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Conflict Economics and Psychological Human Needs

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Abstract

The basic approach in conflict economics, to explain motives and conditions for civil strife, is based on the assumption of choice. Wars, civil conflicts, or terrorism are thus analyzed as outcomes of goal-driven choices according to underlying incentives and constraints. Because conflict involves choices between nonviolent and violent alternatives, it is perceived as a pure result of strategic choice – that is, calculated, rational thinking with the aim to achieve profitable ends. While this would imply that rational agents are primarily motivated by material gains, we argue that individuals may also join groups and use violence for psychological reasons – and this choice is not subject to irrationality. Factors such as group belongingness, threat, a shared group-identity, and self-esteem are important determinants in explaining violent mobilization. In this regard, the current paper postulates that agents make foremost choices in order to serve their mental preferences, or in psychological terms, their fundamental human needs, i.e. needs that address the human drive to survive, to understand and control their environment, to find their role and purpose in life, and to feel accepted and efficacious in their choices and actions. We reviewed a vast amount of interdisciplinary literature and identified three need dimensions: existential, relational, and self-related human needs. Each of these needs is shaped by internal determinants, such as agent's dispositions, and by external determinants, such as economic, social, political, or environmental factors. Therefore, to properly understand why individuals join rebel groups and are willing to accept a high level of personal risk to advance their groups' goals, we have to consider, beyond economic incentives, also their psychological human needs.

JEL Classification: D74, D91, I31, Z1

Keywords: Conflict economics, Psychological human needs, Reconciliation, Individual decision-making

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1. Introduction

In 2019 the Heidelberg Institute for International Conflict Research (HIIK) recorded 358 conflicts worldwide, of which more than the half has been decided on a violent level. Over the past 15 years, 3.34 billion people have been affected by violence; and conflict-related deaths have tripled since 2003 on a global scale (Conflict Barometer, 2019). The Uppsala Conflict Data Program (UCDP) reports that over the five past decades, intrastate wars, i.e. wars and conflicts occurring within state borders, have become more frequent than wars between states. Violent extremism and terrorism are also on the rise, occurring not just in developing regions but also increasingly in the developed world (Pettersson & Öberg, 2020). Individual social and economic cost of violence is thus very high: pure economic cost in 2015 entailed approx. 13.3% of the Global GDP, which is equivalent to 13.6 trillion USD or 1876 USD for every person in the world (OECD, 2016).

Considering these numbers, it becomes obvious that all kinds of conflict have still severe implications for human beings. However, the dynamic, multidimensional, and complex nature of conflict exacerbates a precise address of this issue. The basic approach in conflict economics to explain motives and conditions for civil strife is based on the assumption of choice (Anderton & Carter, 2009). Because conflict involves choices between nonviolent and violent alternatives, it is perceived as a pure result of strategic choice – that is, calculated, rational thinking with the aim to achieve profitable ends (Hirschleifer, 1995). Central to most economic analyses of conflict is thus the assumption that individuals are rational. To be rational means to act consistently (according to subjective preferences) to achieve some well-defined ends, within the limits imposed by given conditions and constraints. This implies that individuals search for optimal means (minimize the resource use) to reach their well-defined objectives (Foley, 2004).

One of the most cited articles in conflict economics to explain the choice of conflict refers to the “greed versus grievance” dichotomy (Collier & Hoeffler, 2004). The greed argument refers to the motivation of individuals to profit from control over natural resources (e.g. oil, diamonds, timber), illegal activities (e.g. drug trafficking) or taxation, while the grievance assumption indicates endured mistreatment or serious deficits faced by individuals or groups, which enhances their willingness to rebel. Another influential study (Fearon & Laitin, 2003) assumes that, other things being equal, rebel activity will enhance, if marginal costs decrease and marginal revenues increase. Both studies, while relying on different methods and assumptions, reach the same basic conclusion: opportunity for rebellion, i.e. certain conditions that favor insurgency, has a higher explanatory power than measures based on grievance, political

repression or ethnicity. In particular, the regression estimates conclude that the risk of (civil) conflict increases under certain conditions: when population is large, the territory mountainous, the income level and economic growth are low and when exports of oil and other primary commodities are high.

These findings may imply that rather opportunities, generated by certain conditions, tend to drive conflict onset. If certain external conditions are given and the state's capacity to respond appropriately to a rebel movement is weak, then a rebel group, like a small business unit, has a high stake in the venture and is willing to accept high personal risk to advance the goals of the group (Clapham, 1988). According to that, Iannaccone (2006) argues that it is not the individual but the rebel organization who at the end determines conflict onset. Relying on terrorism data, he suggests that a useful approach to study terrorism, or martyrdom in particular, is to think in terms of a market, that is, to consider the demand and supply side for suicide bombers. On the supply side of the market are the subjects who offer their performance. The author argues, that given appropriate incentives, a supply of suicide bombers will always exist. On the demand side of the market are the organizations who have a demand for terrorist activity. This demand depends on the value and the efficiency of the missions, as well as the productivity of the suicide bombers. This side of the market, according to the author, makes at the end rational choices and determines conflict onset. In this case, the organizations can successfully overcome the free-rider problem associated with recruitment because the supply side is taken as given and the demand side will primarily decide about the existence and persistence of the market (Anderton & Carter, 2009).

While we agree that external conditions and organization's viability tend to play a significant role in conflict onset, we also argue that the supply side of the market should be not taken as given. It is the individual who is foremost making rational choices whether to join a rebel organization or not. Political and psychological studies agree that individuals are not primarily motivated by material gains but may join groups for psychological reasons. Factors such as group belongingness, self-esteem and a shared group-identity are perceived to be important determinants in explaining violent mobilization (Gurr, 1970; Muller & Seligson, 1987; Basedau & Lay, 2009). Grievance is not just about a deprived access to economic, political and social opportunities, but has also psychological implications, such as the perception of lost control, of an inconsistent and unpredictable environment, of an uncertain life sustenance, of no opportunities for self-realization and for developing a stable and consistent self-concept. Intra-group and inter-group relations, as well as the concept of threat, also play a significant role in

explaining violence and radicalization (Koomen & Van der Pligt, 2016). Therefore, to properly understand why individuals join rebel groups and are willing to accept a high level of personal risk to advance the groups' goals, we have to consider, beyond economic incentives, also psychological factors that have received little attention in traditional conflict economics literature. Therefore, we propose a new perspective to bridge the gap between pure economic explanations and psychological factors in order to obtain a broader understanding of the roots and formation of social violent conflicts.

Various disciplines reveal that every human being seeks to actively shape and construct his or her own environment. In this process, individuals are confronted with a complexity of conditions, such as ambiguous information, unpredictable circumstances, uncertain outcomes, and threatening events, under which they have to make appropriate choices (Baumeister, 1991, 2005). According to that, individuals strive to reduce this complexity in order to understand their existence, to find their role within the social context, and to make autonomous and effective decisions that are consistent with their goals and preferences. In this regard, the current paper postulates that agents make foremost choices in order to serve their mental preferences, or in psychological terms, their fundamental human needs, i.e. needs that address the human drive to survive, to understand and control their environment, to find their role and purpose in life, and to feel accepted and efficacious in their choices and actions. These fundamental human needs can be ordered into three subgroups¹: the existential, relational, and self-related human needs. Each of these needs is shaped by internal determinants, such as agent's dispositions, and by external determinants, such as economic, social, political, or environmental factors (Figure 1).

Existential needs are shaped by conditions of threat, ambiguity, and struggle for survival, which drive human beings to attain a sense of safety, mastery and control concerning one's own environment. Out of these conditions follow needs that address the preservation of human existence and to master the complex environment, which are needs for safety/existential

¹ Some of the following are at least partially overlapping with the three needs that Deci and Ryan (2000) regarded as psychologically fundamental and culturally universal, namely *autonomy*, *competence*, and *relatedness*. There are also earlier taxonomies, such as Maslow's (1943) hierarchy, which specified physiological needs for food, water, and oxygen; needs for physical safety and a sense of security; needs for love and acceptance; needs for positive self-esteem; and needs for self-fulfillment or self-actualization (Pittman & Zeigler, 2007). McClelland (1961) identified three needs as being especially important to human functioning, namely needs for *achievement*, *affiliation*, and *power*. There are other well-known need classifications, such as proposed by Jost et al., 2009, namely the classification of epistemic, relational, and existential needs. However, in the following we will portray and refer to our own need categorizations, namely existential, relational, and self-related human needs.

security, for control, order, ambiguity avoidance, consistency, and predictability. These needs imply the human necessity to secure one's own existence, to have the perception to be able to control and affect one's own environment and to live in an ordered, predictable, and consistent surrounding. However, to survive and be mentally healthy, human beings need also social connections. Here we identified *relational needs* that focus on identity, social belonging, and pro-sociality. Individuals aim to attain a sense of belonging, to share their identity, values, and ideas with significant others and to feel loved and approved by other members of their group. Here we consider needs for belongingness, identification, and social approval, but also the human need for pro-sociality, that is, to share, help and feel empathy for others. Beyond the needs for survival and sociality, individuals have also *self-related needs*, which imply individuals' striving for a positive self-view, for competence and an autonomous and meaningful life – i.e. needs for self-esteem, self-efficacy, and self-determination (autonomy).

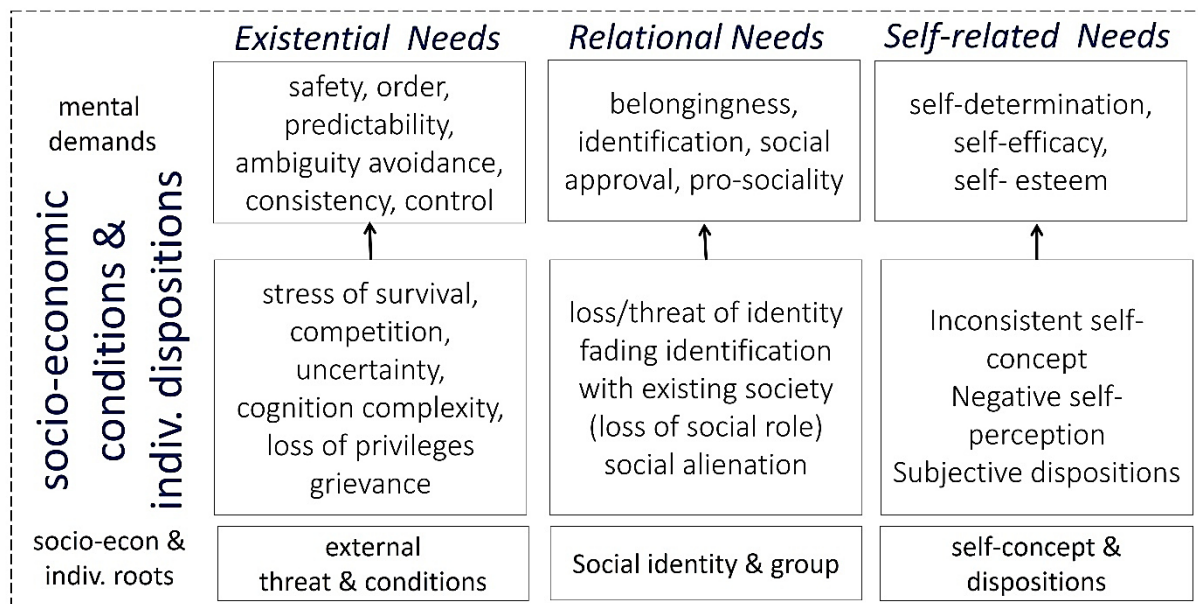


Figure 1: Fundamental Human Needs

In order to serve these fundamental human needs that are vital for survival, well-being and personal fulfillment, individuals search for reconciliation strategies. Reconciliation is a term, used to describe a process of conflict resolution. "It explores the causes of the conflict, particularly causes in the form of threatened and unmet needs for identity, security, recognition, autonomy [...]. It seeks solutions responsive to the needs of both sides through active engagement in joint problem solving" (Kelman, 2008, p.17). Although in this aspect, the traditional use of reconciliation focuses on the transformation of the conflictual relationship between two parties, this elaboration puts more emphasis on an internal psychological process

of conflict resolution. In this regard, we propose that every individual tries to find solutions to reduce the inner tension (inner conflict) that arises due to threatened or thwarted needs (Max-Neef, 1992).

In psychology, the concept of need thwarting refers to the perception that need satisfaction is actively frustrated or destructed in a given context (Vansteenkiste & Ryan, 2013). In our elaboration we refer to the term deprivation, which is often used in economic literature. Deprivation implies a denied access to or the lack of substantial resources or means to serve one's own needs. Such a deprivation, and the "enforced inability" to serve one's own needs, can cause psychological or even physiological suffering (Staub, 1993). If for example the need for safety is deprived, neurocognitive functions of the brain support the threatened individual to process negative information faster than rewarding information. This can be attributed to a survival strategy and environmental adaptation that helps individuals to cope with unexpected and uncertain situations (Zheng et al., 2016). If the need for belongingness is deprived – fueled by feelings of rejection - the activity of the anterior cingulate cortex (dACC) increases, an area that is associated with regulating physical pain experience (Eisenberger, 2011). This implies that our body and our brain react to need deprivation, which give rise to drive states and push the individual to find means to cope with the arousal in order to remain physically and mentally healthy (e.g. Deci & Ryan, 2000; Gunnell et al., 2013). "Human needs specify the necessary conditions for psychological health or well-being and their satisfaction is thus hypothesized to be associated with the most effective functioning" (Deci & Ryan, 2000, p.229).

These psychological and economic assumptions match the thoughts of the philosopher John Locke (2013 [1689]), who believed that an agent can only be free if he has the possibility to act according to his mental preferences. Depriving the agent of the opportunity to act according to his preferences, that is to serve his fundamental human needs, can result in destructive and defensive human behavior. In the following paper we will thus thoroughly examine why the human-need perspective can substantially contribute to explain human decision-making, especially in regard to violence and conflict. To our best knowledge, this is the first paper that extensively address the concept of need deprivation in regard to conflict economics. Hence, the focus of this paper lies on the identification and understanding of these fundamental human needs and their neglected role in this discipline. We will start with the examination of various determinants that have an impact on individuals' fundamental human needs. We combine mostly economic and psychological studies to discuss how certain conditions can deprive individuals from serving their existential, relational and self-related human needs, and how this

deprivation can potentially lead to deviant and violent human behavior. However, in this paper we refrain from examining the link between human needs and conflict onset, by focusing instead on situations and conditions that deprive individuals from serving their fundamental human needs. And this deprivation has the potential to induce deviant choices or violent behaviors.

1.2. Methods

In order to provide a full-fledged overview to support our assumptions, we reviewed more than 400 theoretical and empirical studies, as well as books, across various disciplines, including economics, psychology, political science, and sociology. In this regard we refer to the grounded theory (originally introduced by Glaser & Strauss, 1967) as a qualitative methodology to gather, analyze and conceptualize qualitative data for the purpose of our theory construction. This means we collected and analyzed a vast amount of qualitative and quantitative research articles and formed, based on this information, our theoretical framework. To gather and examine these articles, we used several data bases such as EconLit, WISO, Web of Science, ScienceDirect, PsycINFO, PsycARTICLES etc., as well as the extensive sources provided by the libraries at the University of Paderborn and the New York University. Considering our selection criteria, we aimed to include especially benchmark articles that are well established in the specific disciplines. However, we did not corroborate our assumptions only on these benchmark articles but also tried to provide, to the best of our knowledge, a discussion of alternative theories and empirical findings. The aim of this paper is thus to provide a consistent theoretical approach to reveal why the human-need perspective can substantially contribute to conflict economics.

1.3. What are human needs and why are they considered as fundamental?

Before examining the internal and external determinants and the human needs at length, this section will provide a short discussion on the concept of needs - needs that can be understood as a condition or internal state in an organism that when activated or aroused, directs human behavior. In this context, deprivation of needs, or deviation from desired states, play a central role (APA Dictionary of Psychology). There is no doubt that humans have physical needs and demands, i.e. the need to eat and drink, and – while not fundamentally necessary for survival – they have a desire for goods they would like to consume. The question of how to serve these consumption needs in the best possible way is all about traditional economics. While in standard

economic analyses, these consumption needs involve physical goods, such as apples, bananas or cars – in particular in the contributions by Becker (1965) and others – these models have been extended by time allocation and even by more “abstract” desires such as health, education, or leisure time. Also, models which have appeared bizarre to non-economists (sometimes also for economists), such as the economics of marriage (Becker, 1973, 1981), fertility (Becker & Barro, 1986), or the choice of spouse (Keeley, 1977), have been developed in a move to extend the theory of consumer behavior.

There is no doubt that intangible goods, such as education, health, relationships, or leisure, are important elements in our system of wishes and demands. They complete our needs system and determine eventually how we process information and make economic decisions. In this regard, the psychological literature goes further and postulates that there are more aspects of human behavior - the internally driven aspect of behavior that derives in part from internal tensions or arousals in an organism. According to that, several researchers (e.g. Ryan & Deci, 2000; Baumeister & Leary, 1995) include the concept of human needs into their assumptions and postulate that they indeed energize and direct human behavior.² This approach, which is central to our analysis, perceives needs as variable internal states that go beyond physical needs and demands. When social psychologists talk about human needs, they emphasize needs related to social relations, self-esteem, and control. This implies that there are dimensions to needs and demands that go beyond the necessity to preserve human physical existence – i.e. psychological or mental needs that we classify into existential, relational, and self-related needs.

“Inadequate degrees of satisfaction of these basic needs may not lead to premature death but instead are revealed in the failure to achieve one’s potential or to function as well as one might under more optimal conditions of need fulfillment” (Pittman & Zeigler, 2007, p.475). According to psychologists, serving these basic needs appropriately would thus contribute to enhanced psychological health and general well-being. In our analysis we provide evidence that these psychological needs are fundamental, which implies that the origin of these needs can be explained or reasoned in evolutionary-biological terms. Fundamental human needs are universal; that is, they can be applied to every human being to varying degrees. They lead to ill effects when thwarted (such as to poor mental health, low adjustment to environment), and elicit goal-oriented behavior designed to serve these needs. They are not derivatives of other

² We refrain from reviewing all the theories and models dealing with human needs, especially in psychological discipline, and instead focus on our own classification of needs. For a review see, among others, Pittman & Zeigler, 2007.

motives, but represent the foundation from which various preferences, wishes and goals may depart (Baumeister & Leary, 1995).

Based on this explanatory note, the following section focuses extensively on the fundamental human needs, that is, on their origin, manifestation and the potential sources that deprive individuals from serving these needs. This analysis provides a new theoretical approach to explain individual's willingness to join radical groups and draw on violent means to reach certain objectives. While the extensive research in conflict economics emphasizes the greed and grievance dichotomy, as well as the viability of rebellion, our paper argues that individuals join groups and deploy their personal resources for psychological reasons. Individuals join groups because it represents a viable reconciliation option to serve their existential, relational and self-related human needs, i.e. needs that address the human drives to feel safe, to understand, order and control their environment, to find their role and purpose in life and to feel effective and autonomous in their strivings. Although we clearly emphasize here the destructive and radical outcomes of need deprivation, such as violence, conflict, or individual radicalization, we should think of need-depriving situations and circumstances also in moderate terms. Not every individual will employ radical means to serve his or her needs, and not every need-depriving circumstance leads to radical outcomes.

In the following, we start with the first need dimension: the *existential human needs* (Section III). Before going deeper into the evolutionary sources of existential needs, various factors and conditions are examined that can prevent individuals from serving their existential, relational and self-related needs. Factors and conditions, such as resource scarcity or resource abundance, marginalization, or severe poverty, can threaten individuals' existence, their group identity and self-esteem. These factors can thus deprive individuals from securing their existence, perceiving their environment as ordered, safe and controllable, feeling accepted and belonged to society and from exploring their full potential. These factors will be examined extensively, because they are widely discussed in conflict economic literature and will thus provide a point of departure for our analysis. Individuals do not only face life-threatening situations, but also have to deal with ambiguous information and uncertain, uncontrollable events. All this has a severe impact on both the physical existence and psychological states of individuals. This means that beyond the need to be safe and protected, individuals have also fundamental needs for belongingness, social approval and self-esteem. After identifying and discussing the origin and various manifestations of existential needs (Section III), we proceed in the same manner

with the second and third need dimensions: *relational* (Section IV) and *self-related needs* (Section V).

2. The economic, social and biological basis of human needs

Various disciplines agree that the most basic premise in human life is to secure one's own existence. It is an instinctive desire, a biological drive to avoid threatening situations in order to safeguard the future (Doyal & Gough, 1991). Thus, individuals make choices in order to secure one's own existence, but they also strive to understand, order, and control the environment they live in. In this decision-making process, individuals are confronted with various complex conditions, such as ambiguous information, unpredictable circumstances, uncertain outcomes, or threatening events. This means that individuals do not only strive to ensure their physical existence, but they also aim to order and master their environment, to understand given circumstances and changing situations, and to avoid threat. Since human beings are social by nature, that is, they have fundamental needs to belong to a group, to feel attached, connected and approved by society, community, or a group, they also strive to find various forms of affiliation. However, beyond preserving survival and assuring social attachment, individuals strive to explore their full potential, to achieve something valuable and feel autonomous. This means that to survive and do well in their lives, people must sustain, beyond physical health, also their mental state (Baumeister, 1991). This means, that certain conditions and opportunities must be given in order to enable individuals to adjust to given circumstances, to find their role within the social environment, to be proactive and efficacious. Individuals must be able to express their autonomy and to make decisions that are consistent with their preferences, desires, and goals (Doyal & Gough, 1991).

