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Looking behind the curtain: a model of left behind places and feelings

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Abstract:

The concept of “left behind” places is complex and multidimensional. It encompasses economic factors, demographic aspects, infrastructure and connectivity criteria, social factors, political and cultural aspects. Previous studies on the concept have only described the feeling of left behind very superficially. We therefore focus on the feeling of left behind. We show how individual feelings can become a regional phenomenon of left behind. The feeling of left behind is primarily fed by two components that are felt by many people in left behind places: autonomy deficit and low appreciation. Causes and suitable political measures for left behind places are derived from our conception.

Keywords: Case study, left behind place, feeling left behind, lagging region, regional development, territorial inequality, policy measures.

JEL Classifications: O18, O20, R11, R12

1 Introduction

Fear is running rampant in many European democracies! Those who vote populist "destabilize democracy and weaken our country", says Markus Söder, Minister President of Bavaria (Söder 2023). In this respect, Germany is following the populist electoral trends of many other European democracies. This trend emanates in particular from places that are lagging behind economically and are considered left behind (Rodriguez-Pose 2018). This is underlined by the fact that in 2022, for the first time since 2004, there were more autocratic than democratic regimes worldwide (Bertelsmann Stiftung 2022).

The concept of left behind regions is complex and multidimensional. It encompasses economic factors, demographic aspects, infrastructure and connectivity criteria, social factors, political and cultural aspects. Different concepts and definitions in the literature focus on different aspects or combinations of aspects. In principle, however, it is not necessary for a region to have negative characteristics in relation to each of these aspects in order to be considered left behind (MacKinnon et al. 2022). Whether a place or region is seen as left behind depends on the interaction of the various factors and on their dynamics. Many studies therefore look at a variety of characteristics and Velthuis et al. (2023) even provide a classification of left behind regions in Europe, identifying different types.

It is interesting to note that the identification of left behind places is often based on measurable characteristics of the regions, e.g. Velthuis et al. (2023) use economic, demographic and social metrics, while the origin of the preoccupation with these places is strongly influenced by the increasingly populist electoral trends in recent years. The concept of left behind is often used to describe and analyze spaces, regions and places that are considered forgotten, unimportant and sidelined (Essletzbichler et al. 2018; MacKinnon et al. 2022; Pike et al. 2023). These places also pose a significant problem for prosperous areas and the country as a whole, as populism has already established itself as a political force in many of the so-called left behind places and represents a systemic overall risk (Rodriguez-Pose 2018). This results in a certain contradiction between the more psychologically oriented understanding of being left behind or unimportant and the identification of such places based on physical characteristics.

We address this contradiction and add to the existing literature in three ways: 1) we focus on the psychological components of the concept, which have been largely neglected in the economic geography literature to date. It is often unclear who, what, where or from what is "left behind" (Dijkstra et al. 2020; MacKinnon et al. 2022). In our opinion, this can only be answered on a psychological level, because "left behind" is ultimately a feeling. The central question is therefore what the exact causes of this feeling are. Based on the extensive literature on satisfaction and happiness, we build a theoretical model that extends the previous characteristics of the concept. 2) In this sense, we show a possible way in which individual feelings can become a regional conviction of left behind and how this could form a left behind place from a psychological perspective. 3) Finally, the question arises as to which policy measures are particularly suitable. Usual approaches in the past have focused on an upgrading of economic activities and infrastructure in lagging regions (e.g. Davenport and Zaranko 2020). In recent years, various new measures and policy concepts have been presented specifically for left behind regions (Bosworth et al. 2016; Oberst et al. 2019; Iammarino et al. 2019). However, the more psychologically oriented approach provides additional starting points here.

Section 2 summarizes the previous characteristics of the left behind concept. Section 3 deals with the fundamental psychological factors of feeling left behind and derives mechanisms in left behind places from them. These considerations serve as a starting point for understanding the feeling of left behind on an individual and regional level, from which causes can be derived (section 4). Finally, we summarize our findings in section 5 and conclude with related policy considerations.

2 Left behind places: Characteristics

The concept of left behind places is multilayered and multidimensional and has large overlaps with other concepts (e.g. peripheralization (Leibert and Golinski 2017)). In our understanding, the concept encompasses economic factors (section 2.1), demographic aspects (section 2.2), infrastructure and connectivity (section 2.3), social factors (section 2.4), political factors (section 2.5) and cultural aspects of perception (section 2.6). Many factors have in common that they are considered relatively, i.e. in comparison to the respective national average, as many studies on lagging regions do (Hertrich and Brenner 2023). Major disparities to other regions of the respective country and long-term uneven spatial development are considered important prerequisites (McCann 2020; Tomaney et al. 2021). In addition, many regions exhibit negative dynamics and development in the individual factors (Feldman et al. 2021; Florida 2021). The individual determinants and characteristics of the "left behind" concept described in the literature are outlined and classified in more detail below.

2.1 Economic indicators

Left behind places are described as regions that, over a longer period of time, grow less economically or hardly dynamically compared to the national average, often even shrinking or stagnating (McCann 2020; Tomaney et al. 2021; Oberst et al. 2019; Florida 2021; Ford and Goodwin 2014; MacLeod and Jones 2020). Economic stagnation and relative economic underdevelopment are coupled with high economic uncertainty (Ford and Goodwin 2014; Dijkstra et al. 2020) and low productivity (Davenport and Zaranko 2020). The regions often were/are affected by deindustrialization or major economic restructuring (Rodriguez-Pose 2018; Gray and Barford 2018) and are generally disconnected from the hotbeds of knowledge and innovation (Feldman et al. 2021). In addition, left behind places often have relatively high unemployment, increased job losses and a lower employment rate with mostly few highly skilled jobs (Florida 2021; Feldman et al. 2021; Oberst et al. 2019; Rodrik 2018). This is usually accompanied by low wages and falling real wages, which in turn can lead to further social and political problems and tensions (see sections 2.4 and 2.5). As a result, being economically 'left behind' describes people "who have fallen in social status due to job loss or who, as low earners, do not participate in social advancement" (Deppisch 2019:45).

2.2 Demographic indicators

Left behind places are also areas in which the population is shrinking, not growing or growing at a below-average rate. In most cases, these are shrinking areas with a declining population (Rodriguez-Pose 2018; MacKinnon et al. 2022). There are several main reasons for this: The ageing society is confronted with the consequences of demographic change (Davenport and Zaranko 2020; Oberst et al. 2019). Low fertility rates and increased migration to other more prosperous regions are exacerbating the situation (Oberst et al. 2019; Tomaney et al. 2021). In most cases, the (young) well-educated people who leave the regions are those who can regain a foothold in other prosperous regions. The less well-educated and often older people stay behind (Pike et al. 2023; Tomaney et al. 2021). An above-average number of people in left behind places exhibit increased immobility and live in their home county (Lee et al. 2018).

2.3 Infrastructure and connectivity

Left behind places are in most cases rural areas (Henn and Hannemann 2023), which often have poorer connectivity anyway. The regions are often poorly connected to neighboring cities. As a result, people feel distanced and isolated from the rest of the country (Davenport and Zaranko 2020; Mattinson 2020; Tomaney et al. 2021). "Infrastructural 'disconnection' manifests itself (...) in the fact that certain services of general interest, such as mobility or communication infrastructures, are no longer available to the local population of a place or region" (Deppisch 2019:45). Cramer (2016) finds that rural residents have a deep dislike of city dwellers. The latter would work less hard and benefit more from the government. In addition, there are problems with the (social) infrastructure, especially in rural regions. (Secondary) school facilities have to close due to the demographic upheavals in society and the age structure described above, among other things, and journeys to school are becoming longer and more difficult for those affected. In general, there is a lack of (public and private) infrastructure such as

broadband and a decline in civic and community facilities and public services (MacLeod and Jones 2020; Rodriguez-Pose 2018; Davenport and Zaranko 2020; Oberst et al. 2019), which could be due, among other things, to the often difficult budgetary situation of municipalities (see policy indicators in section 2.5). Oberst et al. (2019) explain that particularly low or sharply declining physician densities can also be an indicator of remote locations.

