through the efforts of Martin Luther and John Calvin. This author agrees with Weber on the fact that moral ideas can have a tremendous impact on economic development, but he disagrees when Weber states that it was Calvinism to have created the spirit for the modern profit-making capitalism. He further states, as some other authors like Joseph Schumpeter do and consider to be one of the main flaws in Weber's thesis, that capitalism actually flourished in North Italy and France several centuries before the Reformation. He also states that the capitalistic spirit as described by Weber has always been verified in all cultures and the Reformation did nothing but to condemn it (and not propel it). In the field of Economic History, Davis S. Landes (1983) explores the conviction that there is a solid relationship between the protestant ethic and the differences in time perception, as well as how the western time perception was greatly influenced by the rigorous and religious time allocation of monasteries in the Middle Ages, especially the Benedictine ones. He also points out the importance of the maritime empires as the conduit to the spread and globalization of the European time perspective.

It would be extremely imprudent to explore culturally transmitted time without intensively considering the way it is regarded by sociology. In this field, Norbert Elias and Barbara Adam stand out. In *Time: An Essay (1992)*, Elias covers the way time is perceived by different sciences throughout History. He further explores on which aspects it is a socially transmitted code, whose signs are interpreted and mold human behavior. Humans are regarded as social beings who have the need to orient themselves, coordinate their actions and belong to a group with homogenous procedures. Adam (1990; 1995; 1998) focuses on the importance time has in social organization, dynamics

and mutation, as well as its implication in economics and environmental issues.

Some literature involving quantitative data has been appearing since the 1980's, complementing the publication of several cultural datasets. All of these intend to bring general cultural trends, behaviors and mindsets of different societies to a quantitative basis. These are "the World Values Survey (WVS) (Inglehart, 1997), the Hofstede dataset (Hofstede, 1980, 2001); the Schwartz Value Survey (SVS) (Schwartz 1994, 2006), and the Global Leadership and Organizational Behavior Effectiveness Research Program (GLOBE) dataset (House et al. 2014)." (Kapás, 2017: 266). Some of these include in its dimensions the perception of time, such as the Hofstede dataset (to be studied in chapter 3.1). In 1999, the Zimbardo Time Perspective Inventory (ZTPI) appeared, becoming one of the most recognized standardized measures of time perspective. It was created by Philip Zimbardo and John Boyd, two authors in psychology. The ZTPI will be further explored in our investigation to corroborate Max Weber's thesis (chapter 4.4).

The state of the art on the issue of time perception uncovers the fact that the individual and collective perception of time is still often overlooked by many sciences or not included in scientific investigations when it should; and when studied, it is still done superficially by behavioral sciences (Fulmer et al., 2014). Moreover, there is no consensus in the study of time, as both natural and social sciences tend to study it disjointedly. In other words, natural sciences focus on the physical aspects of time and the definition of its characteristics and nature, whilst social sciences explore its implication in human behavior and culture. There is also not a rigorous definition for cultural time perception (CTP) itself, a gap which this research tries to fulfill.

1.4. Methodology and Data

As we are dealing with a social science, the research methods were strategically selected to align with the research questions. Overall, the type of research that was conducted could be considered traditional, as no statistical or econometric analyses are created from scratch. Instead, we were deeply supported by biographical research. The decision not to work directly with statistical data is supported by the fact that we aim to bring to light a cultural phenomenon. As it is a social, institutional and psychological variable that is in itself a cause of many other phenomena, we decided to search for methods of research more linked to qualitative aspects. The data we used was, therefore, primarily found in historical texts or in the interpretations of pre-existing statistical studies. We aimed to define, discuss, prove and search for the potentialities of a factor that has not sprouted yet, or can still be found in a very seminal stage of research, hence the strong reliance on qualitative data.

It was necessary to cover a vast literature, which includes mostly books since the beginning of the twentieth century, as well as academic papers, studies and other publications, roughly since the 1990's. Besides, this investigation follows the scientific method to translate CTP into a model with various dimensions to better apply it to human behavior. As a result, a model to apply CTP to socioeconomic observations is constructed. The same happened in the literature, for three models considered in this investigation: the dualistic vision by Edward T. Hall (1990) that distinguishes monochronic from polychronic people, the 6 cultural dimensions model by Hostede and Minkov (2010) and the Zimbardo Time Perspective Inventory (ZTPI) (1999).

Two types of research methods were conducted in this analysis, both of which were required to create and follow a strong logic: the empirical and the interpretative group of methods. The first focuses on answering clear research questions and getting solid answers to those questions by deduction (Is there a correlation between CTP and economic behavior? Does CTP vary across different religions?). On the other side, the interpretative research method, strongly used in this investigation, is a strategy linked to inductive reasoning, a subjective but logical observation of reality. Its function is to explore historical facts and synthesize cultural and societal characteristics in order to look for a meaning in human action. Especially in the social sciences, this method is valuable because the observation of ethical values, transmitted through a cultural

causality, are often too far-reaching or comprehensive for statistical/mathematical analyses alone to describe with validity. The importance of the demarcation and mixed use of both these ways of conducting research is to prove the correlation (empirically) and causality (interpretatively) between an institution and human behavior, thus overcoming the eminence of a logical fallacy.

On the side of the empirical group of methods, we can place two survey studies: the Hofstede's Cultural Dimensions Model (1990) and the Zimbardo Time Perspective Inventory (ZTPI) (1999). The data collected is secondary data. Both are quantitative methods, but they are accompanied by a strong qualitative interpretation, as well as they raise questions beyond the results of the research.

The Hofstede dataset is one of the most valuable tools so far to explore time perception between countries. It was developed by the psychologist Geert Hofstede to explore scientifically cultural differences and the way they influence the work performed in enterprises, as well as it is one of the most valuable and more extensive empirical studies ever developed on what regards cultural differences. It aims to explain the effects caused by culture and socially transmitted values (which were, until then, considered unquantifiable). The theory was originated in the 1970's, when Hofstede had access to a survey database with more than 100.000 questionnaires about the cultural values of people in over 50 countries who were employed by the multinational IBM (Hofstede, 2011). Geert Hofstede's culture dimensions model is a system that describes and measures six types/dimensions of values differences/perspectives between national cultures: Power Distance Index (PDI), Individualism Versus Collectivism (IDV), Masculinity Versus Femininity (MAS), Uncertainty Avoidance Index (UAI), Long-Term Orientation Versus Short-Term Normative Orientation (LTO) and Indulgence Versus Restraint (IND) (Hofstede Insights, 2019). The focus of this investigation will be on the Long-Term Orientation (LTO) dimension, which deals with a society's time perspective, and how it displays a solid relationship with economic indicators.

Zimbardo and Boyd created a model in the field of psychology to turn time perception into a system. The result was the Zimbardo Time Perspective Inventory (ZTPI), which comprised five factors of how the past, the present and the future relate with one's perception of reality. These were, originally, the past-negative (PN), past-positive (PP), present-fatalistic (PF), present-hedonistic (PH) and the future orientation

(F). Future orientation in specific is a recognized tool to analyse and measure the differences in CTP at the individual-level, despite the difficulty to use it in a formal model in, for instance, Behavioural Economics (Altman, 2006: 319). Still, the authors aimed to create another dimension related with the future perspective applied to the macro-level, that is, the social system. To do so, they start out by drawing a distinction between the mundane future and the transcendental future, although both are one of the key motivational factors for the course of behaviour. The first is the limited time one has available from the present until the point of envisioned death. The latter, which is rarely studied or considered in psychology, is about the transcendental-future, that is, the way and intensity an individual envisions life after death (or otherwise if they do not believe in such). It also includes the existence or not of a divine judgment, which dictates the moral, the ethic and the actions of today. As a result, in 2008 a new dimension that encompassed this future was proposed and it is this dimension we will be focusing on. The aim is to explore the way a belief in the future after death influences current behaviour.

On the side of the interpretative group of methods, we present at first a historical analysis, which constitutes a summarized evolution of CTP over time. This is a method that is mostly descriptive. It is a meaning-making strategy because it aims to observe social phenomena in different temporal, social and spatial contexts, so that the influence of social norms and cultural practices can be demarked for further analysis. We look for the *how* of the differences but also the *why*, and that is why this method was important. The emphasis given to historical research is related to the fact that CTP is evolutionary and differing time perceptions could be found through History, since the way periods of time, uncertainty, future possibilities, speed or order of things are understood dissimilarly between historical epochs. We will be focusing on the evolution of cultural time perception since its roots in Western societies until the ongoing process of globalization, passing through the Late Modern Period and the Industrial Revolution. The aim is not to explore time perception throughout History in an exhaustive way, but rather to cover some of the evolutionary aspects of it. That is the reason why this method was chosen: by proving that there is a historical evolution and change of CTP, we corroborate that time is indeed an institution because it is mutable system whose influence keeps on being verified. This descriptive analysis is not exhaustive, which may pose a weakness, but rather serves as a substantial sample to prove our view point.

The second interpretative method is a comprehensive method that involves inductive reasoning, and is a close inspection of Max Weber's *The Protestant Ethic and the Spirit of Capitalism*. This method was chosen because *The Protestant Ethic* is one of the most important works in Economic Sociology and its intercultural comparative stance goes in accordance with our research questions. It is imperative to understand *why* there are differences in time perception across cultures, countries and individuals. It is the central work of analysis and it also provides us an ideological setting, an example of which is the existence of a causal pathway between macro phenomenon and individual behavior. The data collected was mostly present in Weber's writings and in other authors' interpretations. The intention was to explore how influential is the belief of predestination (as a time-allocative necessity) and the *Beruf* (as a driver for action in the present and way of conceptualizing the future) in ascetic Protestants. To this, we add the comparison between Protestants and Catholics. The aim is to explore religion as one of the constituent parts of culture through which the perception of time is transmitted to end up creating a specific economic ethos. The intention is to go beyond the existence of a correlation and look for causality in Weber's historical and socio-economic interpretation, especially between different creeds in Western European countries.