According to that, we argue that depriving individuals of supportive conditions, resources, and opportunities to ensure their survival and mental well-being, can lead to deviant and antisocial behavior. For example, individuals who experience persecution, rejection and poor living standards may rise up and fight an existential threat. And depriving individuals of opportunities to feel belonged and approved by society, and to be able to pursue own goals and interests, can lead to antisocial and deviant behavior and choices. The feeling of disintegration, that is, feeling left behind, socially rejected and not integrated into society, can induce negative sentiments about oneself and the environment. A lack of fundamental resources, to secure one's own physical and mental health, can thus motivate individuals to resort to violent measures to access these resources. In this regard, economic research often assumes a very straight causality. The extensive empirical and theoretical studies in conflict economics consider factors such as

resource scarcity, poverty, and marginalization as a direct cause of conflict and do not include psychological mechanisms into their assumptions. However, this strand of literature is particularly important in conflict economics and can be taken as a significant point of departure for our analysis.

2.1. Economic factors and conditions that deprive human needs

The extensive research in conflict economics assume that economic variables, such as resources, growth, population, foreign direct investment, or income can directly affect the likelihood and duration of conflict (Anderton & Carter, 2009). Scholars often refer to the well-known “greed versus grievance” dichotomy (Collier & Hoeffler, 2004) to explain the motivation for rebellion. Hence, some individuals are motivated by greed aimed at profits from control of natural resources (e.g. diamonds, oil, timber etc.), while others are driven by grievance stemming from enduring mistreatment or denied access to valuable resources. To analyze the direct link between resources and conflict, two contending schools of thought have been elaborated in conflict economics literature – the resource scarcity and the resource abundance approach.

The Resource Curse³: resource scarcity and resource abundance

The *resource scarcity* approach postulates that the competition for access to vital but scarce resources can increasingly drive violent conflict. Lack of access to renewable resources generates frustration and grievances against the state, weakens the state, and increases opportunities for insurrection (Theisen, 2008). Thus, resource scarcity has been perceived as one of the main drivers in conflicts such as the Rwandan genocide (Olson, 1995), clashes in Kenia (Kahl, 2006; Theisen, 2012), the civil war in Sudan (Suliman, 1998), and rebellion in South Africa (Homer-Dixon & Blitt, 1998) or Chiapas (Gledisch & Urdal, 2002). Empirical evidence shows that factors like deforestation, land degradation, and clean water shortages increase the risk of armed civil conflicts (Hauge & Ellingsen, 1998). Such environmental scarcity factors can be categorized as supply-induced, demand-induced, or as structural scarcity. Supply-induced scarcity describes a failed adjustment to resource degradation and regeneration, while demand-induced scarcity emphasizes the consequences of increased consumption and population growth. Structural scarcity emerges as a result of unequal resource distribution

³ The resource curse is widely discussed in both economic and political science literature. At least two excellent surveys describe the major strands of the resource curse debate. For a deeper and more detailed discussions we recommend (van der Ploeg, 2011)

(Homer-Dixon, 1999). The interaction between these three categories can result in resource capture and ecological marginalization.

Resource capture results when powerful elites bar weak groups' access to scarce resources. They manipulate state policies to serve their own interests, which weakens institutions and dampens political responses to social grievances and deprivation. Thus, resource capture tends to induce frustration and protest that may lead individuals turn to violence to gain access to deprived resources (Theisen, 2008). Resource capture has been observed, among others, in Zimbabwe, where a major clash concerning unequal distribution of land and natural resources occurred. Colonial expropriation of agricultural land and natural resources produced a situation in which even after colonial independence, a small, mostly white elite joined forces with the government to control most of the lucrative sectors of the economy, like agriculture and tourism, in turn barring access for 1.5 million families and other subaltern classes to vital resources (Moyo & Yeros, 2005). Ecological marginalization describes how unequal resource access and population growth cause resource depletion and degradation. The interaction between deprivation and population growth can trigger migration to ecologically fragile regions. The accrued high population density, combined with weak human capital and financial capabilities to protect and cultivate local resources, cause severe poverty and environmental depletion (Theisen, 2008). Thailand is a good example for ecological marginalization. The unequal access to resources for hill tribe farmers and a region-wide population increase across Northern Thailand forced marginalized farmers to live on less land with few off-farm options. Soil degradation in those regions led to enhanced demand for land rental outside their own territories and for fertilizer, causing high costs and lowering profit margins. This insecure and unstable situation, which led inter alia to a decline in land productivity, income, and health, has triggered conflicts over resources between the hill tribe farmers and government elites (Crooker, 2007). Similar disputes occurred in the Philippines, where forced migration to degraded upland areas due to high population growth and insufficient rural development, spurred rebellion and violent insurgencies among economically deprived farm workers and landless peasants (Homer-Dixon, 1994).

In contrast to the resource scarcity approach, the *resource abundance* theory postulates that resource abundance and possible resource dependence provide both funding and motivation for armed conflicts (Collier & Hoeffler, 2005; Fearon, 2005). Although the classic economic view regards resource abundance as advantageous for economic growth and development, a number of empirical studies since the 1990s have taken an opposite perspective. These studies and the

growing literature on the “resource curse” and the “paradox of plenty” postulate that resource abundance slows down economic growth while increasing the risk of conflicts and authoritarian and corruptive political regimes (Basedau & Lay, 2009). Empirical studies support this theory and provide evidence that natural resource-rich countries seem to be more prone to conflict and violent insurgencies (Ross, 2004). Abundant primary commodities and the “booty” character of natural resources tend to provide opportunity and motive for “greedy rebels,” which increases the likelihood of conflict onset (Collier & Hoeffler, 2004). Beyond “internal greedy rebels,” “greedy outsiders,” such as external states or corporations, can also engage in or foster the escalation of wars and conflicts, with the aim to gain access to raw materials (Dashwood, 2000). Once, certain access to resources is established, elites, groups or individuals are willing to protect their source of wealth and privilege, even with violent measures. However, other individuals may be motivated by grievances stemming from a denied access to the resource wealth. Such an unequal natural-resource-wealth distribution has been observed in Nigeria or Sierra Leone (Humphreys, 2005). Northern Nigeria, for example, suffers from lack of support from the political center in the south, which exploits the north’s rich uranium deposits with no visible returns. As a result, communities in the north are afflicted with chronic poverty, severe youth unemployment, non-functioning institutions and infrastructure, an educational deficit, and weak economic production (Agbiboa, 2013).

Despite its broad acceptance in the literature, the causal mechanism linking natural resources to conflict onset has not gone unchallenged. Although some empirical studies have found a direct relationship between resource scarcity and conflict onset, occurring especially in developing countries (e.g., Raleigh & Urdal, 2007), other empirical findings suggest a more indirect link, arguing that it is rather the relationship between environmental shortages, population density, and state fragility that increases the risk of conflict (Gurr 1988; De Soysa, 2002). Others argue that rather state weakness, bad governance, corruption, and low investment in rural areas are the real causes of environmental degradation and conflict onset (Peluso & Watts, 2001). This (political) line of argument has been also used to question the resource abundance approach. While some scholars (e.g. Basedau & Lay, 2009) emphasize that only a certain subset of natural resources fuels conflicts, namely lootable resources and oil (Ross, 2004), others reject this view and argue that the quality and strength of state institutions determine conflict onset (Snyder & Bhavnani, 2005). In their view, resource-rich countries tend to suffer from a weak and corrupt leadership, or even oppressive and authoritarian regimes, which decrease their capability of successfully managing their resource wealth (Brunnschweiler & Bulte, 2009; Idemudia, 2012). Hence, the quality of resource governance and the weakness

of state structures seem to depend on country-specific characteristics, such as socio-economic development, intergroup relations, integrity of state institutions, and so on (Basedau & Lay, 2009).

Although some economic analyses assume a direct causality between resources and conflict, we argue that resource-induced conditions, either scarcity or abundance, can severely deprive individuals of serving their fundamental human needs. Facing a shortage of vital resources enhance the threat and uncertainty of not being able to secure one's own existence, to feel safe, to control and to live in an ordered and (economically, socially, and politically) predictable environment. Individuals who are denied access to essential goods and services are not able to make long-term investments, and thus face more ambiguity and uncertainty in their lives. Not being able to invest properly in education, housing, or healthcare, and thus to participate in social and political domains, enhances disintegration. The individual does not feel belonged to and approved by society, which can decrease his or her willingness to invest in collective goods and be prosocial. Experiencing a denied access to valuable resources and opportunities to be proactive and efficacious, to reach goals and make decisions according to one's own preferences, deprive individuals of serving their self-related needs. However, beyond valuable resources, factors such as political instability, ethnic cleavages, or state's economic capacity have to be also taken into consideration. In this regard, economists argue, that states with a relatively low GDP and general poor economic conditions tend to be at greater risk of civil war onset (e.g. Sambanis, 2004). This led several researchers to put the emphasis on the relationship between economic fragility and the risk of conflict onset.

Poverty and deprivation

The World Health Organization (WHO) argues that economic fragility plays a significant role in conflict onset, because it “prevents some of its members from meeting basic needs” (OECD, 2016, p. 86). Such economic risk factors include, among others, unemployment, poverty, migration, economic closure, or educational backwardness. Empirical evidence supports the link between economic fragility and conflict and demonstrates that countries with high poverty, high child mortality and malnutrition, high undernutrition, and limited access to water sources are more prone to armed civil conflicts. Especially the lack of appropriate nutrition and health care tend to significantly increase the risk of armed conflict onset (Nafziger & Auvinen, 2002; Pinstrup-Andersen & Shimokowa, 2008).

In much of the existing literature, the concept of poverty has been considered in terms of income alone while neglecting its multidimensional nature. This leads to a one-sided focus on economic incentives and opportunities for rebellion (Collier & Hoeffler, 2004). However, Sen (1992) initiated a critical discussion of the economical concept of poverty and developed a comprehensive approach which goes beyond economics. At the heart of his theory is the notion that all individuals have the needs and the capabilities to achieve something valuable and meaningful in life. “Thus, living may be seen as consisting of a set of interrelated “functionings”, consisting of beings and doings” (Sen, 1992, p.38). Such interrelated “functionings” may include both, physical elements, such as housing and nutrition, and more complex social achievements, such as social and political participation, in-group identification, social approval, and self-esteem. According to that, the perception of poverty has been extended in the economic development literature by the concept of deprivation (Braithwaite et al., 2016).

The concept of *deprivation* has been widely examined in social science studies as a significant contributing factor concerning conflictual human behavior (Silke, 2008). Here, deprivation can be defined in either absolute or relative terms. *Absolute deprivation* expresses the average level of poverty or human well-being within a population, whereas *relative deprivation* is a subjective perception of unequal treatment and defines poverty from a comparative point of view (Baten & Mumme, 2013). Absolute deprivation implies that low level of physical (ownership of goods and land), human (education, health and employment), social (community, information, participation), and environmental (resource availability) capital deny individuals or groups the possibility of reinvestment and development (Eyber & Ager, 2003). Poor economic conditions provide no options or resources for the poor to receive optimal health and educational standards (Thorbecke & Charumilind, 2002), which in turn reduces educational attainment, economic activity, and overall social and political engagement within society (Easterly, 2007). Examining the causal relationship between conflict and absolute poverty – where poverty is measured in terms of infant mortality –, an empirical study by Braithwaite and colleagues (2016) shows that countries with higher levels of absolute poverty tend to be more prone to conflict onset. Once a country has experienced a conflict, it faces negative repercussions for its economic development, which in turn increases the likelihood of future insurgencies. This reinforcing relationship between conflict and poverty has become known as the “conflict trap” – the vicious cycle of conflict and underdevelopment. Hence, the outbreak of a civil war in poorly developed countries causes economic devastation, which in turn increases the likelihood of further insurgencies (Collier, 2003).

According to that, an empirical study (Hegre et al., 2013) predicted changes in global and regional events of armed conflict for the period 2010-2050, by using exogenous variables such as population size, poverty level (infant mortality rate), demographic composition, education level, oil dependence, ethnic cleavages and neighborhood characteristics. The simulated predictions concluded that over the next few decades a large amount of conflicts will occur in East, Central, and Southern Africa as well as in East and South Asia – those countries with the highest poverty rate. The authors argue that the major reason for increased conflict in these countries is strong population growth. An increase in the population size in poorly developed countries, with a shortage of existential resources and lack of education, may increase the risk of civil conflict. Especially scarcity of food-related resources, as seen in Somalia, Chad or Mali⁴, increases the risk of food insecurity and existential threat.

However, despite this evidence, some studies question the causal relation between poverty and conflict onset. Public opinion polls, obtained from Palestinians living in the West Bank and Gaza, show that not the poor, but rather the well-educated and affluent respondents support armed attacks on targets in Israel (Krueger & Maleckova, 2003). Further studies argue that participation in terrorism is associated rather with lack of civil liberties, political freedom, and oppression, than with the average national income (Abadie, 2006; Piazza, 2006). A similar study of 14 African and South Asian countries with a majority Muslim population also turned up contradicting results, namely an association between less poverty and greater support for terrorism (Fair & Shepherd, 2006). Further evidence is provided by a large empirical study in London and Bradford that questioned men and women of Muslim heritage on their attitudes towards violent conflicts and terrorism. The results show that sympathy for violence and terrorism is particular high among well-educated, young, affluent, and British-born individuals (Bhui et al., 2014). One possible explanation could be that support for terrorism and political engagement, even if violent, requires resources and a certain amount of knowledge – all of which is available to individuals in better economic positions (Krueger & Maleckova, 2003).

⁴ Foremost the Sahel region in Africa, spanning from Mauritania and Senegal in the West to Eritrea, Ethiopia and the Sudan in the East, where droughts and famine are ubiquitous, has faced several conflicts in the last decades (Hendrix & Brinkman, 2013). In Niger and South Sudan, farmers fight against herders over land, which is fueled by ethnic and religious rivalries and low levels of livelihood opportunities. Sudan is facing, beyond tremendous poverty and constrained access to minimum subsistence means, high food prices, violent conflicts between farmers and pastoralists, depletion of food stocks and a high migration flow from South Sudan (WFP, 2018).

In order to explain such inconsistent findings, researchers point out the relative deprivation hypothesis – the subjective perception of one's own economic position relative to that of others. This means that dissatisfaction and frustration with one's situation arise due to subjectively set standards and comparisons with others. Theories of relative deprivation often contrast between comparison types. Personal comparison describes the case where one person compares oneself to other similar individuals from the same group. For example, a Palestinian living in Germany would compare themselves with other Palestinians living in the same country. By contrast, group-based comparison means comparing one's own deprived situation (or the deprived situation of one's own in-group) to the situation of other outgroup members. For instance, a Palestinian individual living in Germany would compare themselves with the German majority (Koomen & Van der Pligt, 2016). Empirical studies show that group-based comparison, rather than subjectively felt deprivation, strengthens support for violent action and group militancy (Burraston et al., 2018). A large meta-analysis supports this hypothesis and shows that group-based relative deprivation increases collective action and generates negative attitudes towards outgroup members, whereas subjective relative deprivation often lead to destructive behavior directed towards oneself, such as substance abuse, negative self-evaluation, withdrawal or antisocial behavior (Smith et al., 2012).

This may imply that relative deprivation has stronger implications than absolute or real deprivation, especially in terms of intergroup comparisons, which may induce collective grievance and thus enhance the willingness to collectively rebel against the potential source of threat. However, a consistent problem in this regard is the level of measurement for empirical analysis. Across studies, relative deprivation has been measured among others in terms of income inequality (Pridemore, 2011), health care, access to electricity (Saito et al., 2014) or the perception of one's own social status (Zhang & Chen, 2014). Especially economic literature uses income inequalities on a communal level to examine the impact of relative deprivation on violent behavior. The empirical results suggest that income disparities are indeed a reliable measure of insurgencies (Ward et al., 2010). Similar studies on income inequality shows that youths with a low socio-economic position but living in affluent communities tend to be more aggressive and prone to violent behavior, compared to poor youths living in impoverished communities (Jarjoura & Triplett, 1997; Alesina & Perotti, 1996). Although some scholars question the relationship between income inequality and conflict due to the lack of adequate income inequality data (Collier, 2000), a vast number of researchers take a contrasting position. They argue that income disparities may indirectly lead to social or political disintegration, which exacerbates grievances and political strife. Thus, socio-economic, and political isolation

and lack of governmental support can increase competition for regional resources and reinforce the risk of conflict (Nafziger & Auvinen, 2001). Using disaggregated data on welfare and socioeconomic inequalities between and within subnational regions in 22 countries in Sub-Saharan Africa, a study provides evidence that conflict onsets are more likely in regions with 1) high levels of relative deprivation regarding household assets, 2) low levels of education, 3) high intraregional inequalities and 4) relative deprivation in regard to natural resource deposits (Ostby et al., 2009).

Considering these empirical findings, we may conclude that subjectively perceived deprivation can be a potential source for rebellion. Although some studies (Collier & Hoeffler, 2004; Fearon & Laitin, 2003) found no statistical significance for proxies for grievance, including measures such as income inequality, political repression, or ethnic and religious cleavages, other studies, mentioned above, contend that especially collective deprivation drive conflict onset. Experiencing existential threat and social, political and economic deprivation as a group can deprive group members of serving their fundamental needs as a group, that is, to secure the group's existence, to assure a certain and consistent environment, to feel accepted and approved by society and to receive opportunities to be efficacious and autonomous in order to live a meaningful and dignified life. According to that, we included research that focuses especially on intergroup relations and collective grievance to explain conflict onset.

Polarization, horizontal inequality, and intergroup threat

The previous paragraph has shown that conditions of existential threat, competition over scarce resources, discrimination, and poverty can deprive individuals from serving their fundamental relational, existential, and self-related needs and can in direct forms even lead to violent conflict. However, psychological literature postulates that the most basic premise in human life is not only to secure one's own existence but also that of one's own social group. Evolution reveals that resource-sharing, cooperation, and socializing within a group all tend to enhance individuals' survival and continued existence. Individuals strive to improve their fitness through collaboration and affiliation with significant others. Belonging to and identifying with a group enable individuals to sympathize with fellow members, to understand their behavior, and to develop their own identity (de Waal, 1996). In this regard, conditions of threat, competition, or exclusion of one's own group from society can enhance individuals' willingness to accept a high level of personal risk to fight for the group. Realizing that one's group is subject to negative evaluation, structural deprivation, or to existential threat can engender a sense of frustration, grievance, uncertainty, and aggression. Intergroup threats, whether realistic or

symbolic⁵, can induce negative feelings about oneself and one's own group and can easily foster anger and outgroup hostility (Koomen & van der Pligt, 2016). Factors such as intergroup threats, collective deprivation, or discrimination can increase cognitive discrepancies, uncertainty, and perceived lack of control over outcomes and the environment, which deprive individuals of serving their existential needs as a group. Social rejection and marginalization prevent individuals from social and political participation, from feeling accepted and approved by other members of society and from expanding the capacity to follow own interest and goals. This can enforce individuals' willingness to protect and fight for the survival of their own group, for social acceptance and approval of their group identity (and norms values, culture etc.), and for receiving the options to make self-consistent choices (i.e. choices according to their needs and preferences).

The most common and widely accepted concept in this regard is Ted Gurr's (1970) aggression-frustration theory, which argues that the primary source of human capacity for intergroup violence is relative deprivation. This means that, higher levels of frustration and subjective feelings of discrimination increase the probability of deprived individuals or groups turning to illegal means to achieve certain goals. This aggression-frustration theory emphasizes the interrelation between relative deprivation, emotions, and the ideological value attached to the good one is deprived of. The scale of the deprivation tends to increase frustration especially when one's own identity is attached to it (Bartusevicius, 2014). In this context, existing literature highlights the concept of horizontal, or intergroup inequality. Horizontal inequality is defined as inequalities in economic, political, and social terms between culturally defined groups (Ostby, 2008). Especially in countries where ethnicity and religion seem to determine resource allocation and social power structures, horizontal (or intergroup) inequality can fuel violent conflicts. In this regard, more severe grievances and accrued frustration may enhance mobilization capacities in countries where cultural groups are socially clustered and group cohesion is strong (Gubler & Selway, 2012). Possible examples to support the frustration-aggression link are the insurgencies in Iraq, where Shiite Muslims revolted against the Sunni regime; the Syrian civil war, through which the Sunni majority express their grievances towards the dominant Alevi regime (Basedau et al., 2017); but also ethnic and religious cleavages in former Yugoslavia, the USSR, Northern Ireland and the Basque Country (Stewart, 2008).

⁵ Realistic or symbolic threat is experienced when one group perceives that another group is in the position to cause them harm. Physical injury, loss of resources or power and deprivation of existential livelihood pose realistic (tangible) threats to a group, while the concern about the integrity of the ingroup's identity or belief-system refers to a symbolic (intangible) threat (Riek et al, 2006).

Theories like horizontal inequality and polarization emphasize especially the role of a threatened group identity in explaining conflict onset. While horizontal inequality refers to multidimensional differences (economic, political, cultural etc.), polarization measures social “antagonism.” Social “antagonism” is fueled by two factors: alienation, felt between members of different groups; and identification with one’s own in-group (Esteban et al, 2012). The degree of polarization increases when members of a homogeneous and cohesive group feel socially or ideologically separated from members of other groups. Accordingly, the level of conflict increases with the magnitude of polarization. “This notion of polarization is particularly relevant to the analysis of conflict, because it stands for the idea that the tensions within a society of individuals or states result from two simultaneous decisions: identification with other subjects within the own group of reference and distancing oneself from one or several other competing groups” (Esteban & Schneider, 2008, p. 133).