2.4 Social indicators

Left behind places are characterized by lower, low and sometimes even declining living standards and loss of social benefits (Essletzbichler et al. 2018; Dijkstra et al. 2020). This is due to the limited employment opportunities in these regions on the one hand and the population's dwindling purchasing power on the other (see economic indicators in section 2.1). Among other things, this also contributes to the social and cultural marginalization of the population (Dijkstra et al. 2020; Ford and Goodwin 2014) and increases the above-average poverty and disadvantage in these regions (Oberst et al. 2019). In addition, the over-indebtedness of private households is high, which points to "increased social challenges" (Oberst et al. 2019:90). In addition, the population of left behind places has less access to healthcare (see e.g. doctor density) and therefore has a lower life expectancy and poorer health situation (Oberst et al. 2019; Tomaney et al. 2021). A tendency towards lower educational attainment and a lower level of education and skills contributes to the further marginalization of the population and the entrenchment of economic problems (Tomaney et al. 2021; Davenport and Zaranko 2020).

2.5 Political indicators

The discourse on left behind places is often accompanied by empirical studies on the Brexit referendum (MacLeod and Jones 2020; Gray and Barford 2018). They argue that the territorially progressive tax system, which redistributes public funds to socially weaker regions and people, has led to regions in England in which the population was disproportionately dependent on state transfer payments. As a result, increased spending cuts combined with tax increases due to the UK government's public austerity policies following the 2008 supreme crisis led to the Brexit vote, particularly in left behind places. People feel politically neglected as there is hardly any visible political engagement in these regions. In addition, spending cuts and - partly due to austerity policies - limited investment in social and economic infrastructure (see section 2.3) increase the feeling of not being important among the population (Tomaney et al. 2021; Davenport and Zaranko 2020). For many municipalities, it is a vicious financial spiral: the less dynamic the economy is, the less tax revenue is available and, as a result, costs have to be reduced, which in turn hinders the establishment of new businesses.

2.6 Perception of left behind

All characteristics described above are used in the literature to characterize left behind regions and places. Figure 1 summarizes these dimensions of left behind places and the characteristics contributing.

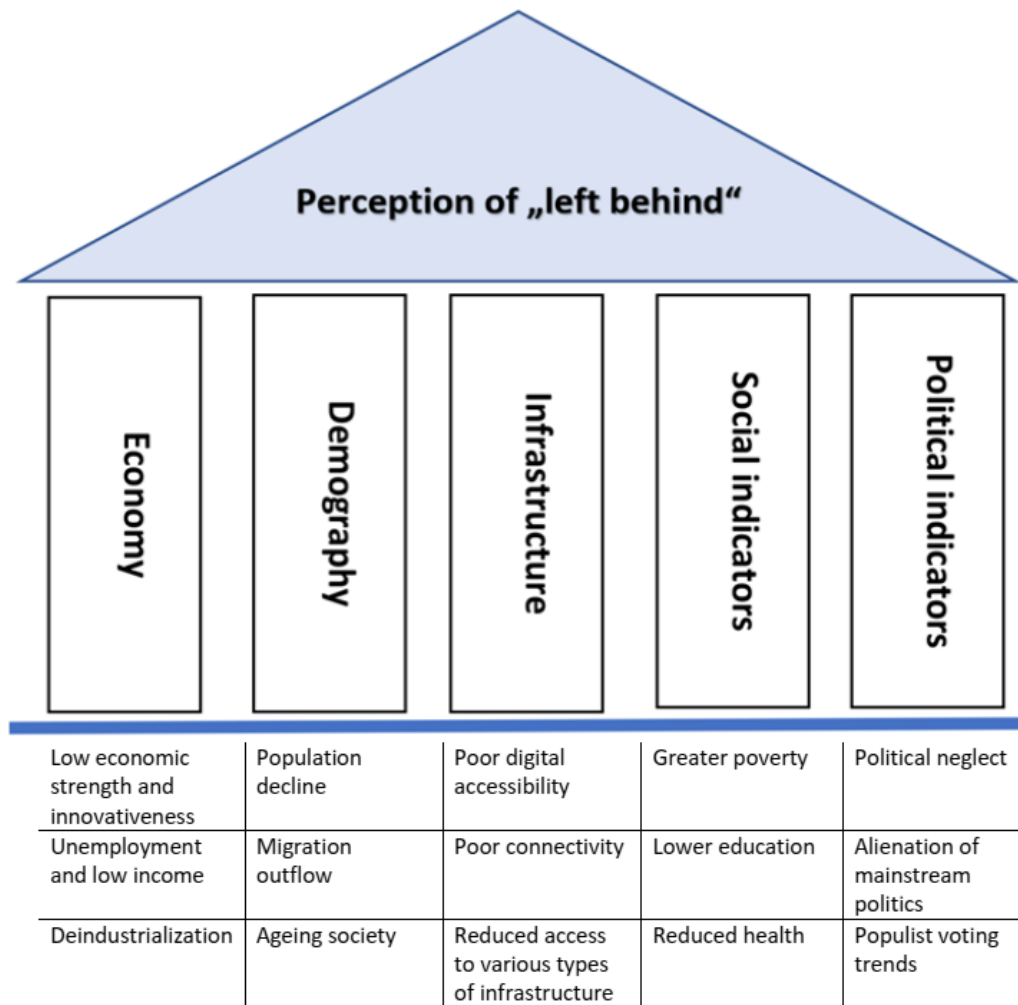


Figure 1: The six dimensions (pillars + roof) of left behind places and some selected characteristics.

Many authors assume that the population living in left behind regions defined by these characteristics feels left behind, although a deeper analysis of the feelings is lacking. Rodriguez-Pose (2018) describes the feeling of nostalgia for better times and a passionate sense of belonging to the region. Gordon (2018) describes the feeling of dissatisfaction regarding economic development in the region. Other authors describe a feeling of marginalization and neglect, dissatisfaction and fear for future prosperity (Rodriguez-Pose 2018; Davenport and Zaranko 2020; Oberst et al. 2019; Tomaney et al. 2021; Pike et al. 2023). All these feelings relate to the characteristics described above. However, the underlying motives and fears often remain unconsidered in further examinations and are not analyzed in depth. We fill this gap in the following.

3. Psychological background

Although *left behind* is often connected in literature with the measurable characteristics of the regions described in section 2, the current origin of the preoccupation with these places lies in the strongly increasing populist electoral tendencies in recent years. At this point, there are clear discrepancies and contradictions in the literature. For example, the sociologist Lengfeld (2017:209) shows that "the low status situations typical of modernization losers (low level of education, professional activity as a worker and low income) (...) do not have a significantly higher probability of intending to vote for the AfD [populist party] in the upcoming federal election". Similarly, unemployment and inequality are found to be probably significantly overestimated by people (Hüther and Diermeier 2019). Hence, many of the aspects characterizing left

behind places according to the literature do not match personal characteristics of populist party voters. Rather, populist party voters are people who are afraid of assumed future loss and share the feeling of (cultural, social and/or economic) dissatisfaction and have a poor assessment of their future (Dellenbaugh-Losse et al. 2020; Decker et al. 2016). Feelings such as fear of loss of identity or social decline or general dissatisfaction are more decisive for feelings of left behind than socio-economic spatial characteristics and must therefore be the focus of further consideration. However, looking at the underlying feelings and psychological characteristics does not exclude the possibility that socio-economic characteristics contribute to these feelings. In order to achieve a better understanding of the concept, the underlying psychological understanding and regional ways of thinking must therefore be more firmly anchored and focused in the concept.