This research on Weber's thesis is built upon a logical method used in sociology named methodological individualism, which studies the causal relationships between the macro and the micro level of society. The micro level includes individual behavior, social interactions, whilst the macro social reality includes economic systems and paradigms, ideologies, states, communities, organizations or other groups. The schematization of such method is made through the so-called Coleman's diagram or Coleman's "boat" (Coleman, 1986), as follows:

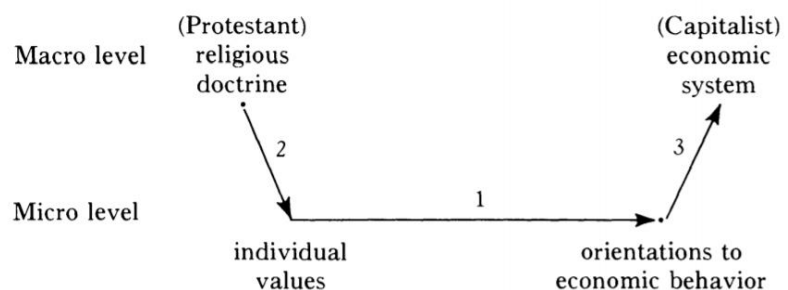


FIG. 2.—Macro-micro-macro relations: methodological individualism

Figure 1: Coleman's "Boat". Macro-micro-macro relations: methodological individualism applied to The Protestant Ethic (Coleman, 1986).

This methodology was used for two main reasons. First, it is a strategy to synthesize macro-micro relationships, and stress the importance of them not being separated, which goes in accordance with Weber's train of thought. It is of use to this investigation because it and allows us to shelter from the criticism imbued to Weber's macro-micro extrapolations. Secondly, it provides us a logical framework through which we assure how valid is the causality we are putting to test, that is, how CTP is transmitted throughout the causal pathways 2-1-3 along with the protestant ethic.

Our train of thought will, therefore, be the following: It is assumed that time perception is entwined with the religious practices and heritage. Then how present is CTP in the ethic (in this case, the Protestant one), which is transmitted onto individuals via culture? (2) In what objective ways did it create a specific individual economic behavior? (1) And how did it eventually contribute to the origination of a "spirit" of capitalism? (3).

2. Cultural Time Perception

2.1. Definition

There is no consensus on the definition of social time, either between social sciences or individuals (Hornero, 2003). This investigation will focus on the concept of time that is part of the ethic transmitted from one generation to the next. Cultural Time Perception is thus to be understood as the approach individuals and societies make towards the idea of fluidity of events as a psychological, socially transmitted idea. We focus on the way people are receptors of a prearranged cultural code and how consequently perceive the chronological order of things. This includes the concepts of beginning and end, the concepts of past, present and future and the way a given period of time is measured and should be used by individuals.

In a broader context, one could ask, for instance: why are there societies or certain social groups that tend to show high levels of productivity in the present whilst others would procrastinate under the same circumstances? Or why are there societies where worktime is perceived as a sacrifice, while in others as a liberation? Why do cultures differ significantly when it comes to the belief and the emphasis given to the belief of control of one's lifetime? (Fulmer, 2014: 11). Although these seem too comprehensive questions, the answer for them resides in the fact that societies allocate time in a specific way, as well as they order their priorities, needs, tastes, goals and daily activities in function of the idea of time they inherited via culture.

A guiding model to define Cultural Time Perception (CTP) comes as follows. It establishes the criteria to evaluate how a society reacts when confronted with the future (a), when searching for a meaning of the action in the present (b), and the degree by which the past is more or less held onto (c).

- a) The dimension Control of the Future and Events (Intrinsic vs. Extrinsic) explores whether the control and order of events can and/or are to be controlled and fabricated by humans (intrinsic), or if it is otherwise controlled by an external force, such as a God (extrinsic).
- b) The dimension Perception of the End is related with how one feels personally involved and responsible when the end comes, taking into account that the end is

unavoidable. The “end” here is to be defined as both the end of processes and the end of life. How one acts in the present by thinking of the inherent end. In life: how one perceives their relationship with the duties the end demands and until which degree the after-end is existent or not, defined and clarified. In processes: how one perceives their relationship with the duties the end demands and until which degree the end itself has a solid, unquestionable meaning. Speed, efficiency, productivity and short-term action tend to belong to this variable.

- c) The dimension Perception of the Past intends to explore until which degree one holds onto the past, tradition, dogmas, security, repetition and normality in opposition to change, individualism, secularity and cultural introspection.

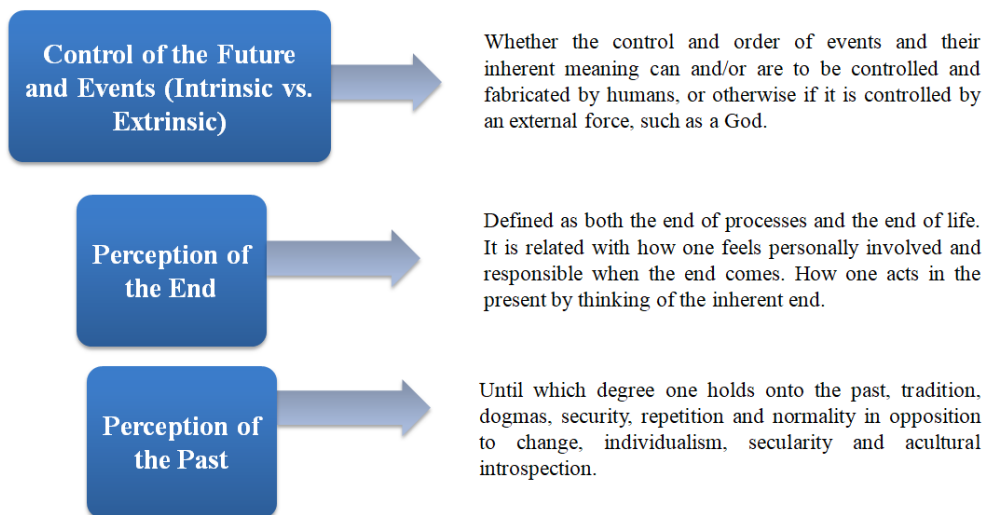


Figure 2: The Cultural Time Perception (CTP) Model

The combination of these offers a strong support in explaining the actions in the present and how to predict them until a certain extent in the future. As such, in order to evaluate and assess the causal influence of cultural time in economic behavior we can construct the following scheme.

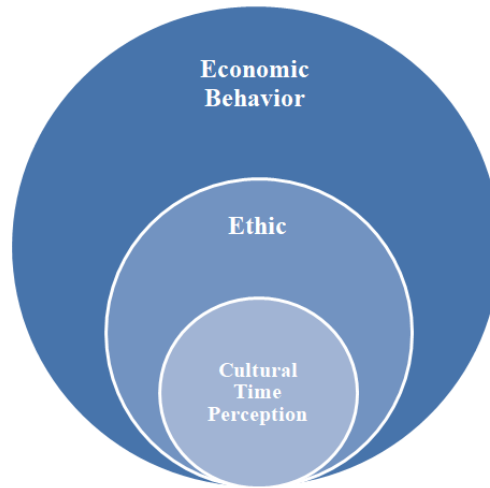


Figure 3: The process through which Cultural Time Perception influences economic behavior.

Cultural Time Perception is part of the ethic. Both CTP and the ethic will influence individuals' economic behavior and their decision-making processes. This is because by being the receptor of a specific cultural ethos, an individual's time and its usage becomes a principled issue. In broader terms, culture brings a perception of time imbued to it, which will, through a causal process, affect economic action.

Therefore, it is important to conclude that culturally transmitted time is an institution. An institution is a "a partial order for community life which serves specific purposes and which has the capacity to undergo further evolution independently. It offers a firm basis for shaping social actions over long periods of time; as for example property, slavery, serfhood, marriage, guardianship, market system, coinage system, freedom of trade." (Schmoller, 1900: 61 in Furubotn and Richter, 2000: 6). Similarly, North (1990: 3-5) defines it as the "rules of the game in a society or, more formally, constraints conceived by man and which shape human interaction". It is worth noticing that in all these definitions there is a persistent idea that institutions are built upon the accepted existence of causality. That is, institutions are human constructs that are caused by past events which coagulate and sculpt human behavior. It is the case of Cultural Time Perception. It is a collective abstract standard construction that was turned into a canon and shared by a group of people belonging to the same community. This community, in turn, ends up being influenced by it.

However, time perception is an institution with a very peculiar property: its

universality. This is so because time is an integral aspect of humankind, and not a mere “partial order for community life” as well as it is a much wider concept than the examples of institutions enumerated above by Schmoller (1900). Time can be considered, along with space, (Elias, 1992: 98-100), the “institution of the institutions”. It is the foundation of the meaning of reality, upon which the notion of everything is built. This includes the economic reality, as the bounded allocation of everything versus the unbounded possibilities. For example, the human lifetime affects individuals' present courses of action and consequently their preferences. Likewise, resources availability in time affect society's decisions on their management and use.

In fact, time is one of the first things that the human perception as a *tabula rasa* at birth needs to clarify, equate and adopt to understand the surrounding environment (Elias, 1992: 98; 122). Time is, consequently, an institution whose origin is a “spontaneous” one, as Furubotn and Richter (2000: 6) put it, as it is born out of the propensity of every individual to understand their reality, and not appearing as a consequence of a deliberate legal design.

Cultural Time Perception is, therefore, an institutional phenomenon that is born out of the need to understand time itself, as a physical phenomenon. In *Time: An Essay* (1992), Norbert Elias tries to cover a general idea of the way time is perceived by different kinds of sciences throughout History, as well as he explores on which aspects it is a socially transmitted code, whose signs are interpreted and mold human behavior. Adam (1990; 1995; 1998) focuses on the importance time has in social organization, dynamics and mutation, as well as its implication in Economics and environmental issues. Both these views are important to the conclusion that time is institutional, being it something that orients humans, helping them coordinate their actions and belong to a group with standardized procedures that are transmitted onto the following generations.