Empirical findings show that especially groups with a shared and stable group identity who find themselves oppressed and discriminated by the government or other dominant outgroups tend to turn to violent means to voice their discontent and stand up for their rights (Ostby, 2008; Stewart, 2002). Denial of access to vital resources, harsh socio-economic conditions and large income disparities seem thus to intensify when identity threat becomes salient. According to this, identity-related issues based on religion, ethnicity, language, or region, which foster group identification and group cohesion, are perceived to have a larger impact on the outbreak of inter-group conflict than economic factors alone (Ostby, 2008). The intergroup threat theory thus extends the concept of horizontal inequality and polarization, and postulates that realistic or symbolic threats are experienced when one group realizes that another group is in the position to cause it harm. Physical injury, loss of resources or power, and deprivation of existential livelihoods pose realistic (tangible) threats to a group, while the concern about the integrity of the ingroup’s identity or belief-system is a symbolic (intangible) threat (Riek et al., 2006). The often-cited conflict between Israelis and Arabs illustrates these types of threat. The enduring conflict involves realistic struggles over land, resources, and power, as well as symbolic threats in regard to religion, cultural worldviews, and language (Stephan & Stephan, 2017).

Ethnic Minorities

Considering the theories on horizontal inequality, polarization and intergroup threat, further theories and empirical studies have shifted their focus to minority groups. In this regard, an empirical study (Cederman et al., 2010) examines a set of mechanisms to explain the effect of deprived minorities and collective negative emotions. The results show that economic and

political grievances have an impact only in combination with ethnicity, which serves as a mobilizing factor for conflict outbreaks. The authors conclude that economic and political factors cannot be separated from frustration-driven ethno-nationalist mobilization and violent conflict. Another analysis confirms these results by showing that major domestic disputes can also occur in countries with high national income if some minority groups feel deprived of their share of the national economic wealth (Koubi & Böhmelt, 2014). Evidence is provided by the example of the government-sponsored cultural, religious, and social deprivation of Muslim minorities in the poorest regions of southern Thailand. Numerous obstacles and severe exclusion, ranging from denied educational opportunities to social subordination, have intensified the ethnic awareness and identity of Malay Muslims. Consequently, Wahhabi doctrines have been disseminated with the aim to recruit discontented young adults as spearheads of the Islamist movement in the south. This example suggests that cultural, ethnic, or religious deprivation, which leads to social isolation and marginalization, can reinforce perceived threats associated with one's own identity. Feelings of rejection engender a sense of injustice, frustration, uncertainty, and anger. Such feelings can induce civil uprisings against the government by deprived minority groups who aim to protect their group identity or bring about major changes to their social status (Croissant, 2007). According to that, scholars often argue that the struggle to preserve one's cultural and ethnic identity is rather linked to the struggle for political and civil rights rather than to economic opportunities. This could explain why rebels are often willing to fight for their group without any expected economic gains, and why sustained and highly violent ethnic conflicts have arisen in developed countries, too (e.g., former Yugoslavia, Israel, Northern Ireland, Cyprus) (Sambanis, 2001). Hence, beyond reducing poverty and improving overall national economic wealth, government policies should also focus on providing equal opportunities, enabling political participation, and including ethnic groups in order to curb civil strife (Ostby, 2008).

Although ethnicity has been identified as the main cause of civil conflicts since 1945 – including conflicts in Congo, Sudan, Pakistan, and Georgia, among others – the role of ethnicity remains a complex subject of discussion (Denny & Walter, 2014). Observing the relationship between ethnic discrimination, grievances, and conflict onset, a large empirical study (Basedau et al., 2017) found no significant relationship between grievances, ethnicity, and conflict involvement. Apparently, grievances and ethnic discrimination do not seem to be the primary drivers of conflict engagement, especially for religious groups. Only for 20 out of the 433 examined groups – such as Christians in Azerbaijan, India, Indonesia and Sudan; Buddhists in Bangladesh; Muslims in Ethiopia, India, Israel, the Philippines, Cote d'Ivoire, and Uganda; and

Sikhs in India – was the causal chain of discrimination, grievance, and armed conflict confirmed. By contrast, more than 150 aggrieved groups that experienced severe discrimination did not choose to engage in violence. One possible explanation provided by the authors (Basedau et al., 2017), could be that countries in which deprived groups do not engage in violent protest are under either authoritarian Muslim or Communist rule. These restrictive regimes are assumed to curb violent uprisings. Furthermore, most aggrieved minority groups are small in size, which indicates that minority group size (relative to population size) has an impact on conflict involvement. Especially for non-state conflicts, and also partly for armed conflicts with theological contradiction, the authors find robust and significant evidence of a relationship between size and conflict. They argue that the opportunity for rebellion in the form of domestic armed conflicts depends on both group size and state capacity, meaning that greater state capacity – measured in terms of GDP – decreases the opportunity for rebellion. These findings would support the prominent studies by Collier and Hoeffler (2004), and Fearon and Laitin (2003), which postulate that opportunity and feasibility of rebellion seem to play a greater role in conflict onset than deprivation and grievances. While the studies agree on the issue that grievance does not determine conflict onset, they disagree in their interpretations of why particular factors operate as they do. The theories and empirical findings presented so far do not provide a clear picture why individuals would accept a high personal risk in order to promote their group's objectives.

In the course of this paper, we considered empirical studies on resource scarcity and resource abundance, on poverty, deprivation, intergroup threat, and ethnic minorities, which all show controversial and statistically unclear results. Discussions like these motivated us to include psychological studies into our analysis in order to broaden our perspective on human decision-making and behavior. Psychological studies on threat and deprivation focus foremost on psychological consequences of these factors, such as negative feelings and thwarted human needs, and their implications on human choices and behavior. Experiencing realistic or symbolic threat, discrimination, harsh socio-economic conditions, and low opportunities to secure one's own existence, can lead, beyond a sense of frustration, injustice, fear, and anger, also to need deprivation. Denied access to vital resources, such as education, housing, water or food, deprive human beings of serving their existential, relational, and self-related needs, which include both physical inquiries and more complex psychological factors, such as a sense of control over one's own life, an ordered, consistent, and reliable environment, feelings of social approval and belonging, as well as having the opportunity to be efficacious and self-determined. Threatening events, that go beyond intergroup hostility and resource deprivation, can also have

strong emotional and cognitive effects. Anger and uncertainty, for example, have a detrimental effect on how individuals process information and make decisions. Experiencing negative emotions and cognitive ambiguity (e.g., stereotypes, negative evaluative judgements, rejection) towards one's own group can lead to severe self-doubts and a lower self-esteem. In the following, we therefore discuss the psychological implications of the factors already discussed throughout the conflict economic literature, namely poverty, resource deprivation, social rejection, polarization etc. In doing so, we will emphasize how these factors tend to deprive individuals of serving their existential, relational, and self-related needs – that is, needs for safety, order, control, ambiguity avoidance, predictability, and consistency; needs for identification, belongingness, and social approval; and needs for self-esteem, self-determination, and self-efficacy.

2.2. Psychological implications

A deeper insight into threats in interpersonal and intergroup domains is provided by social psychology. Social identity theorists argue that inter-group tensions occur due to the assessment of psychological benefits of a group membership – namely acceptance, belonging, social orientation, and a system of rules, values, and norms which guide behavior and provide a purpose in life. Furthermore, stable group cohesion boosts self-esteem, provides consistency and meaning, and increases the sense of distinctiveness. Since humans are “tribal” in nature, membership in particular groups is essential for the basic subsistence and identity formation of each individual. Therefore, individuals strive to preserve their social status as much as they strive to preserve their physical existence, a process referred to social self-preservation (Dickerson et al, 2004). Accordingly, a perceived threat to a group implies a threat to each member of that group, who (the member) fears losing his stable social system and in turn his own social identity.

But also subjectively perceived threats, such as social rejection, economic or political discrimination, lack of opportunities, and experienced prejudice, tend to all increase uncertainty, negative self-appraisal, and perceived loss of control (Stephan & Stephan, 2000). The experience of social exclusion and socio-economic deprivation raises doubts about one's own identity, status, and social belonging. Such threats can affect especially individuals from minority groups who feel threatened by the majority, but also subgroups within the majority who feel threatened by minority groups. In the latter case, notably groups with low socio-economic status may feel left behind and under threat from “elite” sections of society, such as politicians, the government, and other institutions, but also from minorities such as immigrants

or refugees. This can generate uncertainty, perceived competition, and feelings of exclusion. Thus, beyond existential threats (concerning material assets, resources, food, shelter, etc.), individuals can be threatened by ambiguity, inconsistency, and cognitive uncertainty (e.g., possible acts of terrorism, ambiguous information, different cultural or religious values) (Koomen & Van der Pligt, 2016), all which create uncertainty and a perceived loss of control.

Research on threats and discrimination shows that individuals who experience discrimination and social rejection due to their culture, religion, or ethnic background are particularly vulnerable to depression, uncertainty, and decreased self-esteem (Bhugra & Becker, 2005). Especially “targeted exclusion,” which involves an active and intentional rejection of a certain group or individual, tends to enhance the risk of depression. Such obvious rejection may elicit negative self-referential cognitions concerning one’s own self-worth, beliefs, values, and ways of thinking and behaving, which raises severe doubts about one’s own role and place in society (Vedder et al., 2007). “These cognitions, which are hallmarks of many depressive episodes, may in turn give rise to self-conscious emotions like shame and humiliation, which are associated with biological processes (e.g., inflammation) that support behavioral disengagement and withdrawal” (Slavich et al, 2010, p. 3).

Likewise, individuals who are rejected by society due to their low socio-economic position – not necessarily because of their religion or ethnicity – suffer stigmatization, depression, and negative self-image. “A lot of research in the U.S. (cf. Lott, 2002; see also Lott, 2012), for instance, indicates that members of the lowest social classes are widely regarded as having failed to seize the opportunities available to them because they lack initiative and enthusiasm. They are also viewed as dishonest, dependent, lazy, uninterested in education and promiscuous. Wider society considers the fact that they are poor as an individual problem, and as result far more attention is paid to the behavior of the poor than the social and economic conditions and circumstances that perpetuate poverty, inequality and exclusion” (Koomen & Van der Pligt, 2016, p. 43). Such prejudice, stigmatization and ostracism decrease one’s own self-confidence and self-efficacy, which in turn reduce trust in one’s own abilities and future opportunities.

A growing body of psychological research shows that experiences of discrimination, rejection, and social isolation tend to have severe repercussions for individuals’ mental well-being (Cacioppo et al., 2003). Deprivation and discrimination in the area of education, housing, labor, healthcare, political representation, or public policy can lead to long-term structural processes of social and political disintegration. This causes psychological damage, expressed in feelings of inferiority, shame, powerlessness, and apathy (Chow et al., 2008; Dickerson, 2011).

Consequently, feelings of being left behind and disintegration tend to generate, in the long run, a reluctance to adapt to social circumstances and to show consideration for other social members (Anhut, 2005).

A neuroimaging study shows that the pain felt upon social exclusion is similar to the pain experienced upon physical injury. This implies that the experience of exclusion activates the same neural region that is responsible for assuring survival (Eisenberger et al., 2003). These regions include the anterior insula and dorsal anterior cingulate cortex (dACC) - the latter perceived to represent “a neural alarm system” that can detect and react to threatening environmental stimuli. Here, the Hypothalamic-pituitary-adrenal (HPA) axis and Sympathetic-adrenal-medullary (SAM) axis are particularly responsive, which release cortisol and epinephrine in times of stress. “Specifically, stressful conditions characterized by low controllability and high social-evaluative threat were associated with the greatest cortisol responses and slowest recovery of cortisol to baseline levels” (Slavich et al, 2010, p. 4). An experiment provides evidence that social-evaluative threat conditions tend to release greater cortisol and exhibit an increase in negative self-perception and lower self-esteem (Gruenewald et al., 2004).

Especially in conflict-prone regions, the permanent experience of instability, inconsistency, and threats can have a severe impact on need satisfaction and subjective mental well-being. Hereby, individuals are greatly exposed to repeated and enduring existential threats, meaning they live in a state of pervasive insecurity and anxiety. Such conditions of terror, instability, torture, and violence have an immense impact on the psychological states of those involved. Especially in developing, conflict-prone regions, individuals face a severe loss of resources, which translates to instable and uncertain future prospects (de Jong et al., 2001). Field surveys and empirical investigations on the psychologically detrimental effects of potentially traumatic events (such as natural disaster, conflict, or torture) have observed high rates of post-traumatic stress disorder (PTSD)⁶ and depression among affected populations (e.g., Johnson & Thompson, 2008). A review of 161 articles that included 81,866 respondents from 40 countries, with 122 surveys conducted in low- and middle-income countries, confirms that potentially traumatic events are associated with mental disorder. A social psychological framework of war and trauma (Janoff-

⁶ Post-traumatic stress disorder is a mental disorder that develops when individuals experience extremely traumatic events. Trauma involves circumstances and events that pose a significant threat (physical, psychological, emotional) to the survival and safety of a person. Individuals with PTSD have intense, disturbing thoughts and feelings related to their experience, but also about themselves or their environment. Emotional arousals, angry outbursts, reckless social behavior or self-destruction are also symptoms that vary in severity (APA, 2019).

Bulman, 1992) claims that posttraumatic symptoms result from an individual's attempt to cope with loss of meaning in life and self-worth. "When one's basic assumptions of the construction of the world and its reality are in mismatch with perceptions following exposure to potentially traumatizing events, the result is a disorganized memory structure as manifested in PTSD" (Kanagaratnam et al., 2005, p. 512). In other words, life-threatening and traumatic experiences destruct individuals' cognitive assumptions about themselves and their environment, and this psychological inconsistency or "disconnection" leads to mental maladaptation in the form of PTSD or depression.

Other psychological studies show that severe experiences of threat and deprivation can lead to self-destructive and antisocial behavior. Anger and aggression can decrease empathy for other victims (Chow et al., 2008) or may even increase the propensity to engage in extreme violence such as mass shootings or terrorism (Hartling, 2007; Knapton, 2014; Wesselman et al., 2015). But also, economic studies confirm that socio-economic exclusion increases survival stress by generating feelings of grievance, frustration, and anger. This can result in aggressive behavior, rejection of social norms and values, or attachments to political extremes (Gurr, 1970; Ostby et al., 2009; Stewart et al., 2006; Cederman et al., 2013 etc.). Neurocognitive studies provide evidence that low socio-economic conditions tend to increase daily cortisol release over time, which in turn enforces vulnerability to stressful and threatening events (Chen et al., 2010). These results support the assumption that the socioeconomic status (SES) has an impact on individuals' ability to process and evaluate information and decision-making (Chen et al., 2004). Individuals from a low socio-economic background tend to draw more negative inferences from certain situations and interpret ambiguous situations as far more threatening than high-SES individuals (Gump et al., 1999). Furthermore, low SES individuals tend to favor small immediate rewards over larger future rewards, which they perceive to be less probable (Suor et al., 2017).

These neurocognitive studies show that resource deprivation and harsh socio-economic conditions have an impact on subjective information processing, decision-making and the perception of one's social environment. The world is perceived as threatening, insecure, and unpredictable. The lack of opportunities to ameliorate one's state increases one's perception of an uncontrollable and uncertain environment, which may decrease one's subjective willingness to adjust to it in a socially accepted way. We can thus conclude that life-threatening events and potentially traumatic experiences, such as conflicts, natural disasters, or resource loss, have a devastating impact on the mental and physical state of individuals. Poverty, deprivation, and discriminatory living conditions generate persistent distress and grievances, which in turn

reinforces feelings of instability, anxiety, and loss of control (Doosje et al., 2013). The perception of an uncontrollable and ambiguous environment, following the exposure to traumatic events, leads to psychological disequilibrium, severe self-doubts, and confusion (Kay & Eibach, 2013). Further, the lack of opportunities to improve one's social status, to pursue goals and explore one's own potential enhances negative feelings about oneself and the living environment. Decreased self-worth, a sense of personal insignificance, as well as the loss of meaning of personal existence, can lead to severe mental disturbances and negative emotional processing (Kruglanski et al., 2014). Consequently, such external stressors that trigger feelings of grievance, threat, and uncertainty increase the demand for managing these conditions and re-establishing a positive and consistent self-view (Deci & Ryan, 2002). This implies that beyond physical needs, individuals strive to find means to satisfy their (psychological) existential, relational, and self-related needs in order to be physically and mentally healthy. Individuals want to be approved and feel belonged to society, to establish a sense of meaning in life and to form a consistent and reliable worldview about themselves and their social environment. Individuals often seek to understand their environment, who they are, and where they belong to. This produces enhanced needs for consistency (Haidt & Graham, 2007), predictability (Pyszczynski et al., 1997), uncertainty and ambiguity avoidance (Jost et al., 2009), order (Brandt & Reyna, 2010), and control (Kay & Eibach, 2013); as well as needs for identification (Hogg & Adelman, 2013), belongingness (Baumeister & Leary, 1995), and social approval (Slavich et al., 2010); as well as needs for self-esteem (Baumeister, 1993), self-determination (Deci & Ryan, 1995) and self-efficacy (Bandura, 1977). The satisfaction of these needs is of utmost importance for individuals' mental health and coping mechanisms in life. In the following we thus start to discuss extensively existential needs (Section 3) – needs that are foremost covered by a safety-seeking epistemic mechanism, followed by relational (Section 4) and self-related needs (Section 5).

3. Existential Human Needs

Existential human needs are needs that refer to a safety-seeking, threat-avoiding mechanism. They drive individuals to not only secure one's own existence and to cope with uncertain, ambiguous and threatening information and circumstances, but also to order and control the environment they live in, and to understand the "meaning" of the universe and own existence. To survive in a dynamic, ever-changing environment, individuals have to cope with ambiguities and indeterminacy to make choices and master behavioral tasks. They have to make new experiences, to cope with vast amount of information and to develop new cognitive and

behavioral skills in order to adjust to changing circumstances. While existential needs are fundamental in nature, that is, they can be applied to every human being across various cultures and environments, the manifestation of each need vary across individuals. This means that not every individual has the same need intensity. These differences in the need intensity may differ because of various complex synergies, such as genetic, environmental, social, and dispositional factors. In our analysis we will not focus intensively on these differences but draw our attention to the fundamentality of these needs – the need for safety, order, control, ambiguity avoidance, consistency, and predictability.

The Need for Safety/Existential Security

The theories and empirical studies mentioned above provide evidence that the most basic of all human needs is the need to secure one's own existence. Individuals strive to mitigate threatening and uncertain situations in order to feel secured and safe. As Maslow (1943) has indicated, a fundamental and biologically settled motivation, beyond all physiological needs, is to maintain existential safety. The need for safety can be understood as a human motivation to feel protected from environmental threats and to have sufficient material resources to ensure basic survival. Existential safety needs simply represent the human desire to remain alive (which means having sufficient resources to assure basic survival) and to avoid threatening situations and death-related thoughts (such as about one's own mortality, existential anxiety, etc.) (Evans et al., 2005). The need for safety is strongly determined by ecological conditions and external events. Climate change, pollution, diminishing water supplies, and other forms of ecological degradation, but also economic shocks, terroristic attacks, or natural disasters have clear ramifications for the potential fulfillment of this need (Kasser, 2009). But, beyond physical and materialistic safety, individuals also have a need for subjectively perceived feelings of safety. Unlike physical safety, perceived feelings of existential insecurity can arise even if no real danger is encountered. Thus, psychologists tend to differentiate between the physical and psychological need for safety (Ryan & Deci, 2000). Psychological safety refers to individual's sense of security and assurance in their ability to manage threat and change (Newman et al., 2017). Clinical studies show that mental disorders such as anxiety, phobia or depression have been linked to unmet psychological safety needs, or the subjective perception of not being able to manage threat and change (Zheng et al., 2016; Weinstein & Stone, 2018).

Experiments with nonhuman organisms provide evidence that threatening information is processed faster than rewarding information, which may be attributed to an evolutionary survival strategy. Feelings of personal insecurity, like anxiety or uncertainty, dampen the need

for safety. In other words, when the need for safety is deprived, increased feelings of threat and anxiety initiates approach or avoidance behavior. According to that, the appraisal theory proposes that emotions related to harm, or threat are activated faster and more automatically than the emotions that are triggered when experiencing blame or anger. When something uncontrollable or unexpected happens, the individual will first perceive it as a threat (fear/uncertainty) and next evaluate its hedonic value (sad/happy). This implies that the need for safety is an evolutionary adaptation mechanism that helps individuals to cope with unexpected events and an uncertain environment (Zheng et al., 2016).

One prominent approach asserts that when survival and sustenance are threatened, individuals search for means or material resources to feel safe and secure. “Having a steady job and money in a savings account makes people feel more secure and thus fulfills the same needs that drove our ancestors to store dried meat for another long winter” (Kasser, 2002, p. 29). This approach is backed up by experimental studies which postulate that consumption and financial prospects tend to serve both, the physical and psychological need for safety. Higher income has been thus linked to greater ability to secure one’s own existence and to better manage and control given circumstances (Diener & Biswas-Diener, 2002; Howell & Hill, 2009). Accordingly, low-status individuals are perceived to have a vulnerable internal buffering system for coping with threatening situations because they have limited access to appropriate resources (Cummins, 1998). An empirical study provides evidence that increased income and decreased personal debt lead to greater feelings of physical safety and psychological existential security, which in turn increase the overall subjective well-being (Howell et al., 2013).