In this respect, we work out what the feeling of left behind could mean (section 3.1) and what feelings such as fear, satisfaction or threat fundamentally depend on and through which mechanisms they arise (sections 3.2 and 3.3). Section 3.4 brings together the individual perspective before looking at the regional perspective in section 4.

3.1 Feeling left behind

There is no universal understanding in the literature of what the left behind feeling is and what constitutes it (MacKinnon et al. 2022; Dijkstra et al. 2020). There are a number of studies that analyze the attitudes and attitude patterns of populist voters. Goerres et al. (2018), for example, find that people vote for the AfD primarily because of xenophobia, rejection of immigration, fear of economic decline and political mistrust and that entrenched local social networks maintain the persistence of right-wing attitudes over a long period of time. In order to go deeper in the understanding of left behind feelings, media analyses on the feelings that are attributed to people in 'left behind' places are helpful.

Deppisch (2019) comes to the conclusion that the feeling of being left behind in media discourse is very complex and consists of a hodgepodge of different attributions. The narrative of being "left behind" in terms of infrastructure is dominated by supply structure weaknesses, economic "being left behind" is dominated by poverty and fears of social decline and cultural "being left behind" is characterized by an anti-cosmopolitan attitude. "All of the aforementioned forms of 'being left behind' are associated in the discourse with a certain conglomerate of feelings" (Deppisch 2019:16). Immanent are the overarching feelings of fear (Deppisch 2020), threat, insecurity, dissatisfaction and aspects of a lack of recognition, which can relate to very different aspects but result from the infrastructural, economic and/or cultural 'being left behind' of the region (Deppisch 2019). Rodriguez-Pose (2018) adds nostalgia for once better (economic) times in the home region to the feelings. In the following, the most important immanent feelings from our point of view are now analyzed psychologically and placed in context. Table 1 shows the previously mentioned feelings that make up the concept in the media discourse.

Table 1: Feelings of 'being left behind' named in the discourse (based on Deppisch 2019, 2020, strongly modified).

Explicit feelings	Emotional level		Through...
Abandoned; not cared for; alienated; anxious	Fear of...	Cultural alienation, loss of identity; the foreign; economic and social decline; loss of employment; (old-age) poverty	Migration Economic repression Change
Threatened; helpless; deceived; alienated; powerless and weak	Threat to the...	Identity, home and culture; supply situation/services of general interest; one's own social position and financial security	the foreign from 'outside', 'others', (migration (alienation), globalization) Economic repression and infrastructural collapse Change
Powerless; hopeless; without perspective; worried;	Uncertainty about the...	Future; current and future supply structures (e.g. infrastructure, care), social situation	Infrastructure decay; free market - hardly any state protection (competitive society) Change

Disappointed; neglected; abandoned; frustrated; dissatisfied; envious, disadvantaged	Dissatisfaction with...	The own life situation/individual life situation, politics and political decisions (e.g. asylum policy); the democratic system	Political neglect and underrepresentation; decay of infrastructure; economic repression, Comparison with others
Not recognized; to be forgotten; not taken seriously; disregarded	Lowering feeling of self-esteem because of the...	lack of recognition, humiliation and contempt, degradation of life's work	Political elites, people from other regions Interacting with others

3.2 Fear, threat and uncertainty

Fear, threat and uncertainty are closely interrelated and very complex. A perceived threat is usually followed by fear (Kapeller and Jäger 2020). Uncertainty can arise, among other things, from contradictory or unavailable information due to feeling insecure about one's own or general level of knowledge (Babrow et al. 1998). Uncertainty can also trigger stress and anxiety (Eysenck et al. 2007; Knobloch 2015). Anxiety can also have many biological, psychological or social causes. The latter include, for example, negative life experiences, a lack of social support or skills, changes in values or a conflict with social norms (Shri 2010). Anxiety increases attention for threat-related stimuli (Eysenck et al. 2007); corresponding information is perceived more strongly and this leads to a distortion of information (selective perception, see section 3.4) (Donchin 2022). The way in which people deal with fear, threat and uncertainty has been investigated in stress research. The coping strategies and defense mechanisms range from problem-oriented approaches to emotion regulation. People who feel anxiety or insecurity often avoid confrontation and conflict. This avoidance behavior can be observed in various contexts (Jonas et al. 2014). However, anxiety and insecurity can also cause people to become more distrustful of other people (Murphy et al. 2015). They may tend to question other people's intentions and motives more critically and be more skeptical. People may restrict their behavior in situations of fear or threat in order to protect themselves. This can lead to them being less willing to take risks or engage in fewer new experiences (Wake et al. 2020). They may share less information and be less willing to open up emotionally. Fear and threat make people less empathetic to the feelings and needs of outgroup members (Arceneaux 2017). When people feel insecure or threatened, they are more inclined to defend their own culture and worldview, seek security and identify more strongly with their cultural and social groups (Pyszczynski et al. 2006). Insecure people can also try to overcome this state by gathering information (Brashers 2001). Tajfel and Turner (1986) argue that insecurity can also be one of the driving forces behind identification with certain social groups. People who feel fear, threat or insecurity seek support and affirmation in social groups. Such affirmation of their own group often leads to prejudice or hostility towards members of the out-group (Lüders et al. 2016). Worries and fears know no social boundaries and yet are distributed very differently across society. For example, the perception of worries and fears generally decreases with a higher level of education. Although the development of societal fears is subject to strong economic fluctuations (e.g. the general economic situation) and current developments (e.g. immigration), it is striking that the development of personal worries (e.g. own economic situation; job insecurity) has been declining throughout Germany for many years (Lübke 2019). Interestingly, however, these latter fears are also increasingly attributed to people in left behind places (Deppisch 2020).

3.3 Happiness and life satisfaction

Happiness is influenced by many individual and cultural factors. Different theories and models explain the feeling of happiness: In a hedonistic sense, maximizing pleasure and personal enjoyment while avoiding pain contributes to happiness (Moen 2016). Happiness can also lie in the realization of personal potential, meaning and purpose in life (eudaemonia) (Woolfolk and Wasserman 2005) or evoke an experience of flow (Sahoo, F. M., & Sahu, R. 2009). Proponents of set-point theory assume that people have a genetically determined level of happiness to which they return again and again, with ups and downs (Brickman and Campbell 1971). Proponents of positive psychology focus on strengths, positive emotions and the well-being of people and promoting this through positive thought patterns, mindfulness and other techniques

(Hefferon and Boniwell 2011). In this sense, the PERMA model (Seligman 2011) postulates five elements that make up human well-being and fulfillment: positive emotions, engagement, relationships, meaning and fulfillment (PERMA). In the following, we focus on different theoretical strands to explain a lack of happiness and life satisfaction.

3.3.1 Low autonomy, competence and social connectedness

The Self-Determination Theory (SDT) of psychologists Ryan and Deci (2000) builds on this. It postulates that people have an innate psychological need for autonomy, competence and social connectedness. When these needs are met, this leads to a higher level of well-being and happiness. Autonomy is understood as the need for self-determination and the ability to make one's own decisions and exercise control over one's own life. External regulation, on the other hand, is associated with a feeling of restriction, pressure and constraint. Competence is the need to feel effective in coping with tasks and challenges and to develop skills. Social connectedness is the need for interpersonal relationships, social acceptance and belonging (Ryan and Deci 2000). The micro-social embedding and socio-cultural integration of a person is also of great importance for satisfaction (Haller and Hadler 2006). According to SDT theory, people are therefore more satisfied when they have control over their lives (autonomy), feel confirmed in their abilities (competence) and are accepted and respected by others (social connectedness) (Ryan and Deci 2000; Deci and Ryan 2000). A lack or denial of the three needs of competence, autonomy and social connectedness can lead to stress, frustration, dissatisfaction, demotivation, avoidance behavior and low self-esteem, among other things (Deci and Ryan 2000).