Anne-Marie Dingemans (2011) asserts that “the perception of time is heavily influenced by culture since time is an idea, not an object, and therefore subjective and open to interpretation”. Time is, thus, a social construct that allows the same members of a group or community to synchronize their activities and each individual's observation of reality. In fact, cultural time is so important for social organization that, according to Matthew MacLahlan (2016), “values such as progress, success and achievement that are held in high regard are based on adherence to time-keeping”. The

sociologist Edward T. Hall defined the cultural concepts of time and space as dimensions that are part of human non-verbal communication (Hall, 1959), whose intercultural differences result in different outcomes in all spheres of life. Hall asserts that “Time is embedded so firmly in our life that people treat it as one of the most fundamental dimensions of life, similar to our attitudes about interpersonal space. (Hall, 1959; Francis-Smythe & Robertson, 1999)” (Plocher et al., 2002: 23).

One key aspect of time is related to people's behavior in terms of time usage. In that sense, Hall asserts that there are two distinct types of culture on what regards the perception of time: the monochronic (M-time culture) and the polychronic (P-time culture). Monochronic time is in a broad sense defined as “paying attention to and doing only one thing at time”, while polychronic time “means being involved with many things at once” (Hall and Hall, 1990: 13).

For monochronic cultures, time is seen in a linear way, with a well-defined sequence of past, present and future. It can be said that for these cultures time is more “present” in the conscience, so time is more prone to mold their actions: their routines are more inflexible, their personal and professional relationships are more defined and strategic. The attitude toward work is, therefore, very peculiar: the schedule, duties and agenda are a priority. Also, the urge to “get the job done”, to make a decision or to find a solution to a problem is much more present. People belonging to this kind of time culture perceive time as “being almost tangible”, like an economic asset or an irrefutable capital, hence their propensity to higher productivity (Levine & Norenzayan, 1999, in Fulmer et al., 2014). The countries in the West whose societies are more associated with monochronic cultures are the United States, Canada, United Kingdom, Switzerland, Germany and all those in Scandinavia. (Kaufman et al., 1991, in Fulmer et al., 2014; Lewis, 2013).

On the other hand, societies identified with polychronic systems tend to have a more flexible perception of time. Edward T. Hall affirms that “Polychronic time is characterized by the simultaneous occurrence of many things and by great involvement with people.” As a result, people's attitude toward work is more relaxed, as important or even less important than their personal life. Time is less tangible, therefore perceived and used flexibly. Mediterranean, Latin American, Far Eastern and a great portion of African societies are examples of societies whose propensity to be polychronic is very

high (Hall & Hall, 1990: 14).

2.2. Historical Evolution of Cultural Time Perception

Throughout History, institutional time has assumed different forms, varying according to which different societies, cultures and epochs would host it. According to Neil J. Smelser and Richard Swedberg (2005: 114), the perception civilizations have of time changes across History and ends up molding the behavior and action of individuals. For many centuries, time was highly associated with nature, deities and the empirical observation of reality to account for the order of events. For centuries, this was done through primitive methods, such as the observation of the sun, the development of astronomy, the passage of the seasons and associated crops behavior, the heartbeat, the pulse, the day-night sequence, the rhythms of social organization or the birth-death dynamic (Elias, 1992). That is not to mention all the technological evolution in the making of time-measuring devices, which aimed to standardize time itself, such as the case of the sundial as far back as in Mesopotamia, the development of the clepsydra (water clock) in Ancient Athens and the recent quartz-clock. (Elias, 1992: 103; Freeman & Louçã, 2001: 171; Landes, 1983).

Meanwhile, it was with the formal appearance and spread of the Judeo-Christian civilization that the notion of an ungoverned and circular time was gradually replaced by the idea of a unidirectional linear time – displaying a clear division between past, present and future –, which is the notion of time implemented and preserved until today (Louçã, 1997). The cultural time perception in the West was molded by the early Jewish understanding of it (which was adopted, amplified and geographically dispersed by Christians).

The entire history of Judaism is the history of waiting for the Messiah, who is to come in historical time, or rather at its end (Sedláček, 2011: 43).

The Jewish understanding of time is linear — it has a beginning and an end. The Jews believe in historical progress, and that progress is in this world. This progress is to be climaxed by the arrival of the Messiah (...) Hebrew religiosity is therefore strongly connected with this world, not with any abstract world, and those who take pleasure in worldly possessions are not a priori doing anything wrong (Sedláček, 2011: 47).

This corroborates the idea that time perception is intrinsic to the Weberian thesis, that is, CTP changes among different creeds, as well as it is part of the religious heritage that will, in turn, influence economic behavior².

Despite this eminent influence, a radical shift in CTP occurred only in the mid-eighteenth century with the First Industrial Revolution. In pre-modern times (before industrial era), time was felt and experienced as a nonlinear flow. This was a result of the feudal social organization and nature phenomena as dictators of the order of events. In addition to this, the agricultural sector of that epoch was the most preponderant activity in absolute production and overall labor force, and was profoundly dependent upon natural and physical constraints (Rioux, 1972). As a result, time was felt as something synchronical, that is, oriented to a specific point in time. People would “live in the present moment” It was oriented towards the tasks instead of the allocation of time that was needed to perform these tasks. In opposition, in the late modern period, a new phenomenon appeared: time perception as an institution became the consequence of economic processes and paradigms. Time started being regarded in a diachronical way, as a well-defined line extending from the past and towards a future, thus solidifying the concept of a linear, continuous time (Smelser & Swedberg, 2005: 114) that had started in the times of the early Judaism.

As a result, it was only in the uproar of the Industrial Revolution that Western societies started to conceive economic development as processual. Keynes presents a corroborating word on this issue, stating that material progress and growth were indeed residual and did not constitute a goal in itself up until the seventeenth century (Sedláček, 2011). With the Industrial Revolution, emphasis was put on speed, productivity and machine time; non-allocation of time was synonym of losing money, or denying an opportunity to increase one's wealth. From here a new concept of constant, unquestionable need for growth was born, or started seeing its maximum expression (Mokyr, 2017).

This change in CTP also changed the very concept of uncertainty. In pre-modern times, there was not a generalized need to plan ahead and it was not so necessary to make predictions. As a result, and although more dependent upon natural phenomena, uncertainty – as nowadays is economically understood – was in pre-modern times

² To be further explored in chapter 4.

residual. Planning ahead and having a clear understanding of an uncertain future only appeared as a consequence of the new economic and industrial needs. (Smelser & Swedberg, 2005: 114). Therefore, it can be said that the economic processes started being governed by the idea of a from-then-on eminent “economic uncertainty”, consequently constructing a new economic paradigm. Smelser & Swedberg (2005) state that the very assimilation of the concept of uncertainty created the need for individuals to imagine and conceptualize the future. It also created in their understanding an extended time horizon, a synonym to future orientation. In fact, the future-oriented vision was barely existent for the societies before the Industrial Revolution (Kluckhohn & Strodtbeck, 1961, in Adam, 1995: 36). This led to the generalized subconscious idea that individuals *do have* a personal choice and a vast array of options from which to choose on how to allocate the time they own because uncertainty became an eminent hazard.

According to Elias (1992), institutional time increases its power as a cause, its preponderance on humans, the more “complex and differentiated” – that is, industrial – societies become, which is what started happening exponentially from the eighteenth century on. Mathematical clock-time took care of people’s work, lives and routines. (Mumford, 1934 in Adam, 1995: 119). Physical clocks and calendars took over the organization of life, becoming a synthetic framework of norms and ways of perceiving economic processes (Landes, 1983). Although some cultures, like the Maya or the ancient Chinese had already come up with the usage of their own expression of calendars and clocks, respectively, only in the eighteenth century did time become well-established. These entailed the idea of homogeneity and irreversibility (Adam, 1995: 27). “From the late eighteenth century onwards, time has been divided into equal sections of one-hour differences (...)” (Adam, 1995: 24).

As many people’s workplace became the factory, the need to rationalize the act of working appeared (Adam, 1995: 24-29). Speed, maximum productivity and efficiency became the processes’ ethos. In that sense, people started being stimulated by the need to do as much as possible in a demarcated period of time. The present and the end of processes became the boundaries inside which time had to be allocated.

The concept of “machine-time” traces back to this epoch. With the Industrial Revolution, speed became the motto for (any of) economic processes, being faster

processes or processes whose time could be estimated preferred over slow or undetermined processes (Adam, 1995: 100). Speed was indispensable because time is calculated "in relation to money, efficiency, competition and profit" (Adam, 1995: 101).

This way to perceive time became standardized, tends to homogeneity and was massively globalized. This globalization was attained through stronger relations in world trade or the development in communication and transports, imperialism and capital accumulation, cultural exports and imports, internationalization of technology and R&D (Adam, 1995: 107-124). The division of time into equal sections became a priority in the second half of the nineteenth century. One of the major steps in that direction was the International Meridian Conference in October 1884, when time zones were established, dividing the world into 24 parts (meridians), with the prime meridian set at Greenwich (Landes, 1983). As of 1913, time was uniformed into a world time (Adam, 1995: 111-116; 123). All the conditions were then set for time to be assimilated the same way by all cultures.

Even though clock-time nowadays dominates CTP all across the globe, this influence does not exclude the existence of other culturally transmitted cultural times (Adam, 1995: 29). In fact, it is possible that a certain economic inequality between societies increases as, for example, some of the developing countries cannot keep up with the obsession for speed that is transmitted by the developed ones. Hence there is a space for a certain ongoing difference in CTP, or the coexistence of a clock-time and a cultural-time, which are inter-twinned, but still differ. For instance, in less industrialized countries, the short-term orientation prevails, even though the process of globalization and the massification of international trade led to the an increasingly homogeneous tendency towards long-term orientation. (Alon & Brett, 2007, in Fulmer et al., 2014: 7).