However, beyond physical goods, nonmaterialistic means such as social ties, the possibility to make decisions, and a cognitively consistent environment can also serve the human need for safety (De Donder et al., 2012). Terror management theory (TMT) proposes that individuals are highly motivated to establish a safe and eternal environment in order to cope with their anxiety about mortality. This can be done in the shape of a dual-component anxiety buffer consisting of “(a) a cultural worldview—a humanly constructed symbolic conception of reality that imbues life with order, permanence, and stability; a set of standards through which individuals can attain a sense of personal value; and some hope of either literally or symbolically transcending death for those who live up to these standards of value; and (b) self-esteem, which is acquired by believing that one is living up to the standards of value inherent in one’s cultural worldview” (Pyszczynski et al., 1999, p. 2). Real-life evidence of such a dual-component anxiety buffer, consisting of a cultural component that generates self-esteem and

safety, is provided by the gun culture in the United States. As a nation, the United States has a profound connection to guns, not only on a social or political level, but also as something that is deeply ingrained in the cultural identity of American society. Whether for protection, hunting, or sport shooting, gun owners consider gun ownership as a form of personal freedom. Being able to defend themselves and to control their own environment generates a feeling of personal security and existential safety (Lott, 2000). According to the PEW Research Center, two-thirds of surveyed gun owners claim that protection is their main reason for owning a gun. The survey also shows that especially white male, Republican-leaning adults who live in rural areas and have low educational attainment are more likely to be gun owners; and that 91 percent of the Republican gun owners claim that owning a gun is essential to their freedom and safety (PEW, 2017). The cultural theory of risk postulates that individuals form perceptions of threat that reflect their “cultural way of life.” Individuals living in competitive individualistic environments believe that they have to protect themselves without collective assistance or governmental support (Kahan, 2012; Celinska, 2007). Accordingly, gun ownership tends to provide a viable means of self-reliance and thus serves the psychological need for safety and “existential security”.

The Need for Control

Alongside the human need to feel safe and secure, the human need for control displays a further important internal driver within the safety-seeking mechanism. The central assumption in modern cognitive psychology is that individuals actively seek to understand the social environment and their place within it. They aim to find explanations for unexpected events and to understand the system and their own position within that system. Believing that a particular situation can be fully understood, influenced, and managed has significant implications for one’s mental and physical health. Thus, a sense of control, regardless of its true extent, has a tremendous impact on the mental and physical functioning of individuals and helps them to cope with existential anxieties (Kluegel & Smith, 1986). Individuals exercise control over their environment by making decisions that express preferences and allow them to assert themselves. Having the possibility to make choices, no matter how small, reinforces one’s perception of control and self-determination (Leotti et al., 2010). The more a person perceives having control over a situation, the less threatening the situation and the environment appear to them. Empirical studies reveal that humans and animals prefer choice over non-choice, even when the choice option does not imply an improvement in the expected outcome. In economic terms, the preference for choice and control in such conditions may be perceived as irrational. However,

studies show that even the mere possibility to exercise control over a situation tends to be rewarding for the individual, leading to better physical and psychological conditions (Steptoe & Appels, 1989) and even greater feelings of confidence and self-efficacy. “The benefits of perceived control can exist even in the absence of true control over aversive events, or if the individual has an opportunity to exert control but never actually exercises that option”, (Leotti et al., 2010, p. 459). Often-cited studies on nursing-home residents provide evidence that those who were given control over external variables (such as the type and timing of meals and entertainment) or who were taught internal self-control practices tended to live longer than those in the control group (e.g., Rodin & Langer, 1977; Pagnini et al., 2016). Similar studies of cancer patients support these results, showing that low perceived control and desperation about one’s health tend to increase the probability of relapse and death (Shapiro et al., 1996).

This implies that perceived lack of control tends to increase feelings of helplessness and self-uncertainty, which appear to predict reduced somatic and psychological functioning (Gebhardt & Brosschot, 2002). Observations of humans and animals in case of absent control reveal increased cortisol release, immune system suppression, and maladaptive behaviors. Experimental studies show that removing the possibility to exert control enhances feelings of anxiety, reinforces negative perceptions of the stimulus, and increases effort to regain control (Leotti et al., 2010). Such negative responses have been observed in all age groups, ranging from four-month-old infants to adult to senior citizens (Sullivan & Lewis, 2003). Accordingly, preference for control is perceived as a core intrinsic motivation and one of the strongest fundamental human needs. Individuals’ ability to gain and maintain a sense of control thus seems to be essential to evolutionary survival (Bandura, 1994; Deci & Ryan, 2006).

Consequently, the threat of losing control increases levels of distress, which in turn boosts efforts to regain control. Such efforts can result in conformity, aggression, violence, and attitude change, or, if the attempt to regain control fails, in helplessness and withdrawal (Friedland et al., 1992). Self-blame or denial, for example, represents a cognitive method which can generate a sense of control. Studies show that low-income individuals attribute negative outcomes to their lack of ability rather than to external conditions, because doing so allows them to sustain a sense of personal control. Attributing negative outcomes to uncontrollable external conditions (e.g., discrimination) implies that one cannot change or influence the environment and future outcomes, whereas self-attribution indicates that a person can potentially affect future outcomes (Kluegel & Smith, 1986).

Being able to make choices and potentially affect future outcomes, even if illusory, regulate individuals' affective and cognitive processing. "Although the affective experience of choice itself has not been examined directly, there is converging evidence that implicates a corticostriatal network as the neural substrate for perceiving control. The prefrontal cortex (PFC) and striatum are highly interconnected and have been consistently implicated in affective and motivational processes. Certain regions within this corticostriatal network explicitly code for actions that are most adaptive in a given context", (Leotti et al., 2010, p. 460). That means that both animals and human beings desire to make active choices rather than being passive observers of their interactions with the environment. The possibility to make choices and thus to influence the environment recruits the neural circuitry involved in reward and cognitive processing. Neuro-cognitive studies show that rewards following choice activate the striatum to a greater extent than the same rewards that are passively received (no-choice option). Participants reported higher perception of control over monetary outcomes when the choice option was available, which indicates that choice itself is inherently rewarding (Tricomi et al., 2004). Other studies show that in stressful and threatening situations, perceived control can dampen and regulate negative emotions. In this context, even the perception of control, not actual control, moderates negative emotional responses in threatening situations (Amat et al., 2005; Leotti et al., 2010; Leotti & Delgado, 2011). All these findings reveal that the subjective perception of control, either in presence or absence, can have a profound impact on the regulation of behavior, emotion, and physiology. The personal belief in one's control and the ability to affect future outcomes can have palliative and rewarding effects, while control thwarting can lead to either compensatory or maladaptive behavior.

The Need for Ambiguity Avoidance

Suppose a patient must decide between two potential treatments: treatment A and treatment B. Treatment A is a standard method and has been used extensively. It therefore provides information on the probabilities of potential outcomes. Treatment B is a new method that has been barely used so far. There is little information on probabilities because no observations have been made about potential outcomes. While the probability of treatment A can be judged from relative frequencies or event histories, the probability of success of treatment B lacks considerable information. This decision problem implies two types of uncertainty: risk, or expected uncertainty; and ambiguity, or unexpected uncertainty. Risk, or expected uncertainty, is present where probabilities are objectively given, known, or observed thanks to past events (treatment A). Ambiguity, or unexpected uncertainty, implies that observers have incomplete

knowledge about the environment (treatment B). The latter type of uncertainty can be reduced by accumulating information, e.g., by increasing the number of observations. Ambiguity generally increases when the environment changes to a new state (since there are relatively few observations of the new state) (O'Reilly, 2013). Experiments in different disciplines showed that individuals are more willing to bet on risky options than on ambiguous ones (Hsu et al., 2005), which enhanced researchers' interest in studying people's subjective aversion to ambiguity. This choice pattern corresponds to our example above, with the majority preferring treatment A over treatment B (Curley et al., 1986). Ambiguity can be thus defined as an unknown probability – that is, a decision-maker is aware of possible future events that may occur but does not have appropriate information to make subjective estimates (Weber & Tan, 2012).

This raises the question of why individuals strive to reduce or even avoid ambiguous situations. Psychological studies reveal that most individuals tend to interpret an ambiguous situation as threatening (see, e.g., Campbell & Tesser, 1983; Majid & Pragasam, 1997). Ambiguity involves complexity, novelty, and unpredictability, which induces certain cognitive, emotional, and behavioral reactions enabling individuals to cope with the unknown. A potential cognitive reaction may include the tendency to assess an ambiguous situation rigidly in black or white; emotionally, individuals may respond with discomfort, anger, or anxiety; and a typical behavioral reaction refer to avoidance or withdrawal (Grenier et al., 2005). The motive to not choose the completely unknown option, which is perceived as potentially threatening, may be equally important as survival. Neurocognitive studies provide evidence that under uncertainty, the brain is alerted to the fact that information is missing. The options based on this lack of information carry more unknown (and possibly dangerous) consequences. Therefore, the amygdala is encoding ambiguity by sending “fear signals” that help individuals to adapt and react to threatening environmental stimuli⁷ (Payzan-LeNestour & Bossaerts, 2012).

Intolerance of ambiguity, or the subjective need to avoid ambiguity, dates back to the work of Frenkel-Brunswik (1949) who defined it as “a tendency to resort to black-white solutions, to arrive at premature closure as to evaluative aspects, often at the neglect of reality [...]” (Frenkel-Brunswik, 1949, p. 115). While the majority of researchers assume that intolerance of ambiguity is part of a cluster of subjective traits, alternative approaches consider exogenous factors, too. They argue that vast information, time pressure, or uncertain events or situations

⁷ We refrain from going deeper into the neurobiological foundation of ambiguity aversion. For more information see Hsu et al., 2005; Huettel et al., 2006 or Levy et al., 2010.

tend to reinforce feelings of threat. These in turn lead to increased uncertainty and anxiety, a rejection of the unknown, and a tendency to insist on predetermined conceptions (Lauriola et al., 2016). Recent research on ambiguity avoidance has re-conceptualized the definition by putting more emphasis on information processing and cognitive judgement. Accordingly, the desire for a definite answer to a question, the avoidance of uncertainty and confusion, and the inclination to use simpler cognitive structures in order to process information is summed up by the need for cognitive closure (Webster & Kruglanski, 1994).

As a dispositional construct, the need for cognitive closure is manifested in the desire for predictability, order, and a stable cognitive structure. Information processing is seen as costly and effortful, which may induce uncertainty, confusion, and vacillation (Webster & Kruglanski, 1997). However, foregoing discussion suggests that the need for ambiguity avoidance, or cognitive closure, may vary depending on the situation at hand. Several experiments in psychology provide evidence that time pressure increased subjects' tendency to draw on primed impressions and stereotype-driven judgements and to base appraisals on initial estimates (Kruglanski & Freund, 1983; Sanbonmatsu & Fazio, 1990; Webster, 1993). This means that individuals with a strong need for ambiguity avoidance tend to judge faster when information processing is effortful and costly. Stereotype-driven inferences also arise if the information is inconsistent, which can lead to a rejection of the information source.

Although there are countless situations in economic experiments where individuals seek out or even pay for useless information (Powdthavee & Riyanto, 2015), contrary evidence show that individuals also prefer to avoid receiving information (Golman et al., 2017). Laboratory and field research shows that investors, for example, avoid looking at their financial portfolios when the stock market is down (Sicherman et al., 2015), or that individuals with higher health risks often reject medical tests even if the information could improve their decision-making (Golman et al., 2017). Although such information avoidance can prevent individuals from making appropriate decisions and receiving potentially valuable feedback, it can also have positive utility effects. Economic-theoretical models on belief-based utility (e.g., Köszegi, 2010; Caplin & Leahy, 2001; Loewenstein & Molnar, 2018) assume that individuals derive their utility not only from their objective reality but also from the information they obtain about that reality. Thus, information avoidance can occur if individuals hold favorable beliefs about reality that they do not want to dilute (Golman & Loewenstein, 2016). "A number of studies in both psychology and economics find that people weigh and interpret evidence in a fashion that supports what they are motivated to believe, and that they tend to denigrate the quality of

evidence that contradicts beliefs that they hold or would like to hold” (Golman et al., 2017, p. 101). Thus, individuals strive to reject information that implies threat (ambiguity), negative emotions such as anxiety and uncertainty and a high probability of a negative outcome in the future. Receiving for example information about one’s bad health may increase utility gains from receiving medical treatment in the future, but also causes disutility from enhanced ambiguity about one’s own personality and lifestyle.

The Need for Consistency

Research in the area of cognitive consistency first appeared in the psychological literature during the 1950’s. Initially described under various names (balance, dissonance, symmetry, congruency, etc.), the terms “had in common the notion that the person tends to behave in ways that minimize the internal inconsistency among his interpersonal relations, among his intrapersonal cognitions, or among his beliefs, feelings and actions” (McGuire, 1966, p. 1). Festinger’s (1957) theory on cognitive dissonance is one of the most recognized theories in this regard. He postulates that cognitive inconsistencies induce a state of arousal (dissonance) which in turn produces the need to reduce such contradictions and to restore a state of consonance (Gawronski, 2012). Inconsistency may arise when an individual holds two or more elements of knowledge (ideas, beliefs, values) that are relevant to each other but contradictory – a cognitive conflict between the already held belief and the truth or newly acquired evidence. These cognitive inconsistencies may generate uncertainty, anxiety, self-doubts, and confusion. To minimize the accrued negative feelings and the contradictions between one’s own perception and acquired evidence, individuals tend to respond by changing their cognitions (McGuire, 1966). The need for consistency has been found to be as important and basic as the need for survival and water. The fundamental nature of the need arises because it signals potential “errors” in one’s system of beliefs. These “errors” or inconsistencies require a reassessment of one’s beliefs since cognitive inconsistency may disrupt context-appropriate behavior and lead to inadequate courses of action. Thus, the state of arousal which is triggered by inconsistencies serves as a signal that one’s own current belief system has to be revised in order to deal with the environment (Gawronski, 2012).

However, a large body of research argue that restoring consistency is not the fundamental motive but rather the accrued affective consequences of inconsistencies (Kruglanski & Shteynberg, 2012). Newly acquired information, for example, may appear threatening because it conflicts with one’s existing beliefs and attitudes. Thus, individuals may accept inconsistencies since restoring consistency requires great cognitive effort or even a change in

attitude (Kluegel & Smith, 1986). Empirical research shows that individuals often resort to stereotypes or heuristics instead of rationally considering all relevant information to acquire complete consistency in their beliefs and opinions (e.g., Degner & Wentura, 2010). Searching for shortcuts as efficient and fast solutions to problems, or using categorizing methods helps subjects to cope with inconsistencies. Instead of questioning their predominant beliefs and attitudes, individuals tend to “ignore” cognitive arousal and instead use ready-made explanations to defend their interpretation of the environment. Furthermore, individuals may eliminate the information that leads to cognitive inconsistencies by rejecting or degrading the mediator.

Empirical studies show that individuals tend to prefer information that coincides with their attitudes, beliefs, and actions over dissonant and contradictory information (Schultz-Hardt et al., 2000; Jonas et al., 2001). A prominent example of the reduction in cognitive inconsistencies is a habitual cigarette smoker who is told that smoking is unhealthy. According to the theoretical approach, the smoker intends to reduce the dissonant information by changing his/her habitual pattern. So, he/she changes his/her cognition about his/her behavior by changing his/her actions. Quit or no smoking at all is consistent with the information (new knowledge) that smoking impairs one’s health. Although this sounds plausible, in reality individuals tend to adopt other methods to dampen this cognitive arousal. This means that the smoker may adjust his/her knowledge about the effects of smoking by rejecting the received information. Since cognitive inconsistency implies uncertainty and negative feelings about oneself, the smoker may reject the received information or try to find facts or opinions that support his/her smoking behavior (Festinger, 1957).

Finding alternatives to eliminate contradictions and reach cognitive consistency is part of the self-affirming and image-maintaining approach. The goal of the rationalization and justification process is to maintain overall self-integrity. Faced with a threat to one’s own self, the subject can also accept the threat without countering it by instead emphasizing some other important aspects of their self. The habitual smoker, for example, having realized that every rationalization for smoking is socially disqualified, still copes with the cognitive arousal and self-threat by emphasizing other personal traits, e.g., a strong work ethic, to sustain their sense of self-worth. Personality research postulates that individuals with high self-esteem and a positive self-image feel less threatened by dissonant information and thus feel less pressure to rationalize the self-implications of this perceived threat (Steele et al., 1993).

However, external factors, such as violent assaults, conflicts, natural disasters, or terrorist attacks, all which threaten individuals' physical and psychological existence, tend to "shatter" fundamental assumptions about oneself and a consistent and reliable environment (Janoff-Bulman, 1992). The self is perceived as helpless and fragile, the environment as dangerous and life-threatening. Such a cognitive disturbance or "disconnection" from oneself and the environment gives rise to anxiety and can lead in severe cases to mental disorders (Edmondson et al., 2011). After such threatening events, individuals tend to engage in strategies to decrease their accrued negative feelings and resolve the inconsistencies between their own perception and acquired evidence (Janoff-Bulman, 1992). Having consistent beliefs, views or assumptions about oneself and the environment help the individual to better cope with threatening situations, to interact and adapt to the external environment and to make fast and (self) consistent decisions. Individuals need a stable and reliable conceptual system to deal with the complex world and thus strive to maintain cognitive consistency.

The Need for Predictability

Early theories on the need for predictability appeared in the psychological literature during the 1950's (Pervin, 1963). Predictability can be understood as knowing the conditions under which a certain event will occur, as well as knowing what the event will be like. To acquire this knowledge about the conditions and events individuals seek to accumulate information. Experimental studies have shown that both animals and humans prefer to have information about the onset of aversive stimuli, even if that information has no significant value. Being able to receive information about a possible event reduces stress because it allows humans and nonhumans to predict important aspects of the situation and thus to better adjust to given circumstances (for a review see Miller, 1979). Further studies show that the ability to self-administer and predict electric shocks rather than having them administered by the experimenter reduces stress and results in less physiological arousal (measured by galvanic skin response). The possibility to predict electric shocks enable individuals to react according to the significance of the received stimuli, while an inability to predict the shocks enhances the perceived importance of all stimuli. This means that having predictable information about events helps individuals to experience and react appropriately to stressful events. It reduces their subjective feelings of helplessness, cognitive tension, and confusion (Staub et al., 1971).

Social and personality psychologists argue that individuals with a high need for predictability adhere strongly to social norms and rules which provide a predictable form of behavior and social interaction (Kiesler, 1973). Norm violators or individuals who do not comply with pre-

defined role models are perceived as a threat and are thus rejected by individuals with a strong preference for predictability. An empirical study (Makwana et al., 2017) using community samples from the United Kingdom and Belgium showed that individuals with a high need for predictability, order, and cognitive closure tend to reject individuals who do not conform to social conventions and predefined social roles (e.g., gender). Especially obedient individuals adhere closely to social rules, respect authority, and endorse traditional gender roles and prescribed social hierarchies. A predictable social structure with prescribed social roles generates certainty and order and guides how to evaluate incoming stimuli and perceive social others. The results of the study show that individuals who prefer predictable social structures tend to reject those individuals who are perceived as violating society's prescribed social roles and expectations of gender because it does not correspond to the cognitively consistent and predictable social structures they tend to rely on (Makwana et al., 2017). This means that subjects' belief in a predictable environment increases their sense of order, safety, and control, and guides them how to perceive their social environment. Information, behavior, or norms that tend to violate their sense of order and predictability are thus perceived as a threat and become subject to disaffirmation.

Using functional magnetic resonance imaging (fMRI), a neurocognitive study showed that predictability can activate the reward system in the human brain. In the experimental setting the participants received small amounts of orally delivered water and juice in either a predictable or unpredictable sequence. During the predictable sequence, the order of juice and water was alternated at a fixed interval of ten seconds, while in the unpredictable sequence the order and the stimulus interval were randomized. After the scan session, subjects were asked to state their preferences for water or juice. The results show that the activity in the reward system correlated more with the predictability of a sequence of the pleasurable stimuli than with stated preferences. The brain response to the previously stated preferred beverage showed little differential activity relative to the nonpreferred beverage. The main effect of predictability was greater than the main effect of stated preference (Berns et al., 2001). Another study provides evidence that individuals search for predictability in the shape of rules that govern decision-making even in the presence of randomness (Paulus et al., 2001). A common claim in neuroscience is that the brain actively predicts upcoming stimuli in order to code information efficiently. The predictability of sensory input alters the processing of upcoming stimuli and is efficient "in the sense that the brain does not need to maintain multiple versions of the same information at different levels of processing hierarchy" (de-Wit et al., 2010, p. 8702).

Consequently, predictable stimuli require less neural activation to be transferred from lower to higher cortices and thus influence the representation of the subjective experience of the stimuli.