3.3.2 Low appreciation

For the need for social connectedness (SDT), recognition from other people is indispensable. Appreciation goes one step further in that it not only recognizes existence or achievements, but also ascribes a positive value to them. However, this can only be fulfilled by other people. In this sense, if a person feels recognized and appreciated by others (e.g. compliments), this increases their sense of appreciation and satisfaction. Also in Maslow's hierarchy of needs, appreciation is one of the most important individual needs (Maslow 1943). A lack of recognition and appreciation, i.e. disregard, can lead to low self-esteem, dissatisfaction, loneliness and social isolation and also have a negative impact on psychological well-being and feelings of satisfaction (Coffey et al. 2010). The experiences of low appreciation have a significant and substantial independent influence on life satisfaction and even have a greater impact on satisfaction than parameters such as partnership status or unemployment (Eichhorn 2013; Böhnke and Delhey 2013; Priem et al. 2020). People who feel that their value as a human being is not recognized and appreciated can feel humiliated (Klein 1992). Humiliation is a composite emotional state of many characteristics, dominated by shame, anger and sadness and the loss of self-esteem (Araya 2020; Elshout et al. 2017). The emotional state can lead to bitterness as the humiliation generates a hostile reaction. The painful memory persists and occasionally resurfaces. Humiliated people can also feel the desire for revenge. It allows a vengeful attitude to blossom, disguised as a longing for justice. Bitterness and revenge are not always only directed at the direct perpetrator of the humiliation. They can sometimes also extend to third parties who witnessed the humiliation (Araya 2020).

3.3.3 Disadvantage due to social and temporal comparison

People are social beings and often compare themselves with others in their social environment and on social platforms (Morawska 2019). Social Comparison Theory (SCT) (Festinger 1954) states that people tend to compare themselves with others in order to evaluate their own abilities, opinions and experiences. In downward comparison, a person compares themselves to others who are seen as less successful or competent. This can generally boost self-esteem and satisfaction. In an upward comparison, a person compares themselves with others who are seen as superior in certain characteristics or abilities. The relative deprivation hypothesis states that people tend to evaluate their own well-being and self-esteem in comparison to others. The hypothesis suggests that people generally feel better about themselves and have more autonomy (e.g. competence) when they perceive themselves as better or more successful in comparison to their peers or other members of their social group (Stouffer et al. 1949;

Suls 1986). For example, when people see that other people in their social circle or on online platforms are more successful, more beautiful, richer or happier, this can lead to dissatisfaction, shame, envy and a desire to conform and minimize self-esteem (Abou-Zeid and Ben-Akiva 2011; Wert and Salovey 2004; Pelser and van Schalkwyk 2023; Alfasi 2019). It is also important to note that relative deprivation is not always necessarily based on objective facts or actual objective differences, but on the subjective perception of injustice or disadvantage compared to others. Happiness and satisfaction are therefore only partly dependent on the actual standard of living (Veenhoven 1991). Although the reference groups for comparison are often friends, colleagues or neighbors (in-group), comparison can also take place within a larger environment (out-group). In this case, people can compare their own happiness and living conditions with the happiness and living conditions of others in their wider social environment (language area, state borders, nationality) (Schwarz and Strack 1999; Delhey and Kohler 2005). However, the relationship can also be viewed in the other direction, so that unhappy people react more sensitively to social comparisons and are more strongly influenced by the performance of others, while happy people are less affected by such comparisons (Lyubomirsky and Ross 1997).

Building on the Social Comparison Theory (Festinger 1954) presented above, Temporal Comparison Theory (TCT) (Albert 1977) looks at the influence of comparisons with one's own past or future self. According to the theory, people compare their current situation with their previous situation or their future expectations, which influences their self-esteem and satisfaction. However, people adapt to changes in income within four years, after which no significant income effects on happiness remain (Easterlin paradox (1974)). A change in status has a longer-lasting effect on happiness (Di Tella et al. 2010). This could be due to the so-called hedonistic treadmill, which states that people tend to adapt to changes in their standard of living and return to a relatively constant level of happiness in the long term (Brickman and Campbell 1971). The prospect of future positive economic change (improvements), both on an individual and societal level, also has a positive effect on happiness (Haller and Hadler 2006). More recent findings question aspects of the hedonistic treadmill. Very significant events such as divorce, death of a spouse or unemployment are associated with major lasting changes in subjective well-being (Lucas 2007). Major, very significant changes in the past could have an impact on one's identity and subjective well-being.

3.4 Merging the individual perspective

The feelings presented in sections 3.1 to 3.3 mainly arise either because of negative expectations or fears towards the future, dissatisfaction with the current situation or worsening self-esteem (Table 1). The former is often triggered by changes, especially in combination with a deficit in autonomy to deal with these changes. Dissatisfaction can have many causes (section 3.3). Among those are again changes that made life less satisfying, low life circumstance in comparison with reference groups and a low autonomy to shape one's own life. The low self-esteem has its origins, among other things, in the low appreciation and the experience of being rejected by other people (section 3.3.2). Figure 2 shows the main mechanisms, that lead to left behind feelings on the individual level.

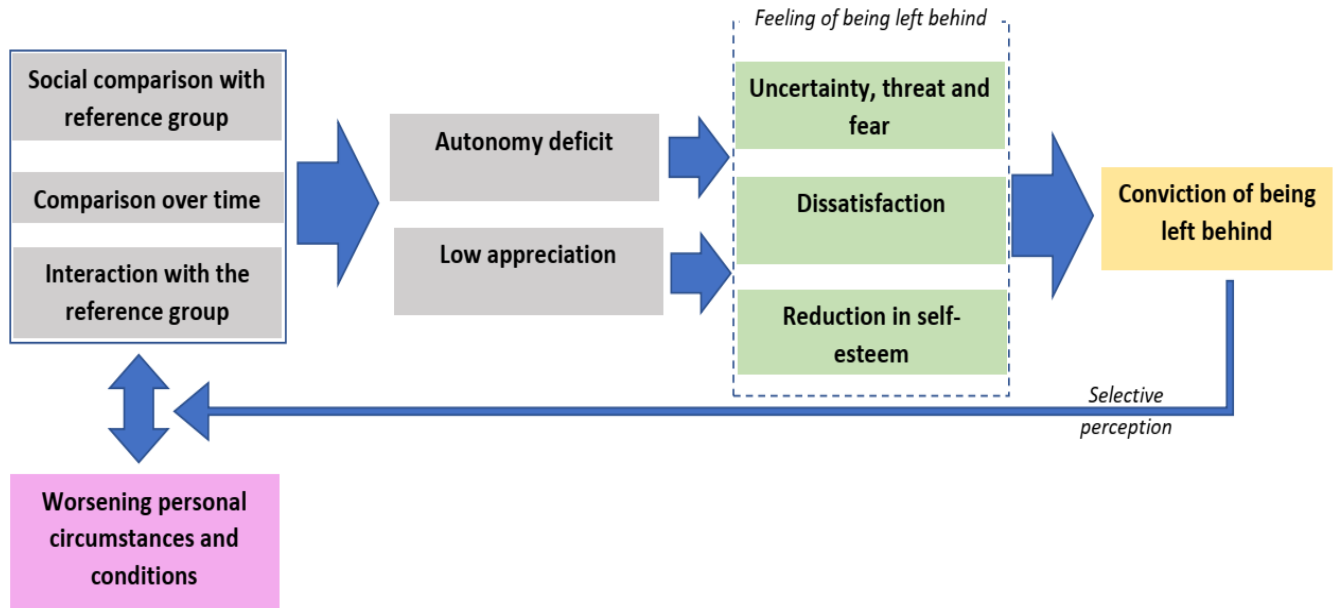


Figure 2: Different mechanisms leading to left behind feelings on the level of individuals.