It is undeniable that the market economy and the functioning of capitalism as with the characteristics observable nowadays all around the globe are deeply rooted in the specific Western CTP. (Adam, 1995: 85-89).

3. Cross-Cultural Analysis

3.1. The Hofstede Model

In our analysis we will focus on the Long-Term Orientation Versus Short-Term Normative Orientation (LTO) dimension of the Hofstede's Cultural Dimensions Theory. The LTO dimension is related with the subjective perspective that a specific individual or group allocates to temporality (Zimbardo & Boyd, 1999, in Terblanche-Greeff et al., 2018). This dimension is included in the model because it is inseparable from culture (Fulmer et al., 2014; Offe, 2001 in Terblanche-Greeff et al., 2018). It is noticeable since its debut in the late 1980's how it was strongly correlated with economic growth (Hofstede, 2011). This constituted a remarkable step towards the recognition of the relationship between the cultural dimension of time and economic performance.

It is important to enumerate the characteristics of each of these orientations, as follows:

Short-Term Orientation	Long-Term Orientation
Most important events in life occurred in the past or take place now	Most important events in life will occur in the future
Personal steadiness and stability: a good person is always the same	A good person adapts to the circumstances
There are universal guidelines about what is good and evil	What is good and evil depends upon the circumstances
Traditions are sacrosanct	Traditions are adaptable to changed circumstances
Family life guided by imperatives	Family life guided by shared tasks
Supposed to be proud of one's country	Trying to learn from other countries
Service to others is an important goal	Thrift and perseverance are important goals
Social spending and consumption	Large savings quote, funds available for investment
Students attribute success and failure to luck	Students attribute success to effort and failure to lack of effort
Slow or no economic growth of poor countries	Fast economic growth of countries up till a level of prosperity

Table 1: Characteristics that define both Short-Term and Long-Term Orientation Cultures (Hofstede, 2011).

It is possible to notice how intertwined are the concepts of Long-Term Orientation with Monochronic Orientation (in Edward T. Hall's dualism of time-orientation). This linkage is supported by Graham (1981), who asserts that the acts of

planning and the emphasis given to organization are extremely sensitive to the subjective perception of time. He observes that monochronic people tend to plan in advance and so their time management is future-oriented (Graham, 1981, in Kaufman-Scarborough & Lindquist, 1999).

The Long-Term Orientation dimension was proven to strongly correlate “with business values, with environmental values and, under favorable historical conditions³, with economic growth” (Hofstede and Minkov, 2010: 493). It is therefore proven that there is a linkage between temporal orientations and the economic progress of different countries and societies. The clear definition of the characteristics of both long-term and short-term-oriented countries has created the conditions to empirically observe that the first will be supported by the values of “thrift and perseverance”, whilst the second will be more prone to seek “social convention and stability”.

There is a strong linkage between the prevalence of long-term orientation and the rapid economic growth in Asia in the period between 1965 and 1984. Hofstede and Minkov “projected that the long-term orientation of East European cultures would propel their countries to recover quickly from the economic crisis [late-2000's recession].” It is also added that in contrast, the short-term temporal orientation of the “African and Latin American cultures, due to their emphasis on tradition and security, may slow the economic growth of these countries” (Hofstede and Minkov, 2010, in Fulmer et al., 2014: 21).

In the late 1980's, this dimension also made it possible to predict China's economic success in the subsequent decades, making this dimension's scores capable of predicting economically potential and notable economic developments (including growth) in a wide variety of cultures. According to this study, the correlation between this dimension and the gross national income per capita (GNI per capita) was 0,64⁴. Moreover, this correlation affected both the group of the wealthiest countries and the poorest analyzed. As a result, the authors concluded that this dimension could be a

³ “Favorable historical conditions” can be interpreted as the assumption that the major economic conditions and indicators in the past are going to be proven confirmed in the future or, in other words, that there is not going to be a major happening that could disrupt the normal functioning of the economy, such as a natural disaster or a war.

⁴ Significance level of (0,01).

conduit to predict economic growth tendencies (in the period between 1985 and 1995), displaying a correlation coefficient of 0,70, once again for both the group of the wealthiest and the group of the poorest. (Hofstede 2001: 367, in Hofstede and Minkov, 2010).

To be noticed that these correlations are a mere corroborative guide to our investigation, since they constitute raw comparisons between two variables only, neglecting others equally valid, such as educational level.

A long-term oriented society is much more concentrated in well-defined prosperity goals, has a clear and linear definition of progress, development and economic growth, as well as it tends to create a wide array of conditions for capitalism to flourish. It tends to verify higher growth rates, a work culture much more influenced by goals-achievement. Constantly-increasing prosperity is a motto. For these societies, planning and prediction is indispensable as the future is seen as being able to control and many times something that *has to be* controlled, otherwise the economic development and growth is subconsciously seen as getting compromised. Overcoming uncertainty is given utter importance.

On the other hand, short-term oriented societies are more relaxed regarding the idea of the potentiality of time being “turned into money”, detaching a lot more from the idea that the future can be controlled and is highly dependent upon one's will and action. These societies are generally more moved by tradition, so there is an emphasis in individual and social well-being as a cause of repetition and a rejection for uncertainty, which is itself also not believed to be controllable. Also, they tend to perceive work less as a way to a specific cultural goal, that is, the work culture is less focused in specific tasks. It is more polyvalent and there is a reduced focus on overall productivity and the allocation of time as a resource. Events are not so believed to be controllable by human action.

The LTO dimension presents data on a scale from 0 to 100. A country that scores low is linked to a shorter-term orientation and the opposite for countries with a more long-term orientation. Nowadays, with the aid of the WVS dataset, it is possible to have scores for 93 countries, a sample of which comes as follows:

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Rank	Country/region	Score	Rank	Country/region	Score
1	South Korea	100	47	Turkey	46
2	Taiwan	93	49	Brazil	44
3	Japan	88	50	Malaysia	41
4	China	87	53	Poland	38
5	Ukraine	86	54	Israel	38
6	Germany	83	55	Canada	36
7	Estonia	82	56	Saudi Arabia	36
8	Belgium	82	61	New Zealand	33
9	Lithuania	82	62	Thailand	32
10	Russia	81	68	Philippines	27
16	Singapore	72	71	USA	26
22	Netherlands	67	73	Iraq	25
23	Kyrgyzstan	66	77	Australia	21
26	Indonesia	62	78	Argentina	20
31	Hong Kong	61	82	Jordan	16
32	Azerbaijan	61	83	Venezuela	16
36	Vietnam	57	84	Zimbabwe	15
37	Sweden	53	85	Morocco	14
40	Great Britain	51	86	Iran	14
41	India	51	89	Nigeria	13
42	Pakistan	50	91	Egypt	07
45	Bangladesh	47	93	Puerto Rico	00

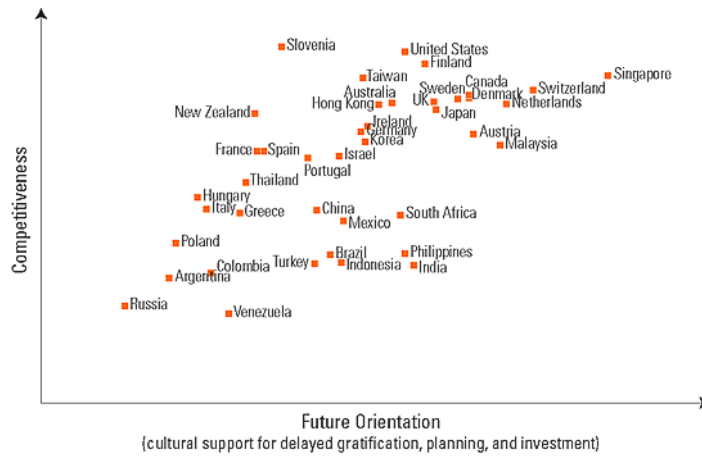
Table 2: Rank and Score for 44 of the 93 countries that are present in the LTO dimension, based on the World Values Survey (Hofstede and Minkov, 2010).

To be noticed that Asian countries with strong economies (especially countries with extremely high growth rates since the middle of the twentieth century) occupy the top of the list: South Korea, Taiwan, Japan and Mainland China. Also, in the upper-part of the list are Germany and Belgium, as well as four former Soviet republics: Ukraine, Estonia, Lithuania and Russia, accompanying the tendency of many countries in Eastern Europe to verify a special proclivity to long-term orientation. On the other hand, North African and Latin American countries are placed on the short-term oriented side of the scale, to whom economic development is expected to be a slower process (Hofstede and Minkov, 2010). CTP is an institutional subject with direct ramifications in economic practice and behavior, as well of the qualities and intensity of this behavior. Individuals and societies that are psychologically more prone to have a short-term orientation verify poorer economic performances and slower political development (Klicperová-Baker et al., 2015).

Running alongside these observations, the article *Forward-Thinking Cultures* by Mansour Javidan, present in *Harvard Business Review* (2007), points out that the way a culture perceives the future is correlated with the GDP per capita, levels of innovativeness, happiness, confidence and competitiveness. The following chart named *Competitive Countries Have an Eye on the Future* compares the levels of competitiveness and future orientation based on data from the World Economic Forum and surveys conducted by the authors. To notice that, despite the weakness posed by the fact that some levels of future orientation are associated with a wide variety of levels of

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competitiveness, a positive correlation can be observed.



Source for competitive rankings: the World Economic Forum, 1998–2005.

Figure 4: Correlation between Future Orientation and Competitiveness (Source: Harvard Business Review 2017).

4. Cultural Time Perception and Max Weber's *The Protestant Ethic and the Spirit of Capitalism* (1904-1905)

4.1. Cultural Causality

Culture can be defined as the common ground of habits, ideology, mentality, education, symbols, rituals, beliefs and ways of living. These are all decisive for creating individuals' ideas of reality, society, life, themselves and survival. Consequently, it will shape their actions and everything that defines them. For that reason, each individual is at some extent the result of a cultural causality (Elias, 1992).