Another study finds that identical pain stimuli are rated as more painful when they are unpredictable rather than predictable. Unpredictable pain stimuli result in increased ratings of anxiety and uncertainty, whereas predictability allows subjects to conceptualize a response to an external aversive event (Carlsson et al., 2006). Early predictions of pain tend to make pain less threatening and direct one's appropriate pre-emptive behavior (adaptation). In other words, predicting incoming pain generates subjective certainty that a negative event is imminent, which enables the organism to "prepare" and adjust. The release of fear mobilizes the organism to take action (fight or flight) or, if this option is not available, to minimize the impact of the incoming stimuli (e.g., by cognitive distraction) (Ploghaus et al., 2003). These findings may lead us to assume that predictability enables individuals to "effectively" process incoming information and (mentally) adjust to certain circumstances even if they cannot be avoided. It generates subjective certainty and the perception that "one can control the situation." The possibility to "predict" future events or incoming information reduces the perception of threat and stress, because it allows the individual to foretell some important aspects of a situation. This in turn provides existential safety since individuals "know" when the next negative stimuli are imminent, which reduces cognitive overload (permanent evaluation of incoming stimuli).

The Need for Order

Cognitive psychologists assume that individuals strive to order everyday stimuli, information, and experiences into coherent units, in order to establish meaning and consistence in their lives (Baumeister 1991, 2005). From an evolutionary perspective this would imply that structuring the incoming stimuli into coherent units helps to avoid danger and approach potential rewards. This enables individuals to determine which stimuli in the environment are pleasurable (and thus species-promoting) and which are troublesome. Organizing the environment into coherent meaning reduces uncertainty and self-doubt and generates a sense of control. This in turn helps to reduce the feeling of living in a random universe, which is essential for avoiding feelings of helplessness and uncontrollability (Thompson et al., 2001). However, psychological literature also assumes that individuals differ in terms of their need for order and structure. An individual with a high need for structure and order prefers a structural categorization of the social environment, clarity in most situations, and reduced ambiguity (Neuberg & Newsom, 1993). To them, an ordered environment is a place where they can make consistent decisions and act confidently. Accordingly, such individuals dislike unpredictable environments or other

individuals who do not conform to the predefined social order or who even disturb or threaten established settings. They are thus rejected in an effort to protect the certainty and stability provided by the established order (e.g., Brand & Reyna, 2010).

Personality studies using the personal need for structure scale (PNS) have shown that individuals high in the need for structure tend to apply stereotypes and rely on social categories to make judgements and decisions. Furthermore, they are more likely to apply predefined attitudes and beliefs to new situations, rely on stereotypical notions to evaluate other people, and have simpler ways of organizing social information (Moskowitz, 1993; Schaller et al., 1995). Behaviorally, such individuals establish daily routines and rely on predefined roles and schemata, or even prefer hierarchical structures, that reduce the amount of information they have to process on a daily basis. Such a cognitive order enables individuals to draw inferences about new events and thus to understand the world without expending a lot of cognitive resources (Neuberg & Newson, 1993). These individual differences in the need for order show that individuals strive to understand their social environment and find coping mechanisms so they can deal with complexity and indeterminacy.

A very prominent and often cited example in this regard is that individuals form beliefs about the society and environment they live in because it guides them how to perceive and evaluate information, people, events, and experiences. In the United States, for example, individuals generally believe that one gets what one deserves (Lerner, 1980). When this “cognitive order” is violated, individuals tend to assimilate the event to restore cognitive consistency (e.g., blaming victims for their own misfortune). The deservingness principle has been examined in various studies, showing that the subjective manifestation of the need for order has an impact on how individuals react to penalties that are imposed if someone commits an offense (Feather, 2006). According to that, a study shows that individuals’ need for order and the offender’s perceived responsibility ultimately determine the degree to which the offense is perceived as serious (Feather, 1996). Hence, individuals with a higher need for order may assess a crime or offense stricter because they perceive it as a violation of legitimate authority such as the rule of law or social order (Rozin et al., 1999).

However, “when people are confronted with others (such as innocent victims) who get something that they do not deserve, people’s principles of deservingness are violated. As a result, people need to restore their belief that the world is a just place in which good things happen to good people and bad things to bad people. Especially when the events that have happened cannot be changed, people often tend to come to the conclusion that victims somehow deserved their ill fates and are to be blamed for what happened to them” (van den Bos & Maas,

2009, p. 1567). Some psychological researchers claim that when individuals are confronted with such an ambivalence or cognitive inconsistency, the need for order becomes affirming (van Harreveld et al., 2014). This need can be served, e.g., by social hierarchies that reflect a form of social structure and interpersonal organization. Empirical studies show that after external shocks such as economic crises or terrorist attacks, individuals tend to adhere more strongly to hierarchy-promoting social structures because they provide order, certainty, and consistency in their lives (Friesen et al., 2014). Giving the world a simplified and manageable form reduces threats and generates the illusion of a controllable environment.

Further empirical studies provide evidence that individuals with a strong need for order/structure are more likely to organize information in simpler ways and to apply previously formed social categories (e.g. stereotypes) to new and ambiguous situations (Neuberg & Newson, 1993). Relying on such predefined social categories generates a clear, predictable and unambiguous environment and guides the subject how to process information and make decisions. Especially in traditional and hierarchical social settings, prescribed rules, norms, roles and beliefs provide a strict order that provide information about who should be doing what, about interpersonal patterns, and about one's role in the social system. This means that hierarchies appear to provide a cognitive sense of order and structure, especially for low-status individuals who appear to have a low sense of personal control (Friesen et al., 2014). Order is generated by restrictions, obligations, prescribed roles, norms, and rules that dictate what kind of behaviors are permitted or prohibited. This social order implies certain expectations and actions that guide appropriate social behavior (Cummins, 2000). A neurocognitive study has found that hierarchically induced order tends to reduce uncertainty and stressful responses to threat, providing instead predictable and reliable guidance on how to process information and act in a given setting (Timmer et al., 2011).

All these findings imply that an established cognitive or social order helps individuals to restore structure and meaning in their lives. It provides guidance how to behave and evaluate information and how to perceive oneself and others (cognitively ordered categories). Furthermore, it reduces uncertainty and increase one's sense of personal control and (ordered) existence, especially but not limited to, for those who feel socially low-ranked.

4. Relational Human Needs – Social Identity and Intergroup Processes

The previous chapters have identified crucial socio-economic mechanisms and exogenous conditions which can deprive individuals of serving their fundamental needs. Our body and brain react to an unmet human need, which give rise to internal drive states and push the

individual to find means to cope with the arousal. Threat, uncertainty, and lack of opportunities to serve one's own needs, can, in severe cases, lead to aggression, riots, and conflictual human behavior. While economic literature focuses on socioeconomic conditions, feasibility, and state capacities that enable conflict onset, psychological literature put more emphasis on aspects related to intergroup threat, a shared group-identity, and the importance of group belongingness. In this regard, the self and identity are analyzed within multiple levels: the individual within a group, groups within the society, and various nations across the world. At the individual level, belonging to and identifying with a certain group, defined either by nationality, ethnicity, religion etc., can generate ingroup favoritism and outgroup hostility. At the group level, social identity, and self-categorization theories (e.g. Tajfel, 1981) emphasize the potential for intergroup comparison, competition and threat, as well as movements to secure the status quo of higher status groups and to change the status quo of lower power and status groups. At the level of nations, identity can be interweaved in a variety of conflicts – either at the national level, where the state is fighting against internal ethnic groups, or ethnic minorities uprising against state oppression, as well as on the international level, where at least two nations fight against each other (Jussim et al., 2001).

This implies that identity is central to understand human feelings, behavior, and decision-making. While the previous section focused on conflicts based on socioeconomic factors, resources and deprivation, this section will address the importance of identity and group belonging in terms of conflict onset. Especially social identity is assumed to play a crucial role in intergroup conflictual relations. One of the most common and recognized definitions of social identity in social science has been provided by Tajfel (1981), who defined it as that part of an individual's identity "which derives from his knowledge of his membership of his social group (or groups) together with the value and emotional significance attached to that membership" (p.255). According to him, social identity is based on two components, namely social belongingness and the value or significance attached to that belongingness⁸. Social psychologists argue that individuals aim to assure and protect their group membership, and that the more value they attach to their belongingness, the more important it becomes to them to have a positive impression of their group (Leach et al., 2008).

But also, economic research, mentioned beforehand, provides evidence that individuals aim to secure and protect the existence of own groups, and that polarization, intergroup inequality, and

⁸ This is one definition of many; other sociologists and psychologists argue that for example ethnic, national and religious identities emerge within specific sociocultural contexts, including myths, narratives, and community, which at least partly determine individual's social identity (Jussim et al., 2001).

threat, especially in ethnic minority terms, can generate collective grievance. Such a collective grievance can be induced by economic and political oppression or discrimination, but also by cultural or religious rejection, which at the end can instigate conflict onset. However, regardless of whether intergroup conflicts are played out peacefully or conclude in violence and conflict, identity is usually involved. On the more “peaceful” side, intergroup conflicts can result due to varying policy preferences, beliefs, and attitudes among different ethnic groups, in such a manner as to enhance the status and power of one’s own group. On a more violent side, identity can instigate extreme movements and can lead to mass murder and genocide (Turner et al., 1994).

Although, social identity tends to play a significant role in conflict onset, research in conflict economics does not direct its attention much to this topic. According to that, we will discuss in the following the significance of a social identity and how social interaction, identification and cooperation with significant others form our self-concept and assure psychological well-being. We explore the effects of belonging to a group and explain why identification, social approval and cooperation play a significant role in the human need system. We will discuss the processes of identity formation, social categorization and identification and show how they influence the way people perceive themselves and their environment. In this regard, we will also focus on aspects that can accentuate intergroup differences and enhance intergroup rivalry and conflict. In the following, a short discussion on the concept of identity will be provided, followed by identity formation and how it can instigate a number of processes and affect individual’s perception of reality and the own self. Here, innate conflicts which can arise in the course of identity formation, and which can certainly be triggered by external factors, – such as social exclusion, identity confusion or perceived threat – can lead to severe need deprivation. We will therefore discuss the fundamentality of these relational human needs and explain why the concept of (social) identity should be intensively studied in conflict economics.

The Concept of Identity and Identity Formation

The concept of identity has a rich tradition in scientific research and offers a multidimensional variety of meanings and interpretations from philosophy, sociology, anthropology, psychology, and recently also from economics and neurobiology. In general terms, identity has been referred to an individual’s sense of self that is defined by multiple variables, such as physical, psychological, and interpersonal characteristics that are distinct to the individual, as well as his affiliations and social roles (APA Dictionary of Psychology, 2020). While in philosophy, identity is perceived as the uniqueness of the concerned object (the persistent sameness of the

self) (Sollberger, 2013), in (social) psychology it is defined as a dynamic expression and perception of oneself and one's identification and affiliation with significant others (the persistent self within a social context). "The term identity expresses such a mutual relation in that it connotes both a persistent sameness within oneself (self-sameness) and a persistent sharing of some kind of essential character with others. [...] At one time, it will appear to refer to a conscious sense of individual identity; at another to an unconscious striving for a continuity of personal character; at a third, as a criterion for the silent doings of ego synthesis; and finally, as a maintenance of an inner solidarity with a group's ideals and identity" (Erikson, 1956, p. 57). This means, that identity is shaped by both self-awareness and an interaction with one's external environment. Identity can be thus understood as a synergy between the inner coherence of mental states and the social environment, which can generate subjective conflicts between acceptance vs. expression, adaptation vs. individualism, social dynamic vs. old traditions, and solidarity vs. egoism (Erikson, 1968). Hence, individuals are faced with the task of forming a coherent and balanced identity – i.e. attaining on the one side a sense of distinctiveness and individuality, and on the other side establishing social bonds with significant others that provide emotional security.

Especially social psychologists attribute huge importance to social interaction, affiliation and identification in respect to identity formation. According to the self-categorization theory (Turner, 1987) and social identity theory (Tajfel & Turner, 1979; Hogg, 2016), affiliation and group belongingness represent crucial internal parts of the subjective self. A social identity is a person's awareness that he or she belongs to a particular group or social category, which induces self-categorization and social comparison processes (Stets & Burke, 2000). In the self-categorization process, individuals perceive similarities between themselves and other ingroup members and differences between themselves and outgroup members. Ingroup categorization can be emphasized in terms of shared attitudes, norms, values, affective reactions, language, and other properties that are perceived to be specific to the ingroup (Hornsey, 2008). The social comparison process implies an evaluation of the ingroup and the outgroup on dimensions that lead to a positive rating of the ingroup and a potentially negative rating of the outgroup – resulting in self-enhancing outcomes for oneself. This suggests that individuals derive their sense of self from the social categories to which they believe they belong.

The idea of social identity was first framed by an experiment in which participants were assigned to groups on the basis of redundant and random criteria. Having been told their group membership, participants had to allocate points to their ingroup and to the outgroup. Despite

the random group allocation, the lack of interaction within the group members and the level of anonymity, participants allocated more points to “their” ingroup even if this had no personal benefits (Billig & Tajfel, 1973). This has been explained by the intergroup interaction approach, where individuals relate entirely as representatives of their groups by deriving their self-image from the social categories to which they belong (Hornsey, 2008). Interacting, cooperating, and identifying with significant (social) others generates feelings of self-confidence and self-worth and has significant effects on one’s subjective mental well-being (Usborne & Sablonnière, 2014). A study with 2,109 Filipino Americans provides evidence that affiliation and identification with a social group increase one’s mental well-being and serve as a buffer against negative and discriminatory events (Mossakowski, 2003). Another survey shows that stroke patients who identified with and belonged to a particular group prior to the stroke were more likely to report higher levels of psychological well-being and a faster recovery after a stroke (Haslam et al., 2008). Other studies assert that individuals with greater social connectedness are better able to manage their resources, have higher self-esteem, and are less prone to mood disorders. They are also more capable of adapting to new social situations, entering new groups, and starting conversations easily (Lee & Robins, 1998).

However, strong ingroup identification can also instigate negative processes and can lead to ingroup favoritism and outgroup derogation. “In general, people make an effort to ensure that their group stands out from others in some positive way. [And] the more important it is to people to belong to a group, the more important it becomes to them that their group has a positive image compared to other groups” (Kommen & van der Pligt, 2016, p.117). Accordingly, individuals often make comparisons between their own ingroup and an outgroup and are concerned to promote their attitude that “we” are better than “them.” Such intergroup comparisons are usually characterized by ethnocentrism and outgroup antagonism. The term ethnocentrism was introduced in an early theory on intergroup relations (Sumner, 1906; Hammond & Axelrod, 2006) and describes the belief in the superiority of one’s own group. The belief in one’s own superiority includes positive attitudes and evaluations of one’s own social group and its distinctive properties, and negative attitudes, or even hostility, toward outgroups (Brewer, 2001). “Members strive for evaluatively positive intergroup distinctiveness because the self is defined and evaluated in group terms and therefore the status, prestige, and social valence of the group attaches to oneself” (Hogg, 2016, p. 9). As individuals strive to form a positive self-image, intergroup comparison represents a functional tool for receiving information about the relative value of one’s own group and thus one’s social identity. Being

part of a “superior” group with high social status, power, and recognition enables individuals to have positive self-views (Lüders et al., 2016).

On the downside, intergroup comparisons and ingroup favoritism can lead to the formation of stereotypes, outgroup homogeneity, and in severe cases even to dehumanization. Those who address a high value to one’s own ingroup, not only define themselves primarily as a member of that group but categorize others in group terms too. This means that they perceive outgroup members not as individuals with distinct characteristics but specifically as representatives of a particular group. Such an outgroup homogeneity can generate negative stereotypes which are then applied to all outsiders that do not belong to the own ingroup (Koomen & van der Pligt, 2016). In a study, Bodenhausen (1988) asked participants to assume the role of a judge and rule on the guilt or innocence of a suspect in a case of armed robbery. Some participants were told the suspect was called “Carlos Ramirez,” a name expected to evoke stereotypes of an aggressive Latin American, while to others the suspect was presented as “Robert Johnson.” The results show that the stereotyped suspect with the Latin American name was more likely to be found guilty, regardless of other information presented about the robbery. Such negative stereotypes can also have a severe impact on the behavior of individuals. In another experiment, participants were asked to take a fast decision whether to shoot a figure in a computer game who was suspected to be armed. The results indicate that individuals were more likely to shoot when the targets were wearing an Islamic head covering (hijab) (Unkelbach et al., 2008).

Such negative stereotypes and outgroup derogation can lead in severe cases to dehumanization, especially when feelings of threat come into play. The impact of perceived or realistic threat has been already discussed in the previous section, but here it is discussed in the context of social identity. When one group feels threatened by another, feelings of existential and symbolic threat arise. A study shows that after the 9/11 attacks in New York, feelings of threat, anger and fear enhanced contempt for the perpetrators and a decline in tolerance of Americans with an Arabic background (Lerner et al., 2003). It also enhanced the support for the expansion of the “U.S. War on Terror” (Skitka et al., 2006), and led to an emphasis of the American shared identity. Emphasizing the shared ingroup identity, its values, norms, and their “collective” way of living, provides certainty, a sense of belonging and a higher self-esteem. Perceived threat of the shared social identity, and thus of the group as a whole, lead to enhanced willingness to defend the group and to enhance its status. A study with French-speaking Canadians and Jewish students in Canada shows that perceived threat of the shared ingroup identity and its culture triggered anxiety in members of that group and induced concerns of the group’s continued

existence. These emotions and concerns in turn, initiated efforts to improve the group's situation and image. A similar study with minorities confirms that individuals emphasize their shared ingroup identity and defend its culture when being afraid that it may be lost and absorbed into the majority (Gonzales & Brown, 2006).

Many studies in this regard, have shown that especially minority groups with less power and a lower status adhere strongly to their culture, shared (ethnic) identity and the traditional way of living. In such cases, it has been shown that they have little interest to assimilate to the mainstream culture and society because of their fear of losing their distinct characteristics that define their identity. Worrell and Gardner-Kit (2006), for example, found such an attitude and behavior in their study of African Americans. The authors argue that the perception of having less power and status to influence the broader society and to exert any meaningful change over the majority group, enhance the emphasis on one's own ingroup identity. But also, in Europe, several studies show that minority groups prefer a multidimensional integration rather than a full assimilation to the mainstream culture and society, in order to assure the prevalence of their ingroup identity (Koomen & van der Pligt, 2016). Realistic or symbolic threat, and the induced fear of losing one's own ingroup identity, can lead, in extreme cases, to dehumanization of the outgroup. Dehumanization means that members of the outgroup are not perceived as human beings, such as to subject them to degradation or to portray them in a way that demeans their personality or dignity. According to this, a study in Israel found that public support for aggressive retaliatory actions against Palestinians enhanced in case of perceived identity threat and the extent of dehumanization. In other words, enhanced threat and dehumanization have been found to be significant predictors of support for deportation of Palestinians (Maoz & McCauley, 2008).

Considering such findings, many researchers aim to understand why individuals strive to maintain their group membership and the shared ingroup identity and are even willing to sacrifice their lives to defend the group in case of threat. Although research in economics is scarce on this issue, identity economics⁹ (Akerlof & Kranton, 2010) argues that identity has a significant impact on individuals' decision-making, preferences, and behavior. Identity, that is the conception of who one is and who one wants to be, shape individuals' everyday decisions and define their social category. Identities influence decisions because different norms that govern behavior are associated with different social categories. For example, a woman may see

⁹ Identity economics is a relatively new research field in economics that provides a framework for analyzing subjective decision-making with regard to individuals' identity as the primary motivation for choice (Akerlof & Kranton, 2010).

herself as a mother at home but as a professional at work, and these two social categories determine how she perceives herself at a given time. Each social category implies particular norms and ideals which in turn influence her preferences and decision-making. “Identity utility,” which is the gain or loss when subjective actions conform or do not conform to norms, changes not only because of subjective choices, but also because of the choices of others. Thus, identity economics suggests that individuals have individualistic tastes in their utility functions, but that social norms - which are internalized through social interactions - also add to this (Akerlof & Kranton, 2010). This means that subjective motivations, attitudes, beliefs, and behaviors are largely determined by the character of one’s social interactions (Cilliers, 2010). Subjective decision-making, then, is driven not only by subjective tastes but also by internalized social norms and values. Social norms provide a sense of belonging and guide individuals how to behave within the social strata (Akerlof & Kranton, 2010).

A survey in the United States, using self-reported attitudes from the General Social Survey (GSS), provides evidence that subjective preferences for resource redistribution are not only determined by financial self-interest but also by the social context. Individuals prefer resource redistribution to their own ethnic, racial, or religious group, but reject it when members of their own group constitute a smaller share of beneficiaries (Luttmer, 2001). Along these lines, a vast number of experimental studies in psychology and economics provide evidence that social divisions affect subjective decision-making. The 1954 pioneering *Robbers Cave Experiment* by Sherif et al. (1961) separated 11-and-12-year-old boys into two groups for a week and brought them together in the second week to play competitive games at the Robbers Cave State Park in Oklahoma, USA. During the first week, the “ingroup formation phase”, the boys developed positive attitudes towards their ingroup and developed a sense of affiliation and belongingness. In the second week, in which the two distinct groups met and entered in competition for resources, both groups developed a stronger sense of ingroup favoritism and outgroup hostility. The experimenters describe an outburst equivalent to war with flag-burning, name-calling, and aggressive attacks. This phenomenon has been replicated across a wide range of settings, showing that a priori social divisions lead to a strong group identity and thus ingroup favoritism, which in turn may result in intergroup conflict.