It is worth noticing that changes in the individual life circumstances are connected to the personal feelings. The latter, in turn, also change the perspective on the circumstances. Selective perception means the human tendency to perceive certain information or things in their environment more strongly than others, based on their individual interests, experiences (feelings) and expectations (Donchin 2022). This can lead to people finding themselves in a mental lock-in; a thinking trap with cognitive rigidity in which people are relatively constantly trapped in certain thought patterns or perspectives and find it difficult to break out of them (Kahneman 2016). Fear, threat and uncertainty, as well as a low self-esteem have therefore the additional characteristic that they might lead to a biased gathering and interpretation of information that might exacerbate the situation and also prolongs the negative future expectations beyond the really given developments.

4 Regional perspective

The considerations on an individual level are crucial and serve as starting point for our endeavor to explore the perception of the feeling left behind on a regional level. Therefore, now we have to understand how the individual processes lead to a general regional feeling. Two mechanisms are important in this context. First, a similar situation for many people in a region might lead to similar feelings. This is discussed in section 4.1. Second, interaction between people within a region might lead to shared feeling. Two concepts are important in this context: the concepts of regional and cultural identity (section 4.2) and the development of attitudes in groups and societies (section 4.3). Section 4.4 brings together the arguments on the regional level.

4.1 Regional conditions and individual feelings

In section 3.4 we summarized the conditions that lead to left behind feelings on the individual level. Especially, we found that a decrease in the living conditions, or the altered perception of it, can lead to feelings such as fear, threat, and insecurity. Related to this is the feeling of powerlessness, of not being able to determine one's own future. According to SDT, this perceived lack of autonomy and control over one's own social and economic situation can lead to anxiety and insecurity (Ryan and Deci 2000). Therefore, a loss of autonomy in the context of changes in the regional circumstances is of high importance. Furthermore, we have argued that people compare their current life situation with the past (TCT). Hence, worsening of any aspect of regional circumstance might lead to dissatisfaction. This might also be connected to nostalgia if people think back to better times (both personally and regionally) in an upward

comparison. Nostalgia can lead to satisfaction in older people. However, if the regional or personal identity is not coherent and cohesive, it reduces satisfaction and the ability to deal with new things (Iyer and Jetten 2011). Nostalgia produces a passionate sense of belonging in left behind regions. People who live in left behind places see the decline and loss of the local economy and industry very much as their own history and perceive this as a loss of identity (Rodriguez-Pose 2018; Mattinson 2020). This is also connected to regional identity, which is discussed in the next subsection. Finally, people who feel that their value as a human being is not recognized can feel inferior (Klein 1992). Hence, changes in the population composition of a region or in the values of a larger area that the region belongs to might put the individual values in question or conflicts with them.

As a consequence, there are many regional circumstances that influence the feelings and satisfaction of people. If changes in the regional environment impact many people in a region, they might lead to similar feelings on a regional level. Examples for such changes are economic decline, mass layoffs, demographic changes, a loss of infrastructure, or a regional loss of autonomy, for example due to a loss of political meaning of the region. In addition, according to the SIT described, people compare themselves and their own life chances also with the life chances of other people in other regions (Tajfel and Turner 1986). If the region provides poor circumstances an upward comparison with the "out-group" results, leading to negative feelings (fear, insecurity) but above all to dissatisfaction among the residents (Lüders et al. 2016). It is perceived as unfair that, through no fault of their own, they do not have the same opportunities as other people in other regions due to the region in which they are located. The similar feelings and dissatisfaction caused by similar situations within a region are further intensified by the processes described in the next two subsections.

It is important to note here that the emergence of the feelings described does not necessarily have to be based solely on regional aspects, but can also be triggered individually by other factors. Nevertheless, it can be assumed overall that regional changes or comparisons can lead to individual dissatisfaction, reductions in happiness and anxiety and that this is more likely to happen in certain regional circumstances (see Table 1).

4.2 Regional identity

Belonging can be seen as the strongest social need in Maslow's (1943) pyramid of needs mentioned above. Only when a person knows what they belong to or where they belong, do they know who they are (Raagmaa 2002). According to Social Identity Theory (SIT) (Tajfel and Turner 1986; Hogg and Reid 2006), part of our identity (and our self-worth) is fed by belonging to meaningful groups. Such groups are, for example, "I as a Berliner" (origin). A key point of SIT is that a person defines and identifies themselves through groups with which they are strongly connected. This connection provides a sense of identity, which in turn promotes self-esteem and a sense of belonging (Psaltis and Cakal 2016; Lüders et al. 2016). People categorize themselves and others based on shared social identities and engage in intergroup differentiation processes. This can lead to stereotypes and prejudices if certain groups are perceived negatively (Zick 2003). People thus actively manage their own social identity; they are so-called social identity managers (Reicher et al. 2016). Leaders (e.g. regional politicians) can use social identity management to exert social influence and motivate and mobilize groups of people (Reicher et al. 2016). People with lower identity resilience may react to a change in identity with more mistrust, uncertainty and fear (Breakwell and Jaspal 2021). There are also individually unchangeable aspects of identity that people cannot choose, such as biological characteristics or geographical origin. "Social groups are always intertwined with the space in which they act" (Raagmaa 2002:57). The concept of cultural identity assumes that cultural identities are continuously constructed dynamically in social and cultural contexts and are shaped by cultural, historical and social influences (Hall and Du Gay 1996). Cultural identity is influenced by the norms, values, traditions and customs that exist in a particular culture or cultural group. People who grow up in environments that promote diversity and tolerance may have higher identity resilience.

A regional identity can be derived from the above-mentioned aspects, which refers to the feeling of belonging and identification with a geographical region on the basis of similar cultural (e.g. language, art), social (e.g. network, connectedness) and historical characteristics (Haußer and Frey 1987; Raagmaa 2002). Paasi (1986) describes how regional identities are formed. The formation of the territorial unit/form with borders (1) is followed by the symbolic form (e.g. coats of arms, buildings, etc.). (2) and then the institutional form (formal organizations and established practices) (3). The latter capture the image of the region and the characteristics of the identity of its inhabitants. Through social and historical processes and practices and the continuous process of institutionalization and transformation, the (4) socio-spatial consciousness of the inhabitants and the anchoring of regional identity emerge (Paasi 1986; Raagmaa 2002). "The nature and history of the region are linked to the biographies of individuals through the action of a sphere of institutions, which in turn are reproduced in the daily practices (habitat) of individuals" (Raagmaa 2002:59, referring to Lefebvre 1991; Soja 1996). Regional identities are therefore socially produced, perceived, reproduced and remembered products within a physical and social space (environment) (Raagmaa 2002). People are guaranteed security and the satisfaction of their social needs (e.g. for belonging) through the use of expectation structures (perception, imagination and action patterns) created within the shared space (Paasi 1996). But not only that, because through its cultural value system the region also determines the "lived space", the self-determined actions of people, their everyday living space and lifestyle (Lefebvre 1991; Soja 1996; Raagmaa 2002). Bonds to regional identity can vary in strength and range from pure socialization (need to belong) to social activity (communal action) to articulated regional identity, in which the idea of a common region becomes an important goal of self-realization for the personality. People who are responsible for certain local issues, who have a higher level of education and who are better informed locally also show more patriotism (Raagmaa 2002).