It should be taken into account, however, that this does not imply at all that human beings are not intellectually autonomous while perceiving their reality. In fact, individuals are influenced by the social reality they are more exposed to at different levels. This is a consequence of their predisposition to attach themselves more or less to a specific set of existing institutions. Moreover, the existence of a cultural causality and that of an independent intentionality are not mutually exclusive because individuals are not mimetic reflections of what has socially already been. They are rather past-influenced, dynamic agents. In Institutional Economics, this fact is emphasized when humans are defined as "creatures of habit and propensity" by Thorstein Veblen (1998), inheriting civilizatory traits that were already there and systematized. A society as a whole is therefore wider than the sum of the individual parts, being itself a dynamic result of a preexisting and organized structure.

It is thus possible to draw the conclusion that economic behavior has a cultural origin. Culture molds individuals' relationship with wealth, investment, preferences, saving, routine, their coordination of actions or even their work, even though that relationship may sometimes be unknown to the individual as a cultural host (Adam, 1995: 27). In addition to the causal relationship between culture and economic agents, Throsby (2001: 9) states that "(...) this [cultural] environment has some influence on shaping their preferences and regulating their behavior, whether this behavior is observed at the level of the individual consumer or firm or at the aggregated level of the macroeconomy".

Cultural time perception, as part of a cultural code, will then also play a part in shaping economic behavior. In that sense, studies by Webley and Nyhus (2006) show

that one's time orientation passes down through generations, even though the mechanisms through which this happens are still debatable. They show that parental time orientations are preponderant for both children's economic behavior and their economic behavior as adults, because the ideas of future orientation and those of saving are clearly transmitted factors (Altman, 2006: 318-319). Also, Maital and Maital (1977) claim that the difference in the way individuals perceive time (in the specific context of time preferences) is a decisive aspect when it comes to the distribution of income and the passage of economic inequality from one generation to another (Altman, 2006: 318).

4.2. The Time Perception Model Applied to *The Protestant Ethic*

Max Weber is fueled by the idea of social causality, which means that the cause and effect between actions must be interpreted and dissected, as well as the scientific methods to do so should not be those used by natural sciences (1992: IX). In his magnum opus, *The Protestant Ethic and the Spirit of Capitalism*, he intends to create a socio-economic theory to explain the differences in economic development across western European countries, namely between their Catholic and ascetic Protestant populations. The author points out what it is in the nature of the Protestant mentality and work ethic that paved the way for the appearance of capitalism heavily since the Reformation and made it become the way it is nowadays (Young, 2009). In other words, how and why the ascetic Protestant ethic influenced the spirit of capitalism.

Accordingly, the author drew attention to a strong linkage between the religious ethos and the economic behavior. He enumerated, explained and proved some of the causes for the manifestation of capitalism, which are in its majority culturally transmitted ethical habits or ideals among Protestants. Two of the most relevant are the *Beruf* (one's God-given vocational duty, such as a profession) and the belief in predestination (among some branches of Protestantism, especially Calvinism). These entail certain conceptions regarding the way God's intervention is perceived, if the accumulation of wealth is less or more praiseworthy, if profiting is less or more dishonorable and the emphasis put on the need to save for the future.

Even so, it is important to have in account, as Weber himself expressed, that the

Protestant ethic is not enough to explain the totality of the origin of capitalism. Other factors were involved. Some examples across the times are the increasing volume of trade (through, for instance, the development of transports and establishment of maritime empires), the easier information transfer, the increasing rate of research and development and a considerable increase of the secularization of the economic activity. The much stricter and intensive education among Protestants can also be included. (Young, 2009).

This research is relevant to fulfill the gap in socioeconomic literature regarding time perception as a “cause of the causes” for the differences between Protestants and Catholics because Weber did not mention it directly in his works. Still, it is often implicit and not so subtly. For instance, he emphasizes the general processes of rationalization, the puritan attitude towards work, the influence monasticism has had in time obsessive usage and control, as well as the perspective of time being a resource to be used and allocated in a rational and frugal way (Adam, 1995: 88). Zerubavel (1981) joined together the recognition of a CTP and the religion-driven differences in economic behavior in Weber. The author defends that it was the very Benedictine monastic way of life in medieval times (up until the fourteenth century) that was seminal to a more economic-driven, utilitarian, rationalized and efficiency-oriented time perception. This perception became entrenched especially in the Protestant mentality, which a few centuries later would be responsible for a specific way of work organization in the West (in Adam, 1995: 89).

We will now apply the previously constructed CTP model to *The Protestant Ethic*.

4.2.1 Control of the Future and Events (Intrinsic vs. Extrinsic)

For Protestants, the control of the future and events is perceived to be highly intrinsic. The idea that people are in control of their lives and their own destiny is a generalized idea among Protestants. (Grondona, 2003 in Ramocka, 2010). In that sense, Weber defends that the Protestant work ethic is characterized by “a rationally calculable action”, in opposition to inactivity. The action is always accompanied by the

expectation that there is a predictable and controllable regularity". The predictability and calculability of events in all spheres of life play a central role in the Protestant mentality, which, for instance, explains the highly praised virtue of punctuality and productivity *per se* (Adam, 1995: 88).

It is to relate to the future instrumentally and to hold an implicit belief that the future is not merely calculable but controllable (Adam, 1995: 88).

People do not fundamentally see themselves in the hands of fate and at the mercy of external forces outside their control (Adam, 1995: 88).

The focus on the future in North American cultures may be due to the people's belief that their future can be controlled (Guo et al., 2012, in Fulmer et al., 2014: 11).

As a result of such ethos, Protestants are more prone to be given a stricter and more complete education, which results in a noticeable individualism and rationalism. They show greater interest than Catholics in specific economic activities, especially "industrial and commercial occupations" (Weber, 1992: 6). As a result, they are better paid and show higher proclivity to own property and explore it rationally over time (Offenbacher, 1900, in Adair-Toteff, 2016: 185-186).

Weber asserted that as a result of the Protestant Reformation, the highest moral action was performing one's vocational duty afforded by God, the *Beruf*. This *Beruf*, also translatable as "vocation" or "calling" is related with one's individual profession, art or occupation. (Jaccard, 1960: 167-168). It was God's willing that individuals pursued in their lifetime "a life-task, a definite field in which to work" so that they could undertake a position in the world that would be acceptable in the eyes of God. (Weber, 1992: 39-40). This *Beruf* is closely associated with the individualistic values shared by the Protestants. It can also be perceived as an inclination to consider that the control of the future and events (via work life and one's professional skills) is dependent on one's action and motivation in the present. The allocation of time is therefore made in function of one's vocation, and stands in opposition to inactivity or unproductivity, which should be condemned (Jaccard, 1960: 166).

Not leisure and enjoyment, but only activity serves to increase the glory of God, according to the definite manifestations of His will. Waste of time is thus the first and in principle the deadliest of sins. The span of human life is infinitely short and precious to

make sure of one's own election (Weber, 1992: 104).

The sociologist Mariano Grondona observed the differences between pro- and an anti-development ethics, especially the higher economic development of directly Pharisee-influenced societies and Protestant ones. Regarding the latter, he puts emphasis on those societies influenced by the Calvinist branch. He concluded that, for Protestants, achieving personal success and wealth is given distinct priority. This wealth is regarded to be "in the future", so it is a constant opportunity that one can attain by individual effort in the present. Also, the well-being and success of future generations' businesses are systematically taken into account.

If you ask them [Protestants] what is the meaning of their restless activity, why they are never satisfied with what they have, thus appearing so senseless to any purely worldly view of life, they would perhaps give the answer, if they know any at all: "to provide for my children and grandchildren (Weber, 1992: 32).

Among both Protestants and Catholics, special concern is given to the act of saving. It should be promoted in opposition to excessive material consumption or the irrational use of resources in the present (Young, 2009). Among Protestants, this is due to a certain delayed gratification, which is a feature that is transmitted through culture.

Delay of want satisfaction is a common feature of choices; that is, individuals make choices in which both costs and benefits are spread over time. (...) Max Weber (1930) argued that the monastic way of life in the Occident had become "a systematic method of rational conduct with the purpose of overcoming the status naturae" by not yielding to emotional impulses. With the Reformation, this form of active asceticism was no longer restricted to religious virtuosi, and the devout had to be "monks" all their lives. The ethics of particular Protestant groups (e.g., puritanism) were one long exercise in imposing self-control and delay of gratification. Weber also pointed out the significance of this inner-worldly asceticism or the extreme delay in consumption of the Protestants for the rise of capitalism (Durk H. Hak, in Swatos, 1998: 129).

Among Protestants, the act of saving is regarded as honorable, so there is a certain control in present consumption. Experiments in psychology have corroborated this tendency. They have shown that the specific act of saving money is crucial for individuals to euphemize the idea of the end of life, as well as to the maintenance of a sense of control in one's lifetime (Zaleskiewicz et al., 2013, in Klicperová-Baker et al., 2015). Research has shown that future-oriented individuals save significantly more than

others of any other time orientation. They typically reach higher education and higher socioeconomic status, making it easier to perpetuate the habit of constant saving and achieving substantial wealth (Klicperová-Baker et al., 2015).

According to Hoornaert, the perception of the future encompasses how far in time one is able to envision their own projected thoughts, how organized that future is in terms of events and goals, the rapidity with which one's life tends towards the future, how one tends to envision the concentration of events in the future and how one personally feels about what is yet to come (in Thoms, 2004: 23). To Nuttin (1985), the objects of time perspective, such as the perception of a future reward, is one of the key determinants to explain behavior (in Thoms, 2004: 23). That was demonstrated by the comparison between Catholics and Protestants. The latter shows high future-orientation, which implies that planning is imperative to economic processes. Also, the rationalization of time is a precept. This can only happen through a higher short-term economic action or, in other words, an economic behavior that tends to focus the action in the present. This immediacy will lead to "better" economic outcomes.

