Algorithmic Automation of Leisure from a Sustainable Development Perspective

Mariusz Baranowski and Dorota Mroczkowska

1 Introduction

This chapter adopts two fundamental objectives that have been conceptualized in the context of developed countries in terms of welfare sociology (Baranowski 2017, 2019a, 2020). The first aim is to analyze the role and importance of leisure in the context of sustainable development. In other words, the aim of this part of the paper is to synthesize the knowledge resulting from leisure practice with regard to how it intersects with the concept of sustainable development in welfare sociology. As leisure is increasingly regarded as an essential value in terms of quality of life, there is a growing demand to combine this phenomenon with the broadly understood phenomenon of social welfare. The second objective concerns the impact of new technologies (algorithmic automation) on the daily practices of leisure time in developed capitalist societies. The main research question is namely, how algorithms based on new technologies change the subjective perception of leisure (especially quality of leisure) and the daily practices implemented within its framework (e.g. work and non-work regimes) (Scribano 2019). However, because we do not have data from empirical research by means of which we can falsify or confirm the nature and direction of the impact of these technologies, we have only focused on signaling their potential impact.

We assume that the fundamental debate on leisure in the context of sustainable development is shaped today in specific, contradictory and ambivalent conditions. These conditions are connected to the pursuit of cohesion, the discovery of genuine or authentic freedom, contemplation or self-development, accompanied by opposing
phenomena, i.e. destabilization and standardization, or connected with the functioning of the individual in post-modern conditions determined by—more or less visible—neoliberal work and leisure regimes (Bailey and Fernando 2017). These regimes are impregnated with new technologies, at the forefront of which algorithmization begins to dominate (Margaris et al. 2017) and is often combined with artificial intelligence (both based on big data).

2 Leisure and the Perspective of Sustainable Development: Research Opportunities and Constraints

As a result of the changes that have taken place over the years in contemporary societies, there has been an ever-growing call for rethinking about how societies persist. One of the first and most cited global documents addressing such a call was the Brundtland Commission Report (WCED 1987) that proposed an imminent need for sustainable development, defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: (a) the concept of “needs,” in particular the essential needs of the world’s poor, to which overriding priority should be given; and (b) the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs (WCED 1987, p. 43).

This understanding of sustainable development is a strategy for improving the quality of life that encompasses society, the economy and the environment, and it emphasizes the need for both development and sustainability in and between the three areas (cf. Duran et al. 2015; Leitao 2018; Lekkai 2020; Vaugeois et al. 2017).

Those researchers of leisure who decided to consider it in the context of sustainable development (cf. Blackshaw and Long 1998; Hemingway 1999; All 2011, Russel 2014; Ferguson and Alarcon 2015; Law and Wearing 2015) are actively devoted to understanding and promoting more sustainable behaviors and decision-making amongst both individuals and communities. Researchers emphasize that leisure has also been shown to foster socialization, community cohesion, democratic engagement and ultimately, resiliency. Russel (2014) adds that leisure, as with sustainability, is a complex concept with a contextual meaning depending on the individual, place or time. Mainly, personal sustainability can be assessed in terms of quality of life, “an individual’s perception of their position in life, in the context of the culture and values in which they live and in relation to their goals, expectations, standards and concerns” (WHOQOL Group 1995; in Vaugeois et al. 2017, p. 299).

We can conceptualize quality of life through the concept of social welfare (Fig. 1), i.e., general welfare, which consists of objective determinants as well as subjective evaluation of physical, productive, material, social, as well as emotional and civil well-being, carried out according to our values (Baranowski 2019a).
In the objective sense, i.e. statistical assessment of the quality of life, the state of the fulfillment of elementary life needs of a supra-individual nature is taken into account, while taking into account the threshold value of their fulfillment, i.e. the value defining the minimum and maximum level of fulfillment of needs, while taking into account the possibilities of the environment in which the unit will fulfill its needs. From the subjective point of view, it means the feeling of a happy, valuable and satisfying life based mainly on psychological-emotional criteria. Following the above-mentioned concept of multi-faceted social welfare, the quality of life in the context of the concept of sustainable development is related to the search for a “good life,” in which consumer needs are developed and satisfied to the same extent as psychological, social and spiritual needs (cf. Hull 2011). Of crucial importance in this context is the mentioned intra-generational justice that indicates that high ecological, economic and socio-cultural standards and equal rights are due to all people, inter-generational justice, which indicates in turn that no generation can demand higher material standards at the expense of the next generation, and the principle of responsibility (Rogall 2010). In line with this idea, each individual (as far as possible) is able to make a personal contribution to sustainable development by working on his or her own “sufficiency strategy,” which is to be a voluntary decision by individuals to gradually change their lives in accordance with ethical responsibility and the principles of internal and intergenerational justice.¹ Pappas and Pappas (2015) emphasize that individual behavior creates the foundation for action in social, economic, and environmental sustainability and potentially guides our ability to work with one another to make life-affirming decisions. They propose the concept of sustainable individuals who are “characterized by creating harmony,