Although this evidence shows that group membership and social norms determine the way how individuals perceive themselves and their environment, as well as their decision-making and behavior, it does not answer the question why individuals would accept a high level of personal risk to preserve the existence of their group, and thus their shared ingroup identity. What are

the psychological implications of a social identity and why do individuals protect it by all their available means? To provide a potential answer to these questions, we have first to understand the role of group membership in the process of identity formation.

The process of identity formation is shaped by both the development of self-awareness and the interaction with one's external environment. The development task is hereby to find out who one is and where one belongs, to explore one's own interests and beliefs, and to find (and reconsider) social commitments that satisfy one's own needs and desires. Already in infancy, children start to understand that they are unique and separate individuals. They begin to form a sense of self, to develop cognitive abilities and an awareness of their own limits. Contemporary psychoanalysis reveals that intrapsychic factors emerging from earlier developmental experiences, but also external factors such as family background, parental control, or a safe environment, tend to be important for personal development (Blustein & Palladino, 1991). One of the widely accepted theories in this regard is Kohut's theory of self-psychology. The cohesive self is the initiating center of personality that consists of feelings, attitudes, and thoughts about oneself and one's social environment. It is formed along three axes: i) the grandiosity axis, ii) the idealization axis, and iii) the alter ego-connectedness axis. The first axis, grandiosity, refers to the establishment and retention of positive self-esteem, ambitions, goals, and meaning in life. The idealization axis refers to the development of an individual's ideals and values. The third axis describes the ability to interact with significant others, form relationships, and become a member of a social group or large organization. Along these three axes, a psychologically healthy and cohesive self must ideally be formed that consists of a positive self-esteem and the ability to influence one's own social environment, to have values and goals in life (meaning), and to experience a sense of belongingness, connectedness, and social approval (Kohut, 1984).

Receiving social approval of one's personality, skills, and ideas contributes to a consistent self-structure that provides a sense of stability, unity, and certainty. It serves as a bulwark against threatening and stressful situations and generates a sense of consistency and inner security (Banai et al., 2005). To establish and maintain a consistent self, interpersonal relations with significant others are thus of utmost importance, according to Kohut. The major function of significant others appears to serve the developmental needs of the individual – specifically their need for mirroring, idealization, and twinship. To form a self-perception that is in line with reality, individuals need relationships with significant others who provide constant feedback about the self and who facilitate permanent self-reflection (mirroring). Furthermore,

relationships with other people, especially one's parents who serve as role models, help to internalize values, goals, and morality (idealization). Feeling similar to others and being part of a group (e.g., one's family or peers) that surrounds and protects the individual, serves the need for twinship. The satisfaction of these developmental needs enables individuals to form a consistent self-perception, to develop values and goals in life, and to feel connected and attached to significant social others. Accordingly, individuals who lack such relationships suffer from damaged self-representation, loss of reality, and a fragile sense of self (Klafter, 2015).

A series of empirical studies support these assumptions, showing that a tight social network, parental assistance, and social connectedness in particular have a positive impact on mental well-being and the successful formation of a stable identity. Mirroring, supportive, and conciliatory relationships buffer against external stressors, unpredictable shocks, and personal failures (Baumeister & Leary, 1995). A lack or loss of connectedness has severe repercussions for the individual, leading to feelings of isolation, helplessness, lack of meaning in life, or even to mental disorders (Townsend & McWhirter, 2005). Using multiple large population-based samples, a study has shown that social integration, or the quality of social relationships, produces better physiological functioning and lowers the risk of physical disorders (Yang et al., 2015). Beyond physical health, connectedness and group belongingness shape the mind, cognitive self-awareness, and individuals' cognitive capacity to engage effectively with their social environment. Social approval and positive attachments provide certainty and self-assertiveness and support the individual to better cope with external threats (Baumeister & Leary, 1995).

From the neurobiological perspective, the development of identity implies an increase in complexity of the maturing brain systems that adaptively regulate the interaction between organisms and the external environment. The experiences needed for this brain maturation are shaped in the attachment context, where the infant, securely attached to its caregiver, learns how to regulate its emotions, and elicit emotional responses. Such stable attachment bonds are vital for the infant's neurobiological development as they expand its coping, interactive, and adaptive capacities. By contrast, several developmental studies show that attachment dysfunctions have devastating repercussions for a child's mental health, and even affect the way they form social relationships later in life (Schore, 2001; Mack et al., 2011).

But also, during adolescence, destructive relationships and lack of belongingness can enhance the risk for mental health and identity diffusions. This phase is marked by the exploration of one's own choices and alternatives, of finding commitments, engaging in relationships, and

searching for goals and meaning in life. Identity development is the key concern during adolescence. In this phase, individuals form relationships, question existing commitments and become member of various social groups, among which especially peer groups tend to be a place for self-discovery. Among peers, individuals learn how to interact and to compare themselves with significant others. Identification and assimilation with a peer group promotes the ability to cope with developmental problems and adjust psychologically to the external environment (Albarello et al., 2018). During adolescence, peer relations become more salient and complex. Individuals learn how to adapt and assimilate but also how to form a distinctive self. They learn how to socialize within a given group, to initialize or conform to group norms, and to categorize and differentiate between in- and out-group members (Chen et al., 2009; Chung-Hall & Chen, 2010). Those who assimilate successfully with their groups' ideals and norms are more liked and accepted by others (Nangle et al., 1996). Such shared norms, values and ideals provide orientation for interaction and shape the personality of members in a norm-consistent way. This suggests that norm violations and deviations are strictly prohibited and that if they do occur, can lead to punishment or rejection by other group members (Reitz et al., 2014).

All in all, these theories and empirical findings provide evidence that social bonds and attachments to social others are of utmost importance for subjective identity formation. Belonging to and identifying with a group provides certainty, stability, order, and orientation in life; shapes the way individuals perceive themselves and the social environment; and generate a subjective sense of acceptance and self-significance. A lack of emotional and interactive relationships, whether during early childhood, adolescence, or adulthood, has devastating consequences for one's subjective development, health, and mental well-being. Social relationships play a key role in supporting individuals in overcoming threatening situations, external stressors, and personal failures. Individuals define themselves in terms of group membership, while the norms and values of that group affect individuals' behavior, decision-making, thought, and information-processing. Social identification is the basis for various forms of social interaction – empathy, reciprocity, trust, and mutual commitment. Social belongingness is a basis for self-formation, assimilation, and differentiation processes, but also for orientation and stability. Social approval forms and reinforces individuals' self-image, self-assurance, and self-esteem. A stable identity is vital when it comes to managing and combating threatening situations, being self-aware and self-reflective, making consistent choices, and staying cohesive in terms of change. All this suggests that human beings have fundamental relational needs for identification, social belongingness, and social approval, which allows them

to form stable, positive, and coherent identities. This means that social groups serve individual's relational needs, that is, they provide a source for identification, belonging and approval. According to that, individuals define and perceive themselves in group terms, form social categories and strive for ingroup positivity – i.e. a positive (and potentially biased) evaluation of one's own group that reflects on oneself. Hence, individuals tend to make intergroup comparisons, which may lead to ingroup favoritism and outgroup hostility. To this, experiencing realistic or symbolic threats directed at one's own group induce collective grievances and shared emotions of fear, anger, and uncertainty, which can potentially instigate violent outburst.

While relational needs are fundamental in nature, that is, they can be applied to every human being across cultures and environments, the manifestation of each need vary across individuals. However, attachments and affiliations with significant others are of utmost importance for identity formation and mental wellbeing and should therefore receive much more attention especially in the conflict literature. Identity has the potential to instigate violent outbursts and the deprivation of relational needs can set a stage for a spiral towards large-scale systematic violence (Staub, 2001). Hence, in the following a short discussion of the universality and significance of these needs will be provided – the need for identification, belongingness, and social approval.

4.1. Relational Human Needs

The Need for Identification

As we have seen, individuals strive to develop a personal and social self by defining and evaluating themselves in group terms. This means that individuals associate their selves with other individuals and their characteristics or attitudes – the infant identifies with its parents; the adolescent gradually adopts the views and characteristics of the peer group; and the adult identifies with a particular profession or a political party. Identification and affiliation of this kind play an important role in how individuals perceive themselves and their environment, and how they interact with others. In general, individuals strive to portray their own ingroup in a positive and distinct way, and thus make intergroup comparisons to differentiate their ingroup from outgroups. A positive conception of one's own group leads to a positive view of oneself and plays an important role in sustaining one's self-esteem (Koomen & van der Pligt, 2016). However, besides positive self-esteem, identifying with a group, with its shared norms and values, worldviews, attitudes, and symbols, results in feelings of certainty and stability. This

sense of stability and certainty in turn generates orientation and confidence in how to behave and evaluate, and what to expect from one's social environment. On the opposite, uncertainty about oneself and one's attitudes, behavior, values, and perceptions reduce the feeling of a stable and persistent environment and of control over one's life (Fiske & Taylor, 1991). Thus, uncertainty-reduction theories postulate that individuals strive to identify with a well-defined, consistent, and stable group because it provides orientation and thus certainty in their lives. Empirical studies support this view and show that individuals with strong self-doubts and self-uncertainty tend to identify more strongly with their ingroup and value their ingroup more than individuals with a certain self. In other words, individuals identify more strongly with a social category if they feel uncertain about something that is relevant to their self-definition (Hogg, 2000).

According to that, empirical studies show that especially immigrants with different cultural backgrounds often face uncertainty and negative appraisal in regard to their groups, their social identity, and thus their own self-definition. Accordingly, members of such groups tend to search for psychological ways to reduce uncertainty and maintain their sense of self-worth and that of the group as a whole (Branscombe et al., 1999; Kommen & Van der Pligt, 2016). A study on Dutch citizens with a Turkish background shows that these individuals identify more with their Turkish identity than their Dutch identity and more with their Turkish culture and its values, beliefs, and norms. They were also found to put more emphasis on their cultural ethnicity than the ethnic Dutch citizens on theirs (Verkuyten & Reijerse, 2008). Identifying with and adhering to ingroup traditions, cultural values, and customs generate a sense of security, consistency, and stability. It reduces self-uncertainty because it guides the individual how to perceive the self and others (due to formed social categorizations) and how to behave and interact with one another. "Social categorization of self and others generates a sense of ingroup identification and belonging, and regulates perception, inference, feelings, behavior, and interaction to conform to prototype-based knowledge one has about one's own group and relevant outgroups. Furthermore, because group prototypes are shared ("we" agree "we" are like this, "they" are like that) one's world view and self-concept are consensually validated by the overt and verbal behavior of fellow group members. Social categorization makes one's own and other's behavior predictable, and allows one to avoid harm, plan effective action, and know how one should feel and behave" (Hogg & Adelman, 2013, p. 439).

In regard to immigrants living in Europe, studies show that a clear self-definition, comprising the values, beliefs, and goals to which an individual is committed, helps to form a consistent

self-image and to better adapt to given circumstances. The received support and permanent reassurance from the own ingroup endow the individual with confidence and self-esteem (Verkuyten & Martinovic, 2012). However, strong ingroup identification can also result in ethnic separation, which involves rejecting the mainstream culture or dominant ethnic group (Berry, 1990). An empirical study on second-generation Indian and Pakistani adolescents living in Britain shows that those who feel socially rejected by society tend to identify more strongly with their ethnic identity. Mainly Pakistani adolescents reported they felt discriminated in British society, which in turn had a negative impact on their willingness to adapt (Robinson, 2009). This implies that feelings of rejection, discrimination, or non-acceptance by society or the major ethnic group strengthen identification with highly entitative, or even radical groups (Hogg & Adelman, 2013; Dovidio et al., 2010). This means that social identification is a two-sided process that reflects the shared aspects of ingroup members on the one hand and the differences between the ingroup and the outgroup on the other. It is a statement about categorical membership that forms and encourages a collective identity that is shared with other ingroup members who seem to have common characteristics. The group and the shared social identity provide a home in a social world, common identifiers, and a distinctive sense of self. Common identifiers may be based on ascribed characteristics like ethnicity or gender, or on external states like political convictions, occupations, or ideologies. Sharing characteristics or beliefs does not require direct contact with other members. Forming a group identity is first and foremost a subjective mental process that involves identification, cognitive evaluation, and emotional attachment. Identifying as a member of a particular social group, finding perceived similarities, and reassuring oneself that one shares the group's characteristics are the first steps in this process (Ashmore et al, 2004).

From an evolutionary perspective, identifying with a group and its norms, values, and rules enables individuals to secure their survival, to reduce intragroup conflict, and to establish cooperation and mutual reciprocity. In a group, individuals learn to trust, to interact, and to evaluate themselves and their environment – and the social identifiers provide a stable background to do so. Trust enables cooperation and intensifies social behavior. Accordingly, heightened social identification encourages humans to contribute to a public good in order to sustain social welfare. Empirical studies have shown that social identification has a positive effect on group members' contributions to the common good, with increased identification even dampening selfish behavior. This suggests that “increasing the group salience encourages people who are normally only focused upon their personal outcomes to make efforts in

obtaining good outcomes for the group even when it runs against their direct self-interest” (Cremer & van Vugt, 1999, p. 887).

The shortly discussed theories and empirical findings show that the human need for identification is universal and transcultural – that is, every human being irrespective of the cultural background or the external environment has the need to identify with a social category. Identification enables to develop one’s own identity, to perceive and define oneself, as well as the social environment. It increases the subjective well-being and serves as a buffer against threatening and discriminatory events. Identification processes have important intra-, and intergroup implications. The own ingroup serves as a key reference point in everyday life – it guides how to evaluate oneself and others, how to act, and process information. Identifying with a certain group, whether defined by nationality, ethnicity, gender, or religion, influences the way how individuals define themselves and their surroundings, how they interpret circumstances and events, and how they make decisions and form preferences. However, emphasizing the value of one’s own group can also lead to ingroup bias and an accentuation of intergroup differences, which can enhance the “us-versus-them” attitudes. In the following, we will thus examine how belonging to, not just identifying with a social group can have palliative effects, and why belongingness is a fundamental human need.

The Need for Belongingness

Identifying as a member of a particular social group, finding intragroup similarities, and reassuring oneself that one shares the identity and characteristics common to the group, is the foundation for group belongingness (Ashmore et al., 2004). Belonging to a social group and forming attachments and social bonds are innate human tendencies that are crucial to survival. The need to belong describes a fundamental human need to form close relationships and stable and reliable attachments (Baumeister & Leary, 1995), by encompassing two important criteria: continuity and mutual interactions. Individuals strive for non-negative interactions that are filled with mutual concern and empathy and are long-lasting (Baumeister, 2012). “Close relationships offer a symbolic promise of lastingness and continuity that provide individuals with a sense of symbolic immortality [...]. They allow people to feel a part of a larger symbolic entity (e.g., couple or group) that transcends the limitations of their own body and expands the capacities and boundaries of their own self” (Lambert et al., 2013, p. 1419). Group belongingness reduces self-uncertainty, provides stability, and increases positive self-esteem. A social group provides a platform for sharing, communication, and affection, which helps the individual to form a social identity and pursue collective goals (Haslam et al., 2009). From a

biological and evolutionary perspective, humans build groups and communities to sustain their existence. They were, and still are, dependent on mutual cooperation, cohesion, and the exchange of goods, services, and knowledge. Without exchanging information and maintaining secure bonds, early hominids would not have been able to survive and adapt to changing environments. This implies that all humans are predisposed to attach to others and to experience mental distress when social relationships dissolve. Forming and maintaining social relationships increase life satisfaction, happiness, and mental health (Carvallo & Gabriel, 2006).

Belongingness also appears to be relevant to the feeling of meaningful existence. Four studies provide evidence that being part of a group and having a strong sense of belonging increase meaning in life and promote psychological health (Lambert et al., 2013). Failure to form close relationships can lead to feelings of isolation, alienation, and lack of meaning in life. The absence of positive and stable interpersonal relationships tends to elicit adverse emotions like anxiety, depression, and mental distress. Being isolated or excluded from a group or society has devastating repercussions on one's physical and mental state. A vast amount of research has shown that such negative feelings of non-belongingness can lead to antisocial behavior, crime, and violence (Sampson & Laub, 1993); substance abuse (Williams, 2007; Hales et al., 2015); poor academic performance and the sense of lost control (Williams et al., 2000). Researchers postulate that individuals' self-esteem, in particular, tends to be directly related to belongingness (Baumeister, 2012). Strong self-esteem evolves from social interactions and feelings of belonging and identification. These social experiences form the cognitive awareness of the self in relation to others. Continuous and stable relationships provide individuals a social lens through which they perceive the social world in which they live, how to behave, and how to evaluate information. Hence, it is argued that people with high levels of social belongingness are more confident in their evaluations and perceptions. These "back-up" resources increase their self-esteem and interpersonal trust and make them better able to manage negative emotions and experiences (Lee & Robbins, 1998).

On the opposite, lack of belongingness and group support represents a threat for one's own identity, which diminishes a person's sense of self-worth and self-confidence. Unmet belongingness needs, and the resulting sense of identity confusion, can lead to antisocial or deviant behavior (Ferris et al., 2009). The World Health Organization reports that youth violence and homicides have increased worldwide. 200,000 homicides occur among young adults aged 10-29 each year, which represents 43 percent of the total number of homicides globally. One risk factor for adolescent violence has been found to be social isolation. Weak attachments to

significant others, social deprivation, and low levels of social protection, rather than gang membership, are strong predictors of propensity towards violence (WHO, 2018).

Neuroimaging studies provide evidence that some of the same neural structures underlie both social and physical pain. They show that the activity of the dorsal anterior cingulate cortex (dACC), which is associated with the affective component of pain, correlates with perceived pain emotions. Participants who reported feelings of social exclusion (and non-belonging) showed increased dACC activity. “The magnitude of dACC activity correlated significantly with self-reports of social distress felt during the exclusion episode, such that individuals who showed greater dACC activity in response to social rejection also reported feeling more distressed by the rejection episode. In response to social exclusion (vs. inclusion), participants showed increased activity in the right ventral prefrontal cortex (RVPFC), a region of the brain typically associated with regulating physical pain experience or negative affect” (Eisenberger, 2011, p. 232).

However, research also shows that it is not social contact per se that is important, but rather the existence of stable, continuous, and positive relationships which provide a buffer against stress and loneliness. Continuity, reliability, affection, and stability are essential factors to meet this belongingness need. Interaction, mutuality, and interdependence are the hallmarks of affectionate, close relationships that provide a social compass (Baumeister & Leary, 1995). Such stable and reliable relationships and positive attachments enable the formation of social trust, which is perceived as a significant condition for a harmonious society. According to that, economic studies show that the sense of group belongingness, solidarity, and cohesion determine the willingness of individuals to adhere to social norms and to contribute to social welfare. Feelings of belongingness to a particular group or a nation determine how individuals make choices, how they perceive their environment, and how they consume and invest (Sen, 2017). Being accepted and approved by friends, colleagues, or society as a whole encourages individuals to put more effort into sustaining this condition. Individuals work, consume, and obey social norms so that they are liked and approved by others and can maintain a stable socio-economic status. Compliance with group norms is rational in this regard, as it helps to coordinate actions, exchange information, and cooperate with each other (Chong, 2000; Chiotis, 2020). The formation of social networks and interpersonal relationships enables individuals to share values, manage resources, build trust, and invest in the future. Social capital, which is defined as an aggregate of social networks, is thus perceived to be indispensable for economic development and civic engagement (Putnam, 1993). All in all, the theories and empirical

findings presented here provide evidence that the need for belongingness is fundamental and universal. It is of utmost importance to sustain human existence, to enable cooperation, interaction, and trust. Individuals who feel belonged to a group, or society as a whole, are more willing to behave prosocial, invest resources to maintain this condition and to increase social welfare. However, mere belonging is not sufficient to enhance cooperation and pro-sociality. Individuals have also the need to be accepted and approved by the group or society for one's distinct personalities, characteristics, and abilities.

Need for Social Approval

The need for social approval corresponds to the desire for validation and appreciation from significant others in regard to one's personality, actions, and achievements. Receiving social approval is important not only for the individual but also for social interactions. An economic model suggests that individual cooperative behavior depends not only on material gain but also on the strength of the approval incentive. The model assumes that subjective preferences are based on utility not only from private and public goods, but also from social approval, and that the latter can have an impact on one's cooperative behavior in social dilemma environments (Holländer, 1990). Empirical research (partly) supports the notion that social approval or social punishment may affect cooperative behavior, the efficiency of teamwork, and decision-making in various areas. Unlike pure economic exchange, social exchange also involves the exchange of social rewards, which are not based on contractual obligations, but are rather expressed by spontaneous positive or negative emotions. One possible example of the effect of social (dis)approval is the recruitment of volunteer soldiers during World War I. The British government used large-scale posters to state that non-participation was an instance of free-riding and that such behavior would be socially disapproved and despised by British society (Gächter & Fehr, 1999).