Therefore, we can establish a distinction between time perception and the action propelled by that time perception. They are, in principle, inversely proportional. This is corroborated by Milfont, Wilson and Diniz, who state that "the focus on future events is formed by meaningful conceptual representations of such events, and these representations and anticipations will motivate behavior" (Milfont, Wilson & Diniz, 2012, in Terblanche-Greeff et al., 2018: 3). Moreover, Zimbardo et al. (2012) proves that it is possible to optimize well-being through present action the clearer a set of goals is regarded in the future (Husman et al., 2015). Zimbardo & Boyd (2008) confirm that future-oriented individuals accept delays of immediate gratification for the sake of goal-achievement in the future, they invest more effort and time in the now, being more proactive and holding a greater willing and need for future control. They are more willing to renounce the gratification in the present in function of a well-defined goal in the future. Once again, that is the case of Protestants, as was proven.

4.2.2 Perception of the End

Among the major Protestants doctrines, the perception of the end of life is clear and unquestionable. Nevertheless, there is not a well-defined continuity, although it is generally agreed that this continuity exists (Zimbardo & Boyd, 2008)⁵. The end in itself speaks louder than eternity, especially among Calvinists, who believe that they only get to know whether they are doomed or saved by the time of their death.

Thus, eternity is seen as ambiguous, not being assured directly by religion as an accepted fact. This ambiguousness – not so much observed among Catholics – comes from the fact that the afterlife was subject to various interpretations among different Protestant doctrines alongside their spread and development. This includes different interpretations between Martin Luther and John Calvin, and even imprecision by the first. However, they would both agree on the fact that speculating about the afterlife should not turn people away from the work obligations in the present, being this one more reason for the afterlife to remain ambiguous (Musée Protestant, n.d.).

In place of the systematic rational struggle to attain and retain certain knowledge of future (otherworldly) salvation comes here the need to feel reconciliation and community with God now (Weber, 1992: 88)⁶.

For some Protestant branches, especially the more conservative Calvinism, one of the core doctrines was predestination. The idea of predestination comprises the belief that those who are saved and those who are not are elected by God. That is to say, in this doctrine God has the power to choose whomever He pleases to be “elected”. As a result, there is a generalized sense of ambiguity and unknowingness in one's deeds. Human actions are not capable of changing fate (Weber, 1989: 93; Slick, 2012). As a consequence, being the afterlife, afterlife's nature and salvation so ambiguous, but still a reason to get anxious for, people would search in every act of their daily lives evidence and proof of God's presence and grace. This includes, to a large extent, as shown by Weber, the professional life and the tendency to be successful and accumulate wealth as an incorruptible end in itself.

⁵ To be further explored in chapter 4.3.

⁶ This is illustrative of the way Lutherans related rationalism in worldly activities with the expectations of the future, as well as the duties the end of life demands before God. For Lutherans, the professional vocation is therefore to be accepted with submission and simplicity.

A seeming but functional contradiction therefore appeared: although fate was believed to be God's exclusive will, people optimized their personal and individualistic efforts on work and on the control of events in a blind, constant and obsessive attempt to be saved. This once again corroborates that there is a very high degree of intrinsic future control. Emphasis was put on the relationship between one's present action and the ambiguous duty the end (God's choice) demanded. We can conclude that the perspective of the end is very clear (salvation is the frontier) and there is not a well-defined continuity. This makes eternity extremely unclear, leading the end – of processes and life – to speak louder than the afterlife vagueness.

This way to perceive the end of life as a result of the ambiguousness of predestination is probably one of the most diverging points between Protestants and Catholics. Weber (1992) affirms that Martin Luther, one of the dominant figures of the Protestant Reformation, seizes this "information problem" to justify the work incumbent to a man as a predestinated duty that could not be rejected or neglected. So, Protestants were strong believers that their economic performance could and should be controlled by themselves. The Protestant ethic entails a strong tendency for there to be future-orientation and goal-oriented economic agents as a result of the idea of predestination (Zimbardo & Boyd, 2008: 141).

For this element of emotion [in Pietism], which was originally quite foreign to Calvinism, but on the other hand related to certain mediæval forms of religion, led religion in practice to strive for the enjoyment of salvation in this world rather than to engage in the ascetic struggle for certainty about the future world (Weber, 1992: 82).

Weber states that throughout History there has been a (sometimes unfounded) tendency for people to believe that Protestants were more materialistic because of the secularization of their ideals (Weber, 1992: 7). Among Catholics, religion was not as much as a factor that would lead them to individualism, but to dependence upon the transcendental. The perception of the end of processes by Protestants could provide an explanation for this, because for them, their personal *Beruf* is an end in itself. The pursuit of the *Beruf* meant that time was made to be allocated in such a way that the end of processes (in this case, professional processes) were well devised *a priori* and were meant to be attained. The *Beruf* could thus be an explanation for the appearance of a rational way of allocating time.

This rationalization of conduct within this world, but for the sake of the world beyond, was the consequence of the concept of calling of ascetic Protestantism (Weber, 1992: 100).

The thought of the pious boredom of paradise has little attraction for their [Protestants'] active natures; religion appears to them as a means of drawing people away from labor in this world (Weber, 1992: 32).

Thompson (1967) states that in certain branches of Protestantism, such as Puritanism, the economic vision of time becomes very clear, stating that it was the relationship between Puritanism and industrial capitalism that created and propagated the idea that "time is money". Consequently, this created in people since birth the urge to be as productive and as successful as possible in the present, as losing time is equivalent to denying wealth (Thompson, 1967).

But more often and, since that motive is not peculiar to them (...) that business with its continuous work has become a necessary part of their lives. That is in fact the only possible motivation, but it at the same time expresses what is, seen from the view-point of personal happiness, so irrational about this sort of life, where a man exists for the sake of his business, instead of the reverse (Weber, 1992: 32).

4.2.3 Perception of the Past

Among Christians, one's actions tend to be psychologically filtered by a mediator (the Catholic Church and its dogmas), which did not create urgency in the short-term action. A significant portion of Protestant peoples, on the other hand, developed a culture where there is the absence of a major mediator between one's deeds and the transcendental. This puts a stress on the acting in the now by the individual.

[Protestant Asceticism] created the force which was alone decisive for its effectiveness: the psychological sanction of it [that labor is pleasing to God] through the conception of this labour as a calling, as the best, often in the last analysis the only means of attaining certainty of grace. And on the other hand it legalized the exploitation of this specific willingness to work, in that it also interpreted the employer's business activity as a calling. It is obvious how powerfully the exclusive search for the Kingdom of God only through the fulfilment of duty in the calling, and the strict asceticism which Church discipline naturally imposed, especially on the propertyless classes, was bound to affect the productivity of labour in the capitalistic sense of the word (Weber, 1992: 121).

Catholics are much more attached to the traditional heritage, such as the maintenance of a solid and longstanding church (the Catholic Church), as well as the enduring stratification of this institution. Moreover, Protestants saw less restrictions to work time because of the reduced number of religious holidays when compared to Catholics. For instance, it has been demonstrated that there is a correlation between the number of days put aside by traditional custom and the economic performance (Ammannati, 2012).

This, the complete elimination of salvation through the Church and the sacraments (which was in Lutheranism by no means developed to its final conclusions), was what formed [in Calvinism] the absolutely decisive difference from Catholicism (Weber, 1992: 61)

The individualism among Protestants as economic agents led to a significant secularity in the economic activity. The predisposition for people to let religious institutions affect their business affairs or their work is significantly reduced.

The ability to free oneself from the common tradition, a sort of liberal enlightenment, seems likely to be the most suitable basis for such a business man's success. And to-day that is generally precisely the case. Any relationship between religious beliefs and conduct is generally absent, and where any exists, at least in Germany, it tends to be of the negative sort. The people filled with the spirit of capitalism to-day tend to be indifferent, if not hostile, to the Church (Weber, 1992: 32).

According to Weber, when comparing Protestants and Catholics, it can be noticed that there is less propensity to cling to the past among the first. It can thus be interpreted that the Catholics show a higher tendency to lead a routine-oriented life, which makes it harder to invest or look up for situations that involve progress or the potential creation of wealth in the long-run. Protestants tend to see unpredictability as more detached from what is traditional or normally expected.

The Catholic is quieter, having less of the acquisitive impulse; he prefers a life of the greatest possible security, even with a smaller income, to a life of risk and excitement, even though it may bring the chance of gaining honour and riches. The proverb says jokingly, 'either eat well or sleep well'. In the present case the Protestant prefers to eat well, the Catholic to sleep undisturbed. (Offenbacher, 1900 in Weber, 1992: 8).

4.3. The Zimbardo Time Perspective Inventory

If religion is to be proven a vehicle for the transmission of ideas about time, then it is imperative to consider, for instance, the transcendental-future, or the future people perceive as coming after physical death. Klicperová-Baker et al. (2015) emphasize the psychological relationship between the mental design of the afterlife in religious and transcendental terms and the economic behavior in the present.

Zimbardo and Boyd, when applying the ZTPI model, found out that there are strong differences of CTP among religions, namely between Christians and Protestants. Overall, Catholics tend to be more moderate in all dimensions of the past, present and future, whilst Protestants tend to be more extreme.

The mundane future is a persistent preparation for judgment at the end of life for both Catholics and Protestants. Also the Transcendental future is deeply engrained in both.

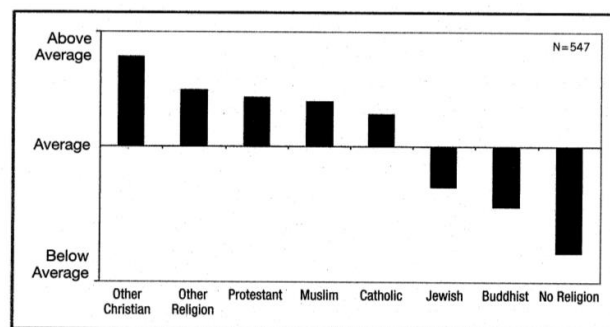


Figure 5: The Transcendental-future Time Perspective among religions (Zimbardo & Boyd, 2008).