Regional identity can be expressed in different ways, such as regional inferiority complexes, regional pride, regional frustration or regional nostalgia (Raagmaa 2002; Cserne 2020; Iyer and Jetten 2011; Santos and Pereira 2021). In the sense of the previously presented SIT (Tajfel and Turner 1986) and SCT (Albert 1977), demarcations such as inferiority or pride arise through social comparison and the subsequent differentiation of the ingroup (own region) from the outgroup (outside the region).

Important in the context of this paper is that regional identities are shaped by joint experiences and common characteristics and are quite stable over time. Hence, history and events might have quite long-lasting consequences for the regional identity. Furthermore, regional identities lead to joint and often exaggerated perceptions within a region.

4.3 Attitude development in groups and societies

Attitudes as the "evaluation of an object, concept, or behavior along a dimension of favor or disfavor, good or bad, like or dislike" (Ajzen and Fishbein 2000:3) can be individual (see section 3) or socially shared in a collective (Zick and Küpper 2017). Social attitudes develop through a complex interaction of individual, social and cultural influences (Tindale et al. 2001). It is assumed that social attitudes result from past experiences that determine future behavior (Campbell 1963). Attitudes evolve as existing beliefs change and new beliefs are formed (Ajzen and Fishbein 2000). Beliefs arise from the processing and reproduction of reality, with reference to living conditions, personal characteristics and experiences (Sitzer and Heitmeyer 2007). Generalized attitudes and beliefs are expressed as ideologies or belief systems (Zick and Küpper 2017).

From the foregoing, it is evident that some of the attitudes and beliefs shared by members of a social group stem from their shared experiences of the world around them. These experiences may have been recently experienced or shared or may be long-established artifacts. Societies/cultures have mechanisms to transmit to their (younger) members the common truths they have defined (socialization, media) (Tindale et al. 2001; Nunkoo et al. 2023). However, newer group members also adopt the group's underlying beliefs and experiences through group adaptation processes without having experienced them themselves. This is because

attitudes can be shaped within groups through social influence. This can occur through conformity (adaptation to the opinions of the group), norms (general expectations of how group members should behave) and social pressure (Martin and Hewstone 2001). Whether and to what extent people conform depends on various parameters. The underlying reasons can be the avoidance of social pressure or insecurity, reward, social acceptance, approval and recognition. Conformity can avoid rejection and social isolation. However, some beliefs are also adopted unthinkingly through mostly unconscious socialization (in a society). (Levitán and Verhulst 2016).

Putting this knowledge about attitude formation into the context of our paper, it becomes clear that there is another mechanism that causes an assimilation of opinions and beliefs within a region. This implies that experiences made by some people might be transferred within the local population and become the basis for common beliefs. In addition, attitudes and beliefs are also transferred to future generations, making them permanent and reproduced.

4.4 Merging the regional elements

As already described, people act as social identity managers. In their search for belonging, they also tend to identify with groups to which they personally belong (e.g. region of residence). It can be assumed that such a regional identity also exists in left behind places. As in most regions, a regional identity is constructed and constantly reproduced through socio-economic, cultural, historical and physical characteristics and the lived space (Lefebvre 1991; Raagmaa 2002; Paasi 1986) (see section 4.1). The underlying attitudes and beliefs are formed through the interaction of individuals among them and with the reality of life. The exchanged experiences originate from the present, but often also from the group members' past. Furthermore, beliefs based on past experiences can also be adopted within the region by adaptation processes of other members (see section 4.2).

Left behind places are characterized by the fact that they perform worse in many socio-economic parameters relative to the national average - i.e. other regions - and are characterized by out-migration (Rodríguez-Pose et al. 2023; Essletzbichler et al. 2018). The pressure to adapt in a region increases the stronger the sense of belonging to the regional identity and the greater the fear of rejection and social isolation. In regions where many people have similar attitudes, the pressure to adopt these attitudes is increased in order to be socially accepted. Increased emigration in the region and the associated decrease in diversity of opinion can reinforce this process. In addition, left behind places tend to be remote, peripheral locations that (can) hardly play a formative or perceptible role in national politics and in the national media (Decker et al. 2016; Rodríguez-Pose 2018; Novemsky and Schweitzer 2004). The negative view of the regions from the outside, coupled with the sovereignty of the other regions, increases the feeling of being unimportant and marginalized in left behind places and contributes to alienation from mainstream politics and the media (Ford and Goodwin 2014; Dijkstra et al. 2020). The downgrading of the regional identity of left behind places could also be seen as a loss of autonomy and control and a threat to the stability of regional identity (social connectedness) in the sense of Ryan and Deci's (2000) SDT, which populist representatives exploit by presenting themselves as defenders of this identity (Reicher et al. 2016). A lack of trust, confidence and skills stands in the way of a recovery and improvement of the sense of left behind regional identity (Mattinson 2020). In addition, populist resentments reproduce themselves within the social group up to the entrepreneurial level and thus have self-reinforcing mechanisms (Hannemann et al. 2023) and are consolidated and further reproduced by the described adaptation processes. Figure 2 shows the previously identified mechanisms for the formation and reinforcement of beliefs in left behind places.

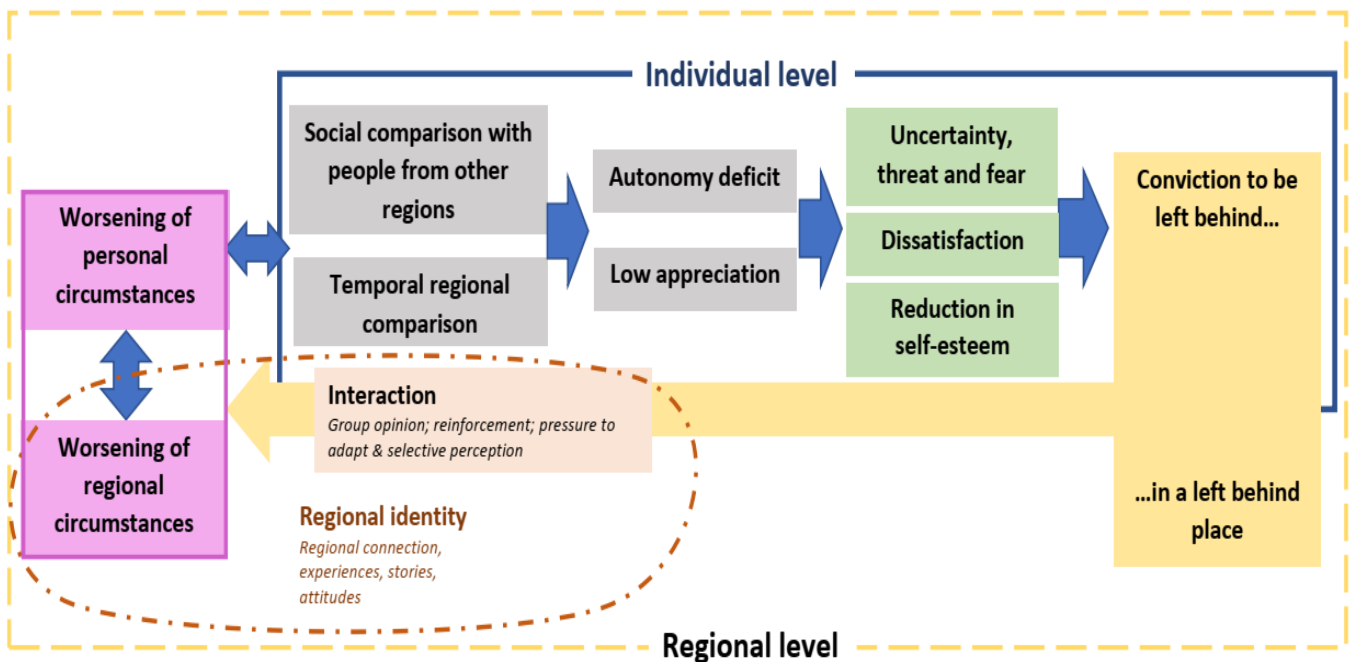


Figure 2: Mechanisms on the regional level in left behind places.