Public disapproval and loss of social reputation are social (identity) threats to individuals. Disapproval, especially of loved ones or people with whom one constantly interacts, tends to be more hurtful and threatening than if it comes from strangers (Grasmick & Green, 1980). Other related experiments show that indirect social approval, meaning a person's belief that someone dislikes their behavior, tends to incite cooperation in a public good game among strangers (Rege & Telle, 2004), and that the cue of being observed by others enhances prosocial behavior (Kurzban et al., 2007; Bateson et al., 2006). Even a random (costless) opportunity to approve or disapprove of another's decisions (without a direct effect on earnings) increases contributions significantly (Masclet et al., 2003). A study involving functional magnetic

resonance imaging (fMRI) examined the neural correlates of reward valuations, with individuals deciding in the presence or absence of observers whether or not to donate money. The presence of observers tended to increase their willingness to donate, which increased the activation of the ventral striatum. High striatal activations were observed especially when a high social reward was expected (observed donation), but also when the possibility for personal enrichment was given without social costs (self-enrichment in the absence of observers). Among subjects who decided to donate, the activation of the left striatum was significantly higher when the donations were observed. This suggests that the extrinsic reward of social approval is processed in the same striatal region as monetary rewards. Both rewards, social and monetary, thus increase the subjective utility of individuals (Izuma et al., 2010).

Further research shows that striatum activity is greater when an individual's evaluation of an object conforms to the opinion or attitude of others (Izuma & Adolphs, 2013). Receiving advice from an expert and evaluating this advice increases activity in the ventromedial and dorsomedial striatum, reflecting the social reward gained by agreeing with the expert or by placing high value on their opinion (Campbell-Meiklejohn et al., 2010). Positive social feedback and general social approval increase striatum activity and tend to have a significant impact on neural, affective, and behavioral responses. In such cases, social rewards (in terms of social approval) are valued to such an extent that they offset the loss of other valued resources (in the case of, e.g., a monetary donation). It is also assumed that individuals gain higher rewards by cooperating with others instead of acting alone. "Earning a reward by cooperation with a partner elicits greater ventral striatum activity compared to earning an equivalent reward in a non-social context and even compared to earning a larger reward by not cooperating at the expense of one's partner" (Bhanji & Delgado, 2014, p. 67). All these findings suggest that approval from significant others tend to generate the same (neural) rewards as physical goods such as food or money. Positive interactions, pleasant feedback, and the affiliation with others encourage individuals to create and maintain intimate and social relationships. Norm compliance, conformity, cooperation, and reciprocity all help to fulfill approval-oriented goals.

All these findings imply that social approval clearly increases individual's willingness to invest in and to sustain the social community, to be cooperative and prosocial to make sure to receive positive appraisal in the future. Being accepted for one's own identity, choices, thoughts, and beliefs not only provides self-assurance, it also has a positive impact on one's subjective mental health. On the opposite, being rejected or disapproved by society or a group has a strong impact on the mental health of individuals. Social disapproval threatens the social self because it

implies high levels of negative evaluations (Slavich et al., 2010). To dampen the negative self-referential cognitions, individuals adopt coping strategies to preserve their social identity and self-esteem (Gruenewald et al., 2004). While some show prosocial behavior in order to be socially re-approved by society or a group, others engage in aggressive and conventional-violating behavior (Twenge et al., 2002). Case studies on school shootings in the United States provide evidence that most school shooters experienced rejection and disapproval by their peers. Teasing, bullying, and ostracizing individuals, which often happens in public, sends a clear message that the subject is not valued, accepted, and liked by others (Leary et al., 2003). Being disapproved and not accepted by society provides a negative feedback to individuals that they are not welcomed in society, and that their identity, behavior, and beliefs do not conform with those of the dominant social group. This negative appraisal can lead to severe self-doubts and low self-esteem and in extreme cases, to an increased readiness to resort to aggression and violence.

5. Self-related Needs – the Self-concept and Intrapersonal Processes

In the former section, social identity theory revealed that belonging to and identifying with a certain group, defined either by nationality, ethnicity, gender or on the basis of a particular profession or sport affiliation, form individual's perception of oneself and the environment (Tajfel, 1982). People derive their sense of self-esteem and self-confidence not just from their own personal characteristics but also from the membership of a particular group. This means that individuals form perceptions, attitudes, and preferences depending on their affiliations with significant others. They make choices and act in accordance with the shared group identity, values, and norms, in order to receive social approval and to feel accepted and belonged. However, to better understand how individuals make choices and shift their preferences under given conditions, requires a deeper understanding of interpersonal and intrapersonal processes. Interpersonal processes imply interactions, events, and feelings between two or more individuals, through which the individual obtains capabilities to interact with others and to form social relationships. Intrapersonal factors operate within the individual, such as the formation of a subjective self-concept, self-esteem, and self-perception. Individuals' behaviors, preferences and choices are clearly determined by both, the social-contextual (interpersonal) as well as the self-conceptual factors (intrapersonal) (Moller et al., 2006). In the previous chapter the focus was laid on the interpersonal, social-contextual factors, which may turn us to the question of how intrapersonal factors matter – in particular, what is the impact of the innate self-concept on subjective decision-making, attitudes, preferences and behavior. In this regard,

the self is perceived as the source of agency and regulation, that is, the individual attributes the source of perceptions, attitudes, thoughts, and actions to oneself (one's body, mind, and abilities).

5.1.1. The Self and the Self-concept

In Kohut's self-psychology, the self is described as the sense of a coherent and stable experience of one's individuality, of consistence, autonomy, efficacy, motivations, and desires. It develops in combination with intrapersonal, growth-oriented strivings and the social environment that either supports or rejects these innate strivings (Swann & Seyle, 2005). This means that, the true, or core self develops "through the ongoing, synthetic resolution of the interaction between the active, integrative organism and the challenges of the environment, and only those psychic elements that have been integrated are considered part of the self" (Deci & Ryan, 1995, p.34). Decisions and behavior that emanates from one's integrated sense of self have been thus perceived as autonomous, or self-determined, which in turn promotes further development of the self, such as a stronger sense of self-worth, and favorable self-beliefs. This means that intrapsychic, or intrapersonal components determine how individuals think about themselves and how they develop capabilities to make choices and to participate in society. In this regard, vast literature in psychology discusses why all individuals have universal, fundamental needs to act volitionally and without interference from external sources (need for autonomy/self-determination), to feel meaningful and effective in their choices and actions (need for self-efficacy), and to have a favorable self-image and a high self-worth (need for self-esteem). Having a positive view of oneself can help individuals to master difficult tasks and to adjust to ambiguous situations and events, which has a significant impact on subjective psychological well-being (for a review see Kernis, 1995, 2006).

While the concept of the self is still ambiguous in scientific literature, psychological research agrees that it can be understood in terms of cognitive self-evaluation and memory structure. The self-concept represents a description and assessment of oneself, including one's psychological and physiological characteristics, qualities, skills, roles and so forth. It refers to individual's thoughts, feelings, and beliefs about oneself – the self-conceptions – that play a central role in subjective experiences and information processing (Epstein, 1973). Knowing who I am, what abilities I have and what kind of goals I pursue enable individuals to form beliefs and knowledge about oneself, which generate certainty and stability in life. These beliefs, perceptions, and knowledge about oneself determine in fact how individuals make

choices and how the new, incoming information about the self is processed (DeMarree & Lodi-Smith, 2017).

This implies that the self-concept can change because individual's experiences, beliefs and knowledge can vary over time (Markus & Wurf, 1987). Research on self-concept thus seeks to explain when the self-concept is susceptible to change and how individuals adjust to these changes. Here psychological studies show that the self-concept can change if for example self-beliefs, social roles or preferences are transforming. But also, external factors or situational circumstances can induce personal or social change which may require the individual to reconstruct the own self in order to adjust. For example, self-concept can change as a result of a relationship breakup because of the confusion generated by an internalized self-belief that was formed according to the relationship (Slotter et al., 2010; Hertel, 2017). However, experimental studies show that individuals react differently to such confusions or changes: some individuals selectively interact with those who support and confirm their self-beliefs; or choose roles and the social environment that is consistent with their self-concept; or re-interpret, devalue or reject negative or discrepant feedback that is not consistent with their self-concept (Demo, 1992). Other experiments show that individuals usually prefer to do tasks that comply with their self-assessed abilities, especially when they are uncertain about those abilities (Trobe, 1983). Individuals may also differ in the willingness to receive potentially threatening information about the self and reject information when it is contradictory to one's own self-concept (Raab et al., 2010). As result, so argued, the self intends to protect itself from threat and change. In this regard, economic studies (Shein, 1992; Rousseau, 1998) show that individuals are only willing to accept (social or organizational) change to the extent to which it is consistent with their own self-concept. Individuals thus support change if its enlarging one's own self-concept and resist change that threatens their self-concept (Eilam & Shamir, 2005).

Self-concepts are also influenced by the culture in which one lives. Looking at collectivistic and individualistic countries, Markus and Kitayama (1991) propose that individuals living in individualistic, Western countries have more "independent self-concepts", in which the self is perceived as an autonomous force, guided by one's own attitudes, thoughts, feelings and so on. On the opposite, in collectivistic cultures, the self-concept is based more on interdependence, which means that the self is connected to others, guided by social norms, obligations and other's thoughts and feelings. Although social psychology assumed for a long time that people come to see themselves as others see them, some empirical studies lead to a different conclusion: people cannot perceive and assess very clearly how others see them and instead assume that

others see them as they see themselves. This means that other's perceptions do not influence one's self-view, but one's self-view determines how one thinks others view oneself (Thagard & Wood, 2015). However, within close relationships individuals tend to integrate the reflected self into their self-concept. Two longitudinal studies provide evidence that individual's self-concept change or increase in diversity when they fell in love or form new affiliations. Individuals even tend to adopt some of the others' characteristics as their own and show the same preferences and behavioral patterns over time (Aron et al., 1995). Other studies provide evidence that individuals also form their self-concept based on social roles, norms and other's expectations (Darley & Fazio, 1980). This means that the self-concept cannot be regarded in isolation but has to be perceived as socially inclusive.

Considering the literature on the self and the self-concept may induce the question why the self-concept in particular is important for (conflict) economics. In economic literature, theories and conceptions on the self-concept did not receive careful consideration. However, some studies in the marketing literature have shed light on the relation between individual's self-concept and the consumer choice process. Theories initiated by Gardner and Levy (1955) or Douglas et al., (1967) assumed that consumer prefer products that are consistent, or in line, with their own self-concept. This implies that goods and services have other dimensions beyond functional utility. The first empirical study (Birdwell, 1968) on this relation revealed that car owners chose the brand of a car that was congruent to one's own self-concept. The findings were stronger for luxury brands than for economy compacts, which was explained by greater possibility for individuals with higher income to express their selves in terms of a purchase. In another survey 352 students at the University of California were asked to rate their self-concept, desired self-concept, and purchase intentions for a list of products. Self-concept was measured in relation to consumer goods on a nine-point scale ranging from "very strongly like me" to "very strongly unlike me". Desired self-concept was measured on a similar nine-point scale ("very strongly like I want to be") and purchase intentions were measured on a five-point scale (indicating a buy-or-reject decision). The results show that one's own self-concept and desired self-concept tend to correlate with purchase intentions, which indicate a preference for matching of product and self-concept (Landon, 1974). This matching preference has been explained by the desire of individuals to express themselves in a favorable way. Such materialistic goods support and guide individuals how to view and evaluate themselves (e.g.: "I'm more worthy because I'm wearing luxury clothes which only a few can afford") and how they want to be perceived by others. Buying a good, using a service or choosing a job that is consistent with one's own self-concept can reduce, from an economic point of view, information, and deliberation costs.

Because gathering and evaluating all of the information that is potentially relevant to any given decision is effortful and costly, relying on self-related beliefs and perceptions may help to make faster decisions. If for example individual X views himself as a social human being who strongly cares for humans and nature, and who wants to be perceived this way by others, he will probably choose a job in a social segment and purchase products that have been produced in a more sustainable way. Persistence in a course of action (such as buying only sustainable products even if they are more expensive), then, may result if the psychological benefits of continuing outweigh the monetary costs (Larrick, 1993).

However, psychological research also shows that individuals tend to perceive and evaluate themselves in an unrealistic and biased way. Such an over/ or underestimation can then lead to decisions with a possibly bad outcome for the agent. Studies show that if individuals perceive themselves as healthy, although they are not, they tend to reject medical tests or seek out ways to discount them (Dunning, 2007). Several lines of evidence also suggest that individuals make decisions in order to protect the view they hold of themselves. Even if they made choices with a bad outcome, individuals tend to find ways to rationalize it, in order to protect one's self-concept. Individuals also aim to protect their self-concept by avoiding feedback on their decisions or reject to be compared with the decisions made by others (Larrick, 1993). In sum, these studies support the claim that individuals tend to make decisions that are congruent, or in line, with their self-concept. In particular, individuals may use the decision process to enhance or support their self-concept. However, individuals who are vulnerable to threats to their self-concept may also behave in ways that protect them from unfavorable information about their decisions. On the other hand, individuals can also react emotionally and even aggressively following self-concept threats. Economics should thus integrate the self-concept into decision theories since it has the potential to be an important variable to explain subjective decision-making.

But also, for conflict literature, understanding the concept of the self, that is, how individuals perceive, represent and evaluate themselves, and how they want to be perceived and evaluated by others, can shed new light on individuals' choices and behavior in terms of conflict and aggression. Especially in adolescence, which is the crucial period for self-concept formation, individuals may encounter different and even contrasting views about themselves. During this vulnerable developmental stage, individuals rethink their previous beliefs and ideas about themselves and experiment with new roles and life plans to find new goals and values that fits their sense of self (Van der Werff, 1990; Baumeister, 1998; Dunlop, 2017). This process of

perceiving, processing, questioning, and choosing should preferably result in self-concept clarity – i.e. the content of self-beliefs is clearly and confidently defined, stable over time and internally consistent (Campbell et al., 1999). However, knowing and conceptualizing the self is not easy. The adolescent has to deal with a variety of options, information, and beliefs, which can imply contradictions and ambiguities. Facing such a confusing amount of options to form one's own self-concept, without any guidance from society or traditional institutions, can lead to confusion and severe self-concept problems (Baumeister, 1998; Van der Werff, 1990).

In this regard, a longitudinal study of adolescents argues that open communication within the family and the possibility to share narratives with significant others support the formation of a clear and consistent self-concept. On the opposite, the lack of a supportive social environment and of the possibility to share ideas and beliefs about oneself can decrease self-concept clarity and predict higher levels of self-uncertainty and depression (Van Dijk et al., 2014). Further, experiences of self-concept threats, such as social exclusion and discrimination, can harm the development of stable, positive, and consistent self-beliefs, especially if supportive coping mechanisms (room for self-reflection, sharing emotions and experiences with significant others) are absent (Heppner et al., 2015; Campbell et al., 2003; Constantino et al., 2006).

It is also worth to consider that social and cultural environments constrain the choices that adolescents are able to make. Individuals living under uncertain socioeconomic conditions, may face severe constraints to explore all alternatives in order to construct a consistent and stable self-concept. Psychological studies show that young adolescents living in a big city did not consider university or professional occupations as a viable option that cohere with their socioeconomic and cultural realities. They thus chose options that they perceived to be consistent with their self-concept (Oyserman & Destin, 2010). A similar scenario has been observed for girls or women living in patriarchal societies, where many options are not available to be selected. They must therefore make choices and create their self-concept based on given conditions and constraints, or even adjust their self-beliefs to the expectations of the social environment (Bosma & Kunnen, 2001). Here psychological studies indicate that individual's self-concept is bolstered if it is socially approved by others, which may induce individuals to follow expected norms, assume prescribed roles and form their self-beliefs according to the attributes of a certain group or environment (Slotter et al., 2015). Receiving social support that affirms their self-beliefs enhance self-certainty and, in turn, leads to self-concept clarity (Slotter & Gardner, 2014).

All this means that having a clear, consistent, and stable self-concept provides self-certainty, structure, and cognitive consistency (of oneself), and may thus generate positive self-evaluation (self-esteem). Individuals who have a high self-esteem, purpose in life, clear goals, visions and an integrated and coherent image of one's own past, present and future (how it all relates to each other) tend to have a stable, certain and consistent self-concept. This means that individuals need to have possibilities to create and achieve something, to explore autonomously their own self (independent of significant others and their social embeddedness) and to feel effective and productive in their life creation. How is all this related to conflict and violence? Depriving individuals of resources and options to act volitionally, to make and achieve goals, to attain a certain social status and to develop a positive self-view can generate negative emotions of oneself and society. Individuals who fail to develop a stable, clear, and consistent self-concept have difficulties to adjust to the environment and define their proper self (and their preferences, goals etc.). Difficulties to integrate the self into society can increase the reluctance to adapt the social norms and values of that society. All this can encourage the development of antisocial attitudes and can lower the threshold of violence. Before turning to this in a more detailed manner, the related fundamental human needs for self-esteem, self-determination and self-efficacy will be addressed, in order to provide a deeper discussion on their significance, also in the context of conflict economics.

5.1. Self-related Human Needs

The Need for Self-esteem

Self-esteem is perceived as one of the central, and most important aspects of individual's self-concept (Baumeister, 1993). It refers to the assessment of the self's worth and can be defined as "a self-reflexive attitude that is the product of viewing the self as an object of evaluation" (Campbell & Lavalley, 1993, p.4). This means that individuals evaluate their qualities and characteristics, contained in one's self-concept, in a self-reflexive manner. It reflects individual's physical self-image, view of his or her capabilities and achievements, values and beliefs and the perceived success in living in coherence with them. The more positive the cumulative evaluation of the self-concept the higher the self-esteem (Campbell, 1990). It is apparent that individuals strive for a positive self-evaluation and in general want to think well of themselves. Studies show that individuals strive to form consistent self-beliefs and reject information that tend to contradict these beliefs (in terms of negative feedback) (Slotter et al., 2015). Others reveal that individuals alter their self-evaluations to maintain their self-esteem when it is threatened (Greenberg & Pyszczynski, 1985). In this regard, research shows that

individuals tend to underestimate or overestimate their performance, especially when the performance is relevant for their own self-concept. In other words, when individuals perform poorly in a self-related task, they tend to overestimate the number of individuals who also did not well in the task; when individuals perform good they tend to underestimate the number of individuals who also performed well (Campbell, 1986). Favorable self-beliefs and a positive self-evaluation enhance happiness and mental well-being and may also predict a variety of positive outcomes, such as better adjustment to the environment, better coping with challenges in life, or even better physical health (Leary & MacDonald, 2003). Self-esteem also guides individuals how to perceive oneself and the social environment and generates a foundation for information processing and behavior (Stinson et al., 2010). Such findings in psychology thus suggest that individuals indeed need a self-esteem for healthy psychological functioning.

A natural question that has been overtly debated across disciplines is why individuals vary in their level of self-esteem. Psychological research consistently agrees that individuals with a low self-esteem do not invariably possess negative self-views, but their descriptions of themselves are rather neutral (Tice, 1993). These individuals have rather higher needs for certainty and ambiguity avoidance, that is, they act to minimize potential losses, avoid risky choices and behavior, set unchallenging goals to avoid failure and are motivated to protect their self from possible threats (Tennen & Affleck, 1993). While a vast number of researchers agree that individuals low in self-esteem appear to be more sensitive and reactive to their social environment (e.g. Campbell & Lavelle, 1993), they also indicate that among high self-esteem individuals, high levels of instability also exist. This means that individuals can have a high self-esteem and at the same time reflect fragility in their positive self-feelings and self-beliefs (Greenier et al., 1995). These fluctuations have been especially observed in individuals who base their self-worth constantly on evaluative information (either externally received or internally generated), which can be potentially inconsistent. In other words, the more weight individuals place on information received in regard to their self in determining their self-worth, the more likely these feelings will fluctuate. Another factor related to an unstable self-esteem is considered to be a poorly developed self-concept. So, it is argued that an inconsistent and fragile self-concept lead to a higher susceptibility to evaluative information. This means, the less individuals know about themselves, that is, their individual characteristics, strengths, weaknesses, or preferences etc., the less stable their feelings of self-esteem may be. If an unstable self-esteem is associated with a poorly defined self-concept, it should also reflect a diminished functional flexibility and an enhanced dependence on events. This implies a decreased capacity to adjust easily to certain situations, since one is less sure about one's own

capabilities and self-image, and a dependence on external, situational information to form beliefs and perception of oneself (Dunlop, 2017).

However, others (e.g. Baumeister, 1993) argue what distinguishes individuals with low self-esteem from high self-esteem individuals is the deprivation the former experience to serve their need for self-esteem. Certain conditions may deprive low self-esteem individuals to form a basis for thinking well of themselves. This deprivation makes them more vulnerable to threats insofar as when they experience events that threaten their self-worth, they are less able to emphasize positive characteristics of the self (Spencer et al., 1993). In order to understand the sources of deprivation, psychological research has thus aligned their focus on the self-conceptions of individuals with a low self-esteem. Campbell and Lavelle (1993), for example, argue that individuals low in self-esteem tend to experience a self-concept confusion, which means that their self-concept is not stable but is rather subject to permanent changes and fluctuations. Their beliefs and perceptions about the self may contain contradictions and inconsistencies which enhances uncertainty and ambiguity about the own self. But what leads to a self-concept confusion and which factors tend to deprive individuals from developing a stable self-esteem? Despite the rich psychological literature on self-esteem, such questions are still under debate:

While cognitive psychologists (e.g. Greenier et al., 1995) focus on internal determinants (e.g. ego involvement), developmental psychologists insist that external factors should be also taken into consideration. Childhood experiences that involve substantial amount of inconsistency, threat and unpredictability are likely to promote the formation of an unstable self-esteem. Receiving inconsistent feedback from significant others about oneself enhances ambiguity and vulnerability because it prevents individuals from developing a clear understanding about own capabilities and limitations (Greenier et al., 1995). This means that a supportive social environment enables individuals to develop a stable, clear, and consistent self-concept, implying positive self-evaluation and functional coping skills (Seiffge-Krenke, 1995). Receiving emotional, informative, and instrumental support, that is consistent, reliable, and guiding, provide a basis for a successful mastery of life. Therefore, individuals require appropriate resources in order to develop a certain and stable self-concept, a consistent and predictable environment, and possibilities to form relations, to control their environment and to participate in society. This will strengthen their self-esteem and enable to develop a consistent self (Dumont & Provost, 1999). On the opposite, individuals who are deprived from these resources to form a stable self-concept and a high self-esteem, show a less stable development

over time. They tend to suffer from greater vulnerability and also differ in their choice of coping strategies. Empirical results show individuals with a stable self-concept and high self-esteem adopt rather an active coping, while individuals in a deprived situation, with an unstable self-concept, resort less readily to active coping and social support. They rather adopted defensive, antisocial, and avoidant coping mechanisms such as denial or withdrawal (Seiffge-Krenke, 1990).