Protestants scored high on the future time perspective dimension. Also, Protestants give slightly more emphasis to the transcendental-future than Catholics. This corroborates our previous observation of the Weberian thesis: the transcendental meaning for actions among Protestants is more ambiguous and leads to a greater individualism. Therefore, Protestants give more emphasis to the action in the present, as there is a vocation or calling to fulfil, which by itself entails the investment and allocation of one's time.

THE IMPACT OF CULTURAL TIME PERCEPTION IN ECONOMIC BEHAVIOR
 A Reinforcement of Max Weber's Thesis

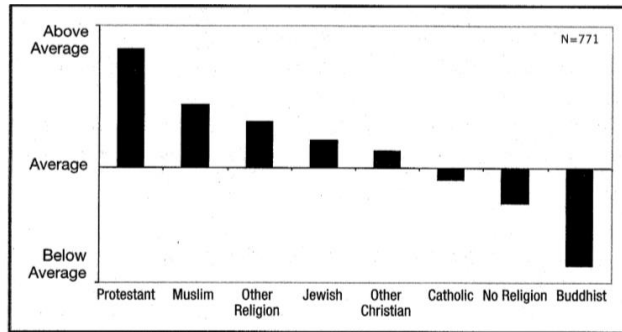


Figure 6: The Future Orientation (F) among religions (Zimbardo & Boyd, 2008).

Protestants score markedly low on the past-negative dimension, along with Jews and Muslims. In terms of Perception of the Past, Protestants tend to view their past as a positive and constructive factor to shape one's view of reality. The positive aspects of the individual past (and the collective History) is taken and used in an action in the present that is oriented towards a future taken over by the expectation of progress. The Catholics tend to focus on the negative aspects of their past. Protestants scored high on the past-positive dimension.

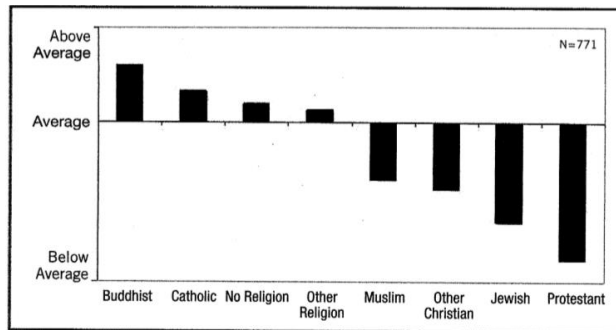


Figure 7: The Past-negative (PN) Time Perspective among religions (Zimbardo & Boyd, 2008).

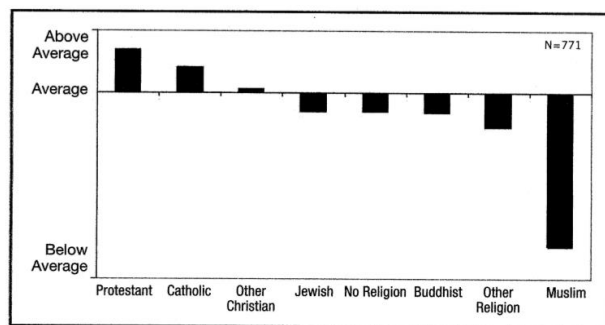


Figure 8: The Past-positive (PP) Time Perspective among religions (Zimbardo & Boyd, 2008).

Protestants show remarkably low scores for the present-fatalistic dimension and high scores for the present-hedonistic. That could be explained by the fact that for protestants life is composed of a wide array of choices and so an endless number of ways of behaving, once again because there is a sense of individualism and that there is a higher purpose that can only be attained through individual work and action. Protestants, in opposition to Catholics, are more prone to believe that life is surveilled but not controlled by external forces, stressing the importance of the present action to attain a better future.

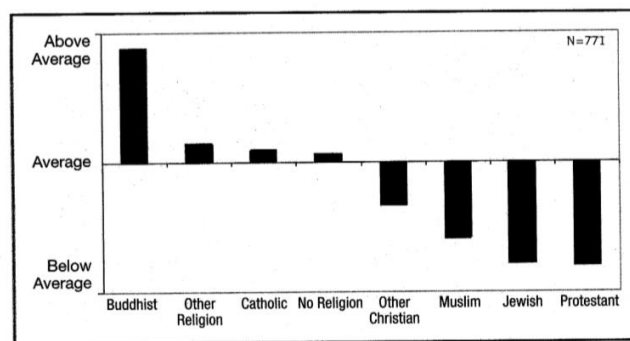


Figure 9: The Present-fatalistic (PF) Time Perspective among religions (Zimbardo & Boyd, 2008).

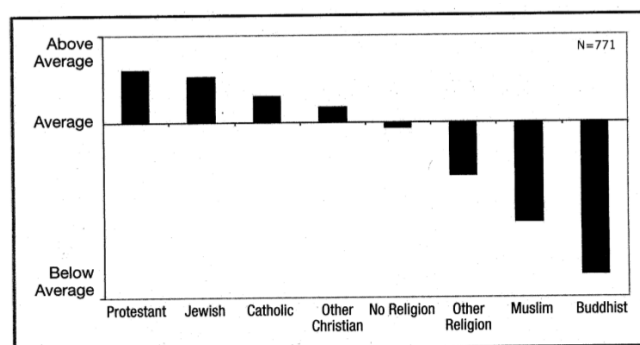


Figure 10: The Present-hedonistic (PH) Time Perspective among religions (Zimbardo & Boyd, 2008).

4.4. Conclusion

In the concept of “religion” we included overall religious setting, values and dogmas, and not only religious practices and rituals. In that sense, it should be understood that we were not only looking forward to understand how a group of people who actively practices a religion in a specific epoch views time. Rather, we aimed to know *how* a religion creates a code of values and ethic that is inherited, having in account that this code includes a specific CTP.

We thus reiterate that it was possible to prove that:

- CTP is entwined with the religious practices and heritage, and consequently is part of the ethic that is transmitted across generations.
- It contributes to a specific individual economic behavior through the emphasis on future time orientation and present action. In the specific case of *The Protestant Ethic*, this is decidedly caused by the belief in predestination and the idea of *Beruf*.
- The conjunction of these individual values created the conditions for the appearance of a “capitalistic spirit”. This “spirit”, as a specific socio-cultural environment, had the power to help change the attitude towards work, wealth, progress and build most of the features central to capitalism nowadays.

The Protestant Ethic and its inherent comparative sociology of religion was methodologically used to serve as an evidential base. In turn, we reinforced it in the light of CTP.

5. Practical Value and Further Research

5.1. In Economics, Business Studies and Marketing

By including CTP in economic analysis, many academic and scientific potentialities arise. It is useful to further explore the motivational drives of a single economic agent, such as an individual's job performance, teamwork and negotiation skills, as well the strategic planning of institutions. It is also worth considering when analyzing issues related with the economic system, such as labor market regulation. The same goes for the study of the economic development itself (Fulmer et al., 2014).

Scholars' attention has increasingly been turning to the importance of time management in the context of work. For instance, in Labor Economics a growing emphasis is being put on the relationship between time and tasks. What is lacking is a more cultural tone in various topics connected with work time and labor market dynamics. Today, and more than ever, the value of time is a matter of reflection. Professional activities overlapping free time is a concern of increasing notability, for instance. There is a growing reflection on work-life balance, especially in industrialized countries. In that sense, Freeman & Louçã (2001: 172) emphasize the shift from pre-industrial time perception to the industrial one, describing it as "an enormous cultural and organizational change and acute social conflicts about working hours". Indeed, since the beginning of the First Industrial Revolution, sharp pressures to increase working hours were verified. Debates started arising regarding the working conditions of the proletariat, namely the working hours and the speed attached to it. "Mature industrial societies of all varieties are marked by time-thrift and by a clear demarcation between 'work' and 'life'" (Thompson, 1967: 93-34, in Freeman & Louçã, 2001: 173). Employers became able to buy the personal time their workers were willing to give in exchange for a pecuniary return. Time became fundamental to the labor market, because it is the medium through which there is trade of work and money (Giddens, 1981, in Adam, 1995: 90). But understanding how that trade is processed and the ideological and ethical settings that institutionalized it makes the study of CTP indispensable, both on the demand and the supply side.

Many of the debates in labor economics imply a certain CTP, such as economic well-being, social welfare or retirement of collectivities and individuals. Very often,

their cultural dimension is neglected, but can constitute an avenue of research. Also, the recent notion of time poverty or even time inequality, which is related with the ethic in the allocation of labor time and its further relationship with freedom, democracy and well-being deserve a deeper research and recognition (Goodin et al, 2018, in Klicperová-Baker et al., 2015).

CTP can also be used in management and business studies, such as in analyses on organizational culture, goal setting or intercultural activity (Richmond et al., 2012). By mastering the time perspective of an enterprise, it becomes easier to set up and map the goals in such a way the added value to customers is optimized. For instance, if a group of workers tends to be more task-oriented instead of time-oriented, encouraging polychronicity can pose an alternative to the widespread notion that the successful accomplishment of a project is defined exclusively by workers' capacity to answer the needs of completion on time and within a budget.

In Marketing, CTP is entrenched with consumer behavior and preferences because it is one of the pillars of selling, decision-making and rhetoric. For instance, it can be of use in consumer advertising, through the understanding of how audiences' CTP influences their decision. Marketers can create the increasing sensation in potential buyers that they are or should be in control of their future. This is done by nurturing the intrinsic future control of the target audience, which establishes automatically a well-defined end of the process of opportunity. Consequently, there should be an increase of the short-term action in the form of the act of acquiring or doing (Klicperová-Baker et al., 2015). To a marketer (either linked to commerce, politics or institutional activism), the understanding of time perception is important to know how to implement delayed gratification or, inversely, immediate gratification in consumer preferences. Further studies could be conducted, for instance, on political campaigning, such as the correlation between CTP and political ideology and, consequently, the vote.