4.4 Feeling left behind

Figure 2 opens the way to the feeling of left behind. As described above, people have basic individual needs for autonomy, competence and recognition (Ryan and Deci 2000). These needs are not adequately met in left behind places due to various spatial characteristics and interdependencies with other regions. These individually perceived limitation in region and individual development and devaluations, as well as lowering of self-esteem and the feelings of fear and dissatisfaction, are constantly experienced and reproduced through comparisons (social, regional & temporal) and ultimately become part of the regional identity of left behind places and its inhabitants.

In our understanding, left behind places are those places where a large part of the population feels left behind. This feeling is rooted in socio-economic and psychological factors that are rooted in a regional identity. Based on these preliminary considerations, we believe that the following two aspects play a central and essential role in the formation of the feeling of being left behind:

1) **Loss of autonomy:** The feeling of left behind arises from dissatisfaction with one's own life situation coupled with the feeling that one is not given the same opportunities due to external circumstances, especially by the region. This also relates to the sovereignty of interpretation and the media framing of the perceived stronger out-group - inhabitants of other regions. The need to be able to determine one's own future, one's own goals and wishes, but also with regard to the region (regional identity) in a self-determined and free manner, is not sufficiently fulfilled. This is particularly evident in the fact that people from left behind places feel that they are not equally involved in new developments and are unable to benefit from them. They are left out of many new innovative jobs, innovations and opportunities. Poor economic data (e.g. in terms of innovativeness or economic strength) contributes to the fact that the region and thus the regional identity experience little sense of competence. Connected with this is also the fear of the future due to missing capabilities and options to adequately deal with future developments.

2) **Low appreciation:** People from left behind places do not feel fully accepted, recognized and valued by people from other regions (the out-group). On the one hand, this concerns the achievements and history of the region (regional identity), but also their own life's work in the region. They feel patronized by media attributions, without being able to exert much influence on media coverage (see autonomy deficit), and do not feel equal and recognized. People have a need for social inclusion, appreciation and recognition, which is not given individually and in terms of regional identity in left behind places. The lack of appreciation leads above all to dissatisfaction and lowering of self-esteem.

Central to our understanding of left behind places is thus the perception of being left behind. Figure 3 shows the regional characteristics that influence the perception of being left behind at the individual level and manifest themselves above all in a loss of autonomy and disdain. The resulting feelings and attitudes are firmly anchored in the regional identity and are constantly reproduced in it through selective perception, interaction and group adaptation processes as well as socialization.

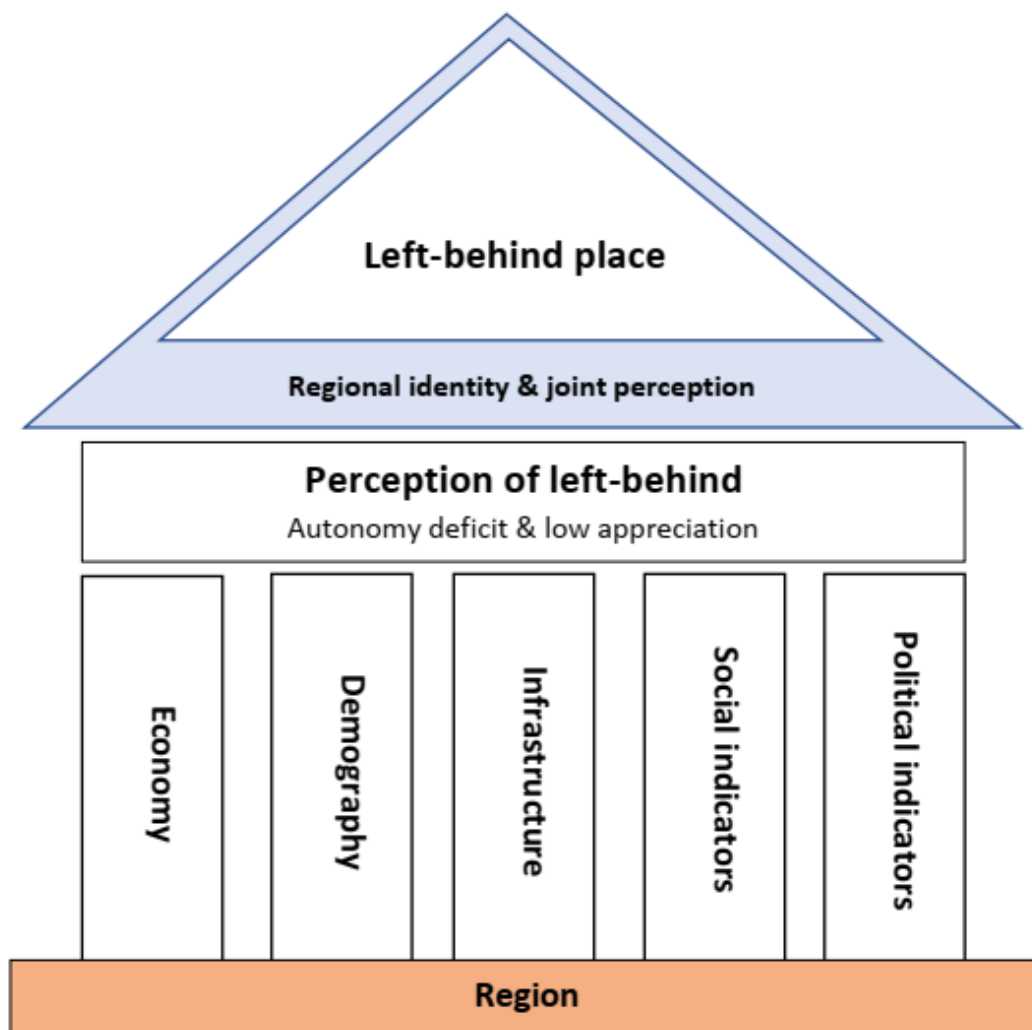


Figure 3: Summary of the individual characteristics of the left behind place concept.

4.5 Derived causes for left behind places

The five pillars identified above for the characterization of left behind places thus only represent possible factors that can contribute to the individual causes of the feeling of being left behind. The causes derived from the pillars as to why places could become left behind places are presented below. All causes emerge with the help of the tools of social, regional and temporal comparison.

4.5.1 Economic decline and deindustrialization (A)

Left behind places are marked by long-term economic decline. Above all, deindustrialization and major economic upheaval and restructuring in these regions are the causes of economic decline. In public discourse, external causes are usually blamed for this: globalization has led many companies to relocate their production to countries with lower labour costs and less stringent environmental and occupational health and safety regulations (Essletzbichler et al. 2018). As a result, some regions have lost their competitiveness and industries. In addition, technological progress in many industries means that fewer workers are needed. Furthermore, the demand for certain products can change over time. If a region is mainly dependent on a certain industry and the demand for its products decreases, this can lead to deindustrialization in that region. Political decisions can also have deindustrializing effects (Braun and Schulz 2012; Bathelt and Glückler 2003). Due to the economic decline and deindustrialization in left behind places described above, many residents have lost their original jobs in the industrial sector. The lack of job opportunities in new areas also means that self-determined living is only possible to a limited extent. The people affected can feel useless and incapable, as their own skills no longer have any economic or social value. Residents of left behind places compare themselves, their life situation and their region with other regions in the form of an upward comparison and perceive the different economic development, especially in innovative conurbations, and the associated individual and regional opportunities as an injustice. As many of the causes of economic and technological decline and industrial decline are attributed to external factors, the inhabitants of left behind places are left with a feeling of helplessness and insignificance. Economic repression leads to greater unemployment, which in turn reduces the average level of perceived autonomy in a society (Eichhorn 2013). The need to be able to determine one's own future, one's own goals and wishes, but also with regard to the region (regional identity) in a self-determined and free manner, is not sufficiently fulfilled.