However, this does not invariably imply that individuals with an unstable self-concept and low self-esteem are more prone to violence and aggression. In their influential article Crocker and Park (2004) advanced two main arguments which sparked a debate within the psychological discipline: first they endorsed that self-esteem is a fundamental human need and not just a state of mind or a feeling, and second, that high self-esteem can be also harmful in some fundamental ways. The authors argue that when individuals have the goal to protect, maintain and enhance their self-esteem, they are constantly facing stress, anxiety, and self-uncertainty because failure in achieving this goal leads to a decrease in self-esteem. Accordingly, several studies provide evidence that individuals with a high need for self-esteem tend to validate mistakes, failures, and criticism more as a threat to the own self (Sheldon, 2004). Baumeister and colleagues (1993) even argue that experienced threat to one's favorable self-evaluation can cause violent aggressions. In their view, not a low self-esteem, as often argued, is the root of violence, aggression, and antisocial behavior, but threatened egotism (favorable self-view). The term egotism refers to favorable self-evaluation and a higher preference for a positive self-view. Any beliefs that support the view that one is a superior being, especially in the comparison with others, is relevant. If these beliefs are threatened, individuals tend to react aggressively toward the source of the threat (Baumeister et al., 1996; Bushman & Baumeister, 1998).

A long tradition in psychology has regarded low self-esteem as a potentially harmful and dangerous cause of violence (e.g. Oser, 2006). It has been assumed to be the most "pervasive characteristic" of terrorists, armed robbers, murders, and an important source of hate crimes (Long, 1990, Wiehe, 1991, Kirschner, 1992). However, Baumeister and colleagues argue that such studies suffer from several ambiguities and inconsistencies (for their arguments see 1996, 1998, 2000). Low self-esteem individuals do not have negative or even destructive beliefs and views about themselves, but they are characterized by high levels of uncertainty and instability (Dunlop, 2017). Instead, they (Baumeister et al., 1996) postulate that in contrast to low self-esteem individuals, high self-esteem individuals tend to have more favorable, even superior, views of themselves and may feel entitled to receive more resources and options for personal

gain. However, their main argument does not portray high self-esteem as the main cause of violence, but the combination of it with perceived threat. When favorable views and beliefs about the self are questioned, criticized, challenged, or devalued, individuals may aggress against the source of the threat. Especially unrealistically positive or inflated views of the self, and favorable self-evaluations that are uncertain, ambiguous, or heavily dependent on external validation, are perceived to be especially vulnerable to such threats. Such threats often elicit negative emotions when the person refuses to thoroughly process, accept and internalize the received negative information about the self. This would conform to the vast amount of research on the stability of self-esteem, which argues that especially high, but unstable, self-esteem individuals tend to react aggressively to negative self-appraisals (Kernis, 2005). Unstable self-esteem reflects a self-worth that is more vulnerable to threats because it requires constant validation and protection through self-protective or self-enhancing strategies. Several studies endorse that individuals with an unstable self-esteem tend to be more reactive toward self-related threat and are thus more likely to exhibit aggressive or antisocial behavior (Lee, 2014). For our general analysis, these findings would imply that instability of self-esteem is an important aspect to consider when examining violence and conflict. Individuals with unstable and fragile self-esteem tend to be more reactive to threat, are more vulnerable toward ambiguous (self-relevant) information and tend to take a more self-protective strategy than a mastery-oriented strategy.

The Need for Self-determination

Self-determination is a highly debated concept across various academic disciplines. While the philosophical discourse discusses whether human behavior is predetermined or the result of free will, psychology focuses more on internal and external factors that tend to determine human behavior. In philosophy, determinism implies that human behavior is the effect of preceding causes. Here, the discourse differentiates between hard and soft determinism, where hard determinism postulates that every action and event is caused in accordance with causal laws, soft determinism argues that an act can be both, free (not compelled) and caused. Hard determinism infers that when human actions are assumed to result from implicit determinants or causes, such as feelings, needs or desires, those same feelings, needs, or desires are themselves caused by certain conditions that induce their appearance. Contrary to hard and soft determinism, anti-determinist positions insist that human behavior results purely from free will (no causes for actions or events). This debate on free will versus determinism is argued to be one of the most enduring philosophical problems of all time (Wehmeyer et al., 2017). John

Locke, as a soft determinist, argues that human behavior is guided by human thought that is shaped by experience and reflection. Self-determination, in his view, is a developmental process. Human actions encompass the ideas of power, freedom, and volition. Power is the ability to influence the environment (make change) and the human mind has the power to induce human actions. The exercise of that power is volition. Freedom in turn is the power to execute volition without any external force or constraint. It is thus the agent, not the will, who is free to act on volition. Human beings act freely just insofar as they are able to translate their psychological preferences into performance. In other words, as far as an agent has the power to think and to act according to his mental preferences, so far is he free (Locke, 1689). For our understanding this would imply that the agent is free to act, but the action itself is “caused” by numerous determinants. These physiological, psychological, economic, and environmental “determinants” have an impact on agent’s mental preferences, and the agent is free to choose a course of action according to these preferences.

While such a philosophic discussion focuses on the question whether human behavior is the effect of human thought and free will, or if human actions are predetermined, psychology emphasizes the internal and external “determinants” that cause human action. One of the most influential works on self-determination is that of the psychologists Edward Deci and Richard Ryan (1986, 2008, 2012). In their early writings, Deci (1980) argued that self-determination is a basic human need to feel competent and autonomous of utilizing will in order to choose how to serve one’s own preferences. Self-determination theory thus postulates that human beings are active organisms, motivated to adapt and integrate their experiences, knowledge, and abilities in their environment (Deci & Ryan, 2012). According to that, the theory emphasizes the intrinsic, autonomous motivation for producing healthy adjustment and the negative consequences that can arise if individuals are deprived from the ability to act autonomously (and the perception that one is driven mainly by external forces/rewards) (Shogren et al., 2017).

Various empirical studies indeed provide evidence that the satisfaction of the need for autonomy enhances subjective mental well-being and supports the development of a consistent and stable self-concept. True self develops as one acts autonomously and consistent according to one’s own preferences, and as one is socially accepted for who one is rather than for matching some external requirements. Being able to act freely according to one’s own preferences, desires, or attitudes (perceived locus of causality) enables to develop a true and consistent sense of self and a stronger sense of self-worth. Being autonomous is both an input to and a manifestation of a high and stable self-esteem (Deci & Ryan, 1995). On the opposite, if

individuals feel the obligation to assume a certain role or social standards and thus feel forced to give up autonomy and their true sense of self (and thus one's own "true" preferences, desires, attitudes etc.), the own self-concept becomes contingent on following these implanted roles or rules. Clinical studies have shown that the deprivation of the need for autonomy, that is, the lack, or denial of resources or possibilities to serve this need, can even result in personality or behavioral disorders. In this regard, an empirical study argues that individuals with an eating disorder report to have difficulties in defining and controlling themselves. One possible explanation for this, so argued, could be an overtly controlling parenting, where individuals received no opportunities to make decisions that were consistent with their needs and desires. Controlling one's own eating behavior and weight can be thus perceived as a compensating factor to regain control over one's body and mind (Wechselblatt et al., 2000).

Further studies examine the relationship between socioeconomic factors and the subjective ability to feel autonomous. They assume that socioeconomically disadvantaged individuals have mostly physically demanding jobs with limited possibilities to express their autonomy, and also less resources to make choices that are consistent with their needs and desires (Polshuk & Green, 2008). Having low access to socially valuable resources which allow the individual to serve one's own needs, and thus make autonomous decisions according to one's own preferences and goals, is perceived to dampen the development of a self-regulatory mechanism that helps in managing various tasks and challenges in life. In other words, the lack of environmental support and opportunities to make decisions according to one's preferences and goals can have detrimental effects on individuals' psychological and physical well-being (Shogren et al., 2017; Rouse et al., 2011). Especially during adolescence, individuals need environmental support and opportunities in order to develop a stable self-concept and a positive self-view. The experience of the self being the originator of one's actions and decisions enforces one's self-worth and increases one's self-confidence (Hansen & Jessop, 2017). Therefore, developmental psychologists emphasize that self-determination is achieved if the individual identifies and reaches goals based on the foundation of knowing and appreciating oneself (Field & Hofmann, 1994). Since volition and choice are instrumental to experience and develop autonomy, an important question is how constrained resources and environments dampen this development (Hansen & Jessop, 2017). The self-determination model of Field and Hofmann (1994) postulates that self-determination is promoted or thwarted both by internal variables (individual's values, knowledge, skills) and by external variables (e.g. opportunities for choice making, social support from others etc.). The authors argue that to be self-determined one must have both a foundation of self-esteem and self-awareness as well as the ability to act on this

foundation. Especially during adolescence, individuals learn to be aware of one's own capabilities, skills, attitudes, and preferences and strive to develop personal independence. Because acting on one's own behalf always involves risk, individuals learn how to make risky choices in order to reach their goals and how to cope with potentially negative outcomes. Learning how to tolerate uncertainty and consequences of risky choices help the adolescents to develop self-confidence and trust in their own decision-making. Developing the ability to make plans, to think more abstractly and to control own impulses enhances the ability to anticipate potential consequences of own choices and actions, which is also a key ingredient of self-determination (Field et al., 1998).

However, cross-cultural psychologists insist that the manifestation and endorsement of autonomy (or self-determination) differ within cultures that hold different values. Self-determination is, thus argued, characteristic for especially individualistic Western societies that promote subjective independence instead of social interdependence. Hence the need for autonomy is in conflict with the need for belongingness and interdependence, both which are highly valued in collectivistic societies. But others argue that the need for autonomy is universal and present in every human being but may be reflected on different levels. In collectivistic cultures the need for autonomy can be served through internalization of the choices made by significant others. A study with Chinese children showed that those with a close relationship with their mother showed a lower need for autonomy but were still intrinsically motivated to complete a task chosen by their mothers. In contrast, autonomy was an important factor for children with no close relationships. The authors conclude that the effect of freedom of choice no longer prevailed when the relationship was intimate and positive (Bao & Lam, 2008). Another study with Chinese students showed that the need for autonomy was strongly linked to the need for belongingness, revealing that the higher autonomous support received from their parents, the greater connection they felt with their parents (Hui et al., 2011). Authors from the previous study assume that "the issue of autonomy is concerned with the extent to which one fully accepts, endorses, or stands behind one's actions. If Chinese children have internalized the choices made by trusted others, they might experience autonomy although they did not make the choice" (Bao & Lam, 2008, p.280). Individuals who base their self-concept on interdependent relationships perceive themselves as a part of a social system and may thus perceive close individuals as a part of their own selves (Markus & Kitayama, 1991). These findings and assumptions confirm that the need for autonomy is a fundamental human need that seems to hold across cultures and values.

The Need for Self-Efficacy

The previous sections made clear that the development of a true, stable and consistent self is assured as one acts autonomously, is accepted for who one is (feels belonged and approved by significant others) and learn to appreciate and be aware of one's own capabilities, skills, attitudes and preferences. A further significant aspect for true self-development is the ability to experience an inner sense of self-efficacy, that is, the perception of the individual to have the capacity to create, achieve and produce something of subjective significance and to attain desired results. Individuals strive to feel competent, to effectively make decisions, solve problems and overcome challenges (Gecas, 1989). Albert Bandura (1977, 1986), the pioneer of self-efficacy theory, postulates that self-efficacy is the primary determinant in behavioral change and successful environmental adjustment. Hereby, he distinguishes between efficacy expectations and outcome expectations. An efficacy expectation is a subjective belief that one is capable to successfully perform an action, while outcome expectation is an estimate that an action will lead to a desired outcome. The former is a subjective belief about one's own competence, while the latter is a belief about one's own environment. Bandura argues that this distinction is important in case of subjective feelings of frustration and powerlessness, which can be then explained either by a low sense of self-efficacy or by lack of responsiveness of one's own social environment (e.g. no opportunities; lack of social support from the environment). To decrease the efficacy-based meaninglessness requires the development of own abilities and awareness of personal effectiveness. To change the outcome-based meaninglessness requires changes in prevailing environmental structures (e.g. decreasing social barriers).

However, this concept of self-efficacy has been expanded to refer more to the subjective belief to have the capacity to mobilize one's given resources to reach certain outcomes. Self-efficacy judgements, in this regard, are not concerned with skills one has, but with the evaluation of what one can do with the resources and skills one possesses. In this process, individuals weigh, evaluate, and integrate information from various sources concerning their capabilities (i.e. given skills, resources, knowledge etc.), and regulate their choices, actions, and effort expenditure accordingly. Especially in experiments, self-efficacy expectancy has been observed to be a viable and reliable measure to assess individual's success to reach certain outcomes. A study, for example, shows that the best way to predict the success and striving of a smoker to give up on cigarettes is to assess his self-efficacy expectancy. This means that measuring a smoker's perception of his own ability and eagerness to quit smoking under specific environmental

conditions will provide better results than measuring his self-esteem or self-confidence (Maddux, 1995). An individual who believes that he or she is able to abstain from smoking or other form of drugs, and thus to produce a desired outcome with his own personal resources, can conduct a more active and self-determined life course (Ilgen et al., 2005).

This means that stronger feelings of self-efficacy can induce change in one's own behavior, actions, and value priorities. If individuals believe that they have the ability to achieve certain outcomes, and thus to promote change, it will enhance their willingness to act and to adjust to their given environment. Self-efficacy, thus, plays a crucial role in psychological adjustment. Studies show that individuals with a low self-efficacy are more likely to suffer from depression because they often tend to believe that they are not able to behave effectively and to reach desired outcomes. But also, dysfunctional anxiety and avoidant behavior are often assumed to be a direct result of low self-efficacy. Individuals who lack confidence in their abilities and agency are more likely to avoid difficult and stressful situations and tend to react more uncertain and anxious in terms of threat and unpredictability. On the opposite, individuals with high self-efficacy are assumed to be more capable in managing threatening and uncertain situations, and in reacting more calmly to stress and unexpected events (for a review see Maddux, 2002).

However, there is also long and rich tradition in sociology which deals with self-efficacy. Marx, for example, argues that the subjective self can only be developed through efficacious actions in the context of work. If individuals receive the possibility to create or achieve something of subjective significance, their self is created and affirmed. In contrast, individuals who feel estranged and alienated from their social and work environment, suffer from a frustrated need for self-efficacy. Depriving individuals from the opportunity to perform in a given setting, to be effective and to attain desired results will lead in a long-term to enhanced perception of powerlessness and meaninglessness in life (Gecas, 1989). In order to develop the ability to act impactful, efficacious, and authentically, developmental psychology assumes that certain socioeconomic factors must be supplied. Although there is scarce research on this issue, a study (Bandura et al., 2001) examined the multifaced socio-cognitive origins of children's self-efficacy beliefs and their impact on their career-related choices in life. The proposed conceptual model tested the influence of socioeconomic, familial, and self-related factors on self-efficacy and career choice. It shows that especially the familial socioeconomic status and parental perception of their own efficacy shape children's personal efficacy, which, in turn, determine their decision-making in regard to potential career paths in the future. Another study (Boardman & Robert, 2000) shows that also the socioeconomic level of the neighborhood, such as high

levels of unemployment or public assistance, tend to have an impact on individual's self-efficacy. In some cases, the results show that neighborhood socioeconomic background appears to reinforce this relationship over and above individual-level socioeconomic status. This means that individuals with a similar socioeconomic status will report different levels of self-efficacy, depending on the socioeconomic conditions in the neighborhoods they live in. The authors explain that due to limited resource flows into low socioeconomic neighborhoods, an individual with low SES living in such an environment will have lower resources to draw on. Living in such a social context, where opportunities and resources are limited, lowers the perception that one can achieve something and act according to one's own desires and goals. This means that the individual has less exposure to other individuals who engage in efficacious actions and achievements, which lowers the perception of one's own efficacy.

These theories and findings provide evidence that if individuals believe that they can master their environment, be efficacious in their actions and impactful in their choices, it will encourage the formation of their consistent and stable self-concept. Acting autonomously and authentically according to one's own desires, preferences, and goals, and receiving opportunities and active encouragement from the social environment to do so, will generate a self-determined, stable, and consistent self. Depriving the individual of all these resources, options, and mental support, will lead to maladjustment, frustration, and the formation of an inconsistent self-concept.

6. Discussion and Concluding Remarks

The examination of these theories and empirical studies provide evidence that human beings actively seek to understand, evaluate, and shape their environment. In this process, they are confronted with a complexity of conditions, such as ambiguous information, unpredictable circumstances, uncertain outcomes, and threatening events, under which they have to make appropriate choices. Conflict economics is all about choices. This means, that individuals make choices in order to understand their existence, to find their role within the social context, and to make autonomous and effective decisions that are consistent with their goals and preferences. According to that, this paper emphasizes that individuals make choices in order to foremost serve their fundamental human needs, i.e., i) existential needs that address the human drive to secure one's own existence, to understand and control the environment, to reduce ambiguity, chaos and indeterminacy in their lives; ii) relational needs, that is, to form one's own social identity, to integrate the self into society, form relationships, understand one's own role in society and feel accepted and approved by significant others; iii) and self-related needs that

describe the human drives to form a stable and consistent self, to feel autonomous and efficacious in one's own choices and actions, and to have a positive view of oneself. Each of these needs is shaped by internal determinants, such as personal dispositions, and by external determinants, such as economic, social, political, or environmental factors. Serving these needs is of utmost importance for subjective mental well-being. However, every human being differs in the manifestation of these need¹⁰s. While one individual may have a higher need for order and control, the other may put more emphasis on the need for self-determination. The theories and empirical findings mentioned throughout the paper also reveal that certain conditions, resources, and opportunities must be given in order to enable human beings to serve their emphasized needs. Thwarting, or depriving, individuals of vital resources, of options and a supportive social environment can enhance frustration and a negative perception of oneself and the social environment.

Individuals strive to be active social members and creators of their environment, to feel affiliated and belonged to that society, to be able to induce change and to feel accepted for who one is. Denying individuals these opportunities, and resources to serve their needs, and thus to be a socially recognized, integrated and active member of a society, can induce feelings of disintegration. The social disintegration theory (SDT) postulates that antisocial and conflictual behavior can be explained as a consequence of society's unsatisfactory integration performance. This means that social institutions and communities failed to provide sufficient options and resources to enable individuals to integrate their selves into society and receive social approval (Heitmeyer & Anhut, 2008). This theory would match the assumptions made here, namely that depriving individuals of resources and opportunities to serve their fundamental needs may enhance their tendency of maladjustment and withdrawal. However, in order to serve their needs, individuals have to find alternative coping strategies and reconciliation options. They thus make choices according to their needs and preferences under given conditions and constraints. This means that the choice of a certain reconciliation option depends primarily on how effectively this option can serve the subjectively emphasized needs. Empirical findings indicate that especially disintegrated individuals, who are denied access to vital resources, opportunities, and social support, tend to find reconciliation in ideologically formed groups. Albrecht (2003), for example, argues that recognition deficits in the social domain (no viable

¹⁰ Human needs can be thus understood as "both behavioral motives that are inborn within everyone (although people may develop variations in the strengths of these motives) and as experiential nutriment that everyone requires in order to thrive and experience wellness (although people may vary in how well these needs are satisfied)" (Sheldon, 2011, p.552).

access to work, housing, education, consumer goods etc.) are responsible for the risk of power-seeking violence (e.g. illegal activities, antisocial behavior, seeking status); that experiences of institutional discrimination can enhance the risk of ideologically and collective motivated violence (e.g. right-wing extremism); and that emotional deprivation (not being able to express oneself and own beliefs etc.) can increase the tendency of identity, and self-esteem related violence (join groups to feel approved; tests of courage etc.). This implies that individuals search for alternative coping strategies and reconciliation options in order to serve their fundamental needs. While we agree with economic assumptions that resorting to violence and joining a (potentially radical) group is an intentional choice, selected from a range of perceived alternatives, we also emphasize here that this choice is driven by need deprivation. Thus, the principal argument of this paper is that individuals may join radical groups, adopt radical ideologies, start illegal activities or resort to violence because they are deprived of resources, opportunities, and a supportive social environment to serve their existential, relational and self-related needs. They thus make choices and search for alternative coping strategies and reconciliation options to serve their fundamental needs, given the environmental conditions and resource constraints. While individuals may also join rebel groups for prospective material gains or political, social, and economic payoff (Collier & Hoeffler, 2004), the psychological drives should be also taken into consideration.

7. References

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