Also, one important aspect that has to be pointed out is that there is a growing tendency (and need) for "pushing" the time preference to a longer-term. That is, to make it more future-oriented, both to institutions and individuals, because only by doing so can effective and quicker measures be taken in order to address the temporal dimension of issues such as climate change and the need for effective environmental policies (Milfont & Demarque, 2015). Environmental issues often have long-delayed effects and

evolve too slowly to the common human perception, not to mention the inertia between the realization of the environmental hazards and the action performed to combat them. Hence, the question is how CTP can be useful to make the publics' action more effective when dealing with scenarios characterized by an expanded time horizon and uncertainty, as well as complex and mutable-over-time characteristics (Adam, 1998: 104-106; 1995: 148).

5.2. In Economic Thought

As we have seen in chapter 2.2, CTP changes across the times (it is non-static) and adapts to the needs and predispositions of its cultural hosts. Western time as we know had its roots in a specific CTP and molded the course of Western History, economic thought and our very definition of economics.

The paradigm of a constant increasing progress and growth were brought to light in the rise of the Industrial Revolution, highly influenced by the Judeo-Christian (especially Jewish) notion of it (Sedláček, 2011). Alongside, the idea of development, as the path to greater happiness among continuously flowing periods of time or stages were also established since the eighteenth century, hand in hand with the concept of a time-related progress (Elias, 1992: 92-93). All these definitions still shape the Western economic thought. Even more precisely, their definition has molded the very activity and meaning of Economics nowadays.

Before the Industrial Revolution, we did not expect much of growth. Then we were impressed with its speed, and today we consider it to be completely automatic. What's more, today we think of progress in economic and technical terms (Sedláček, 2011: 232).

The continuous growth and the proclivity to innovate became the leitmotifs of the Industrial Revolution. Economics started thus "living for the future", that is, future orientation took over economic analysis (Sedláček, 2011), as well as the increasing need to plan and fight the hazards of a new concept of eminent uncertainty.

The inherent nature of the Industrial Revolution was then transmitted to less industrialized countries, who would search for representations of growth to follow, at

the same time that developed countries saw it as an advantage to export these same ideas and models (Rioux, 1972).

By induction, it is now possible to get to a major conclusion: from the Industrial Revolution on, time perception ceased to be the cause and became grandly a direct consequence of economic activity and human intention (Adam, 1998). To be more precise, it became a by-product of economic activity. There is, therefore, a turning point in the eighteenth century when time is subordinated to industrial needs. According to Elias (1992: 92-93), this was caused, among other factors, by the Protestant ethic and the influence of the Enlightenment thought.

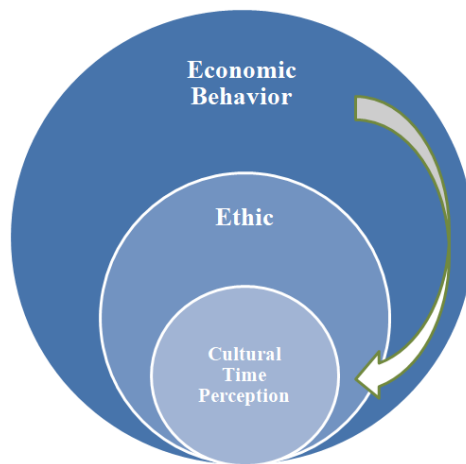


Figure 11: The process through which the economic activity and behavior influence Cultural Time Perception.

The pillars on which on which the economic discipline stands – the ideas of progress, growth, uncertainty or productivity – were constructed on the basis of a certain CTP but, in turn, the quest for a standardized CTP became global.

6. Concluding Remarks and Critical Reflection

The most important idea one can retain from this research is also the idea that was initially put to test: Cultural Time Perception plays a major role in the economic behavior of individuals and the paths of development taken by societies as mutable systems. Cultural time is often unconsciously used by economic agents because time cannot be removed from the basis of the generally-accepted concepts of allocation, growth and uncertainty.

This investigation started out by delimitating the concept of CTP, as well as constructing a 3-fold interpretative model to position an individual or society in a specific orientation regarding their views of the past, the present and the future. Next, a brief historical evolution of this concept was presented. This historical framework is valuable because it serves the purpose of corroborating a valid relationship between CTP and economic action since primitive men were forced to understand reality and manage their activities until the First Industrial Revolution in the second half of the eighteenth century. It is corroborative for two reasons: the transformations that were verified in CTP throughout History were accompanied by specific archetypes in economic thought; secondly, this contrast of CTP across epochs and the associated economic outcomes proves that CTP is an institution that causes an impressive causal effect to influence economic habits, decisions and preferences. We then turned our attention to cross-cultural studies, especially the Hofstede Model and its Long-Term Orientation Versus Short-Term Normative Orientation (LTO) dimension, completing the quest for a correlation with success. This model mattered because it is one of the most reliable quantitative works to assess cultural differences, as well as the statistical interpretation it encompassed revealed to a large extent the corroboration we were looking for.

In order to look for traces of causality, a close examination of Max Weber's *The Protestant Ethic* was conducted, out of which we could prove, by applying the CTP model, that the belief in predestination and the quest for the *Beruf* (the professional calling) amongst Protestant peoples are deeply entwined with the appearance of a specific way of perceiving time. Studying Weber was important because this author still represents a reference regarding cultural causality and the influence of religious beliefs and institutions in socioeconomic practices. Our thesis, as intended at first, was

supported by Weber's work but it did go beyond his observation, especially the search for the "causes of the causes" of the economic habits in the religious ideology. One of these causes is CTP. A study derived from the Zimbardo Time Perspective Inventory (ZTPI) follows, showing through surveys that religion does indeed incorporate in itself a detailed time perception. This study is one of the first to statistically prove that there is a difference between the Protestant and the Catholic "time".

The contribution to knowledge present in this research is original. It explores a cultural concept that is largely neglected in Economics, including Economic Sociology and Behavioral Economics. The main reasons for such are the lack of agreement on the definition and the boundaries of what Cultural Time Perception is and the fear in the academic community that such a wide concept is not able to provide solid empirical conclusions. Regardless of this fear, this research used Max Weber's *The Protestant Ethic* to study not only how economic systems developed over time, but also stress how useful is the observational and conceptual study of CTP today and shall keep on being in the future. The innovativeness in this approach is two-fold: first, by pointing out that time is the basis of any allocation, including its own, and a culturally-inherited factor that heavily influences one's work ethic, we prove that it is a missing explicit notion in Weber's work; secondly and simultaneously, we reinforce the importance of the *Protestant Ethic*, both at the beginning of the twentieth century and now, validating its capacity to answer why we behave economically the way we do, why capitalism became the way it is and why it is still differently enforced and interpreted across cultures.

Moreover, this investigation is significant to Economics for various reasons. For the first time, a culturally-oriented guiding model was created to define what is to be understood as Cultural Time Perception. This enabled a sociological and psychological theme to be of further use in Economics. Also, CTP proved to be a vehicle for the validation of Coleman's methodological individualism and the way it can be used to explain economic phenomena within a framework of causal influences between and among macro (society) and micro (individual) levels. Moreover, and in general terms, CTP is useful to better conduct research studies on the economic paradigms of our times and the very definition and methods of the discipline of Economics. In other words, understanding CTP is crucial to understanding current economic thought.

Researchers are now given the tools to study economic phenomena in the light of CTP, not to mention that they are now able to consider CTP separately as a cultural variable. In fact, isolating CTP for analysis could constitute a new methodology. This leads to higher efficacy when dealing with issues that are challenging to economic agents, especially in the future. For instance, it is valuable to further explore environmental policies, social justice, equality, poverty and globalization. It is also suitable to explore the effectiveness of democracies, technological advances, as well as political unsteadiness, mutability and movements.

While conducting this research, especially on what concerned gathering data and processing it, various challenges and problems were found, some of which were difficult to deal with. Also, some structural interrogations menaced the robustness of the observation of this social and psychological concept. First off, there was too much reliance on secondary data, namely the Hofstede Model and the Zimbardo Time Perspective Inventory on the quantitative side of data, despite being far-reaching and well-established survey studies. Although they proved to go in accordance with the idea we aimed to prove, it led to a weaker autonomy on our side to extrapolate further conclusions or even represented a reduced bundle of data sources. Much of this problem is explained by the lack of data and awareness of this issue in the literature. It can also be explained by the innumerable and diverse definitions of time in academic and scientific works. Secondly, although CTP is a preponderant variable, it cannot be applied to all situations and contexts, so the level of abstraction in this investigation was proven too high. Thirdly, the intersection between CTP and time as used by Behavioral Economics (such as time preference) is existent, but a separation was mandatory because CTP requires a macro-level approach and entails a much more sociological essence. That is the reason why sometimes there was not a clear pathway between the culture (cause) and the action (effect), such as how CTP directly affects preferences or utility at the individual/micro level. As a result, many issues the discipline of economics traditionally deals with were only (and unfortunately) approached in a superficial way. Finally, the last challenge was related with the clear demarcation of differences between different (and quite numerous) branches of Protestantism in *The Protestant Ethic* by Max Weber, which made it difficult to standardize a set of values and beliefs on which to apply our CTP model. In other words, there is not by far *one* protestant ethic. This issue was overcome by collecting the most noticeable characteristics of each branch and

their similarities, particularly the belief in predestination and the notion of the *Beruf*. Giving a special attention to Calvinism, one of the most spread and radical branches, was also a strategy.

This research was successful at calling for attention and setting up the boundaries to a concept that was until so far regarded as a cultural factor that belonged almost exclusively to popular knowledge. In addition to adding value to further scientific research, Cultural Time Perception is crucial to reflect upon the economic thought and behavior of economies, groups, individuals and, last but not least, ourselves.

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