4.5.2 Migration and an ageing society (B)

In addition to many other factors, economic decline can also cause well-educated people to leave the region (brain drain) in order to take advantage of better conditions and opportunities in other regions. Less well-educated and often older people, who experience a skill deficit, often remain in the region (see section 4.5.1). These people have the feeling that they have been left behind by society and are no longer needed (low appreciation). The emigrated members of society leave a vacuum in the social fabric. The constant out-migration from the regions leaves holes in the social fabric of the community in left behind places and new impulses from people moving into the regions fail to materialize. In addition, older people start fewer businesses compared to younger people (Azoulay et al. 2020), and these circumstances also lead to a further economic decline of the region in the long run, without the remaining people being able to determine this themselves (autonomy deficit). Many people left behind in left behind places either do not have the strength or the personal means to reorganize themselves economically or even to leave the region and are disappointed by the development.

4.5.3 Declining infrastructure and connectivity (C)

The result of austerity policies and the increased focus on prosperous regions within the respective country is the increased closure or neglect of public, digital and social infrastructure (roads, broadband expansion, daycare centers, schools, etc.) in areas that are already lagging (MacLeod and Jones 2020; Rodriguez-Pose 2018; Davenport and Zaranko 2020; Oberst et al. 2019). Oberst et al. (2019) explain, for example, that particularly low or sharply declining physician densities can also be an indicator of remote locations. However, infrastructure and knowledge network decoupling (Leibert and Golinski 2017) is also a decisive negative location factor for companies and the economic development of a region. A lack of infrastructural connection and connectivity in the region reduces individual opportunities to participate in new developments and thus also future prospects (autonomy). As described in the last section, more and more young people are leaving the region. All of them, but especially the older people who stay behind, are dependent on a well-functioning infrastructure, as they can only participate in private transportation to a limited extent in old age. On an individual level, there is a loss of autonomy if there are no longer any opportunities to maintain social contacts or

participate in economic activities due to poor connectivity or a lack of infrastructure. Not having the same connectivity and therefore opportunities as many people in other regions leaves the feeling that the regions are not relevant enough (low appreciation).

4.5.4 Declining educational opportunities and healthcare (D)

The lack of infrastructure described above has a significant impact on families who have remained in the region. This is because younger people are experiencing the closure of elementary school, for example. This means longer distances to school and poorer educational opportunities for future generations compared to other regions and also in terms of time, which leads to dissatisfaction and a reduction of opportunities. The poorer educational opportunities cement the region's economically poor competitive situation and thus also scratch at the regional identity. As described in section 4.5.1, the economic decline and deindustrialization in these areas leaves people without job prospects who are dependent on transfer payments (autonomy deficit). The deterioration in health care, an important feature of the basic function of existence, particularly affects the older population, which is disproportionately represented in these places. A feeling of "no longer being important", the devaluation of their lifetime achievements and a sense of injustice (low appreciation) - after all, they have paid into the country's social security funds for many years.

4.5.5 Loss of political significance and neglect (E)

Left behind places are often regions that were once of economic and/or political importance but have also lost political significance due to economic decline, among other things (Rodríguez-Pose 2018). At the same time, politicians have increasingly focused on wealthy and dynamic parts of the country. Top-down development strategies, which are often based on the promotion of growth poles or similar territorial development strategies, assume that agglomeration effects increase with the size of the city and that larger and denser cities have significant productivity advantages (Rodríguez-Pose 2018). The left behind regions with no or low-tech production play no or a very subordinate role in political discourse today and are economically insignificant. The political and media focus today is on the new 'tech economy' in metropolitan areas, which is highly innovative, profitable and more focused on urban agglomerations (Rodríguez-Pose et al. 2023). People in left behind places do not have a political voice and cannot participate in many developments (autonomy deficit). In addition, the neglect and turning away from the originally important regions and the fall into political insignificance is seen as a devaluation of regional significance and importance. The achievements of the region, with its significant (historical) accomplishments and those of its inhabitants, are not sufficiently recognized and appreciated (low appreciation).

4.6 Stabilization and consolidation of the feeling left behind

When looking at the pillars, it becomes clear that they can provide many reasons for the feeling of being left behind. In our understanding, many of the points described can be seen as paternalism and a belittling of one's own identity roots and regional identity. However, the combination of the various parameters also leads to a special situation in the left behind regions, which is difficult to change due to the regional identity and group opinion-forming processes described. Due to increased emigration, mostly older people with similar views, experiences and fates and therefore also attitudes remain in the region. In addition, the economic decline of the region means that there is no influx of people and therefore no new impetus in terms of opinion formation. On the one hand, this increases the pressure on the remaining people and the few newcomers to adapt to the group opinion in the region and, on the other hand, the demarcation from other regions is reinforced. Once experienced artefacts (from the past) of many inhabitants, which are anchored in the regional identity, are constantly reproduced, passed on through socialization processes and kept alive. The process of selective perception reinforces this regional and mostly negative view of one's own situation. In summary, this means that positive changes and regional improvements in the immediate environment of the inhabitants of left behind places are not (or only partly) perceived by them and the feeling of being left behind remains consistent and stable.

5 Conclusions

The concept of left behind regions is complex and multidimensional. It includes economic factors, demographic aspects, infrastructure and connectivity criteria, social factors, political and cultural aspects. Our work contributes to the further specification and clarity of the concept of left behind regions by placing the concept on a psychological basis. We show how psychological processes at the individual level can lead to a regional attitude of left behind, theorizing the various mechanisms that lead to the regional phenomenon of left behind place.

Through our psychological derivation, we are able to show that the left behind feeling of the population in left behind places has various causes and that it consists of two main aspects, based on Deci and Ryan (2000) SDT: **1) Autonomy deficit:** The feeling of left behind arises from dissatisfaction with one's own life situation coupled with the feeling that one is not given the same opportunities by external circumstances, especially by the region. **2) Low appreciation:** People from left behind places do not feel fully accepted, recognized and valued by other regions (the out-group). This applies to the region (regional identity) on the one hand, but also to their own life achievements in the region. They feel patronized and not equal due to the media attributions, without being able to exert much influence on the media coverage (see autonomy deficit).

Most political support programs in Europe focus on the apparent causes (pillars in Figure 3) of the regions' lack of opportunities, especially the economic aspects. In our opinion, they do not take sufficient account of individual regional needs, such as autonomy or appreciation. Certainly, individual measures could be adapted in this sense for underdeveloped locations. Due to the very stable existing attitudes and convictions in the regions, the orientation of the various measures would have to be adapted according to the motto "Do good and talk about it". By increasing the presence of promotional measures in the media and thus in public perception, people's attitudes could slowly change again. Another approach would be to create a stage for the region with large, media-effective events or measures on which it can profile itself (appreciation). The change brought about by such a measure would have to be so strong that it is so emotionally significant for people that it permanently changes their view of the region, both internally and externally.

Coming back to our statement in the introduction: *fear is running rampant in Europa!* We have shown that not only politicians from democratic parties but also people from left behind regions experience feelings of fear. We also explained the complex mechanisms in backward places and that the beliefs of the people are very stable. However, we also show possible ways in which the regions could be helped to get out of the situation. Our theoretical concept provides a broad basis that can be used as a theoretical starting point. Of course, it is also worth examining whether our theoretically derived model is empirically viable and applications to regional cases should follow.

Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the result.

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