¹In the context of the above strategies, the main points are to responsible consumption, including reducing consumption and lifestyle in favour of policies of simplicity; promoting an efficient and affordable society; improving health, tackling stress and speed of life; responsibility in the way we move and spend our leisure, encouraging environmental attitudes and awareness (for example, information campaigns and environmental NGOs); and applying sustainable land-use planning.
interconnection, and relatively high levels of self-awareness in their values, thoughts, behaviors, and actions as well as cultivating continued individual growth in their physical, emotional, social, philosophical, and intellectual abilities. Own sustain-
ability includes possessing a well-developed and demonstrated value system that acknowledges the importance and interconnectedness of all global biological and social systems, and our appropriate place within them” (Pappas and Pappas 2015, p. 12).

Although leisure researchers are involved in sustainability research, their contri-
bution is still much smaller compared to other more traditional academic disciplines. The lack of scholarly work linking sustainability and leisure is especially alarming, considering leisurely activities are based on the inherent freedom of choice. McCole and Vogt (2011) emphasize that the future of leisure itself is dependent on access to sustainably managed resources.

Vaughois et al. (2017) conducted a study between 2005 and 2015 on the extent to which the most popular leisure and tourism journals—Leisure/Loisir, Journal of Leisure Research, Leisure Studies, Leisure Sciences, World Leisure, Journal of Park and Recreation Administration, Annals of Tourism Research, Journal of Sustainable Tourism, Journal of Travel Research, Tourism Management and the Journal of Ecotourism—relate to the subject of sustainable development.

The results in Table 1 show that leisure researchers address the issue of sustain-
ability in three dimensions: ecological or environmental (the most common among researchers), socio-cultural, and economic, where only two subcategories are defined. The last category, on the other hand, was added to capture topics that have emerged outside the three areas and was called advancing inquiry into sustainability.

In addition, as Vaugeois et al. (2017, pp. 312–317) emphasize, research on sustain-
ability in the leisure journals has emerged more slowly than within the tourism journals both in the scope of topics explored and the volume of inquiry. Leisure articles could be described as just starting to explore sustainability, while articles on tourism seem to be more insightful, attempting to describe and explain how tourism intertwines with sustainability.

They also emphasize that leisure scholars must be willing to question their research, role and practices in a way that not only results in a better understanding of both what leisure does to alleviate sustainability issues but also what it does to cause them. In addition, they highlight three areas worth exploring further. These concern, firstly, questions and research on the relationship between leisure time and sustainability. Secondly, they indicate that researchers should critically examine the influence of leisure consumption on sustainability. Armed with this type of evidence in the future, leisure research will be able to articulate its positive and negative influences with enhanced metrics, allowing for comparisons between other sectors and for the evaluation and monitoring of interventions. Thirdly, researchers should question existing practices in a way that allows for the proposal of new models and approaches to enhance sustainability through leisure. This aim could be substan-
tially enhanced through the use of interdisciplinary research where critical reflection around sustainability is more evolved.
Table 1  Contributions to sustainability by type of journal 2005–2015

| Themes linked to sustainability | Contributions within leisure journals | Contributions within tourism journals |
|---------------------------------|--------------------------------------|--------------------------------------|
| **Environmental sustainability** |                                      |                                      |
| Protecting parks and natural areas | 11                                   | 28                                   |
| Connecting people to nature      | 3                                    |                                       |
| Encouraging active transportation | 3                                    |                                       |
| Proposing adaptations and responses to climate change | 1 | 59 |
| Enhancing food security          | 4                                    |                                       |
| **Socio-cultural sustainability** |                                      |                                      |
| Influencing social capital       | 4                                    | 94                                   |
| Enhancing quality of life        | 3                                    |                                       |
| Promoting social justice         | 3                                    | 26                                   |
| A solution to health issues      | 2                                    |                                       |
| Protecting heritage, culture and local communities |    | 50 |
| **Economic sustainability**      |                                      |                                      |
| Producing economic benefits      |                                      | 12                                   |
| Financial sustainability         | 5                                    |                                       |
| **Advancing inquiry into sustainability** |                              |                                      |
| Questioning existing practices and thought | 14 | 66 |
| Measuring impacts of leisure/tourism on sustainability | 5 | 76 |
| Encouraging sustainable practices by operators and destinations | | 71 |
| Defining and shaping responsible behavior of tourists or residents | | 84 |
| Offering insights on researching sustainability | | 38 |
| Offering tools to enhance sustainability | | 32 |

Source (Vaugeois et al. 2017, p. 308)
Given the importance of leisure and recreation for people and society, it is crucial to facilitate and support leisure activities that coincide with sustainable development. In this context, it is clear that it is crucial to promote not only an attitude towards leisure that meets the objectives of sustainable development but also to propose sustainable forms of recreation at the same time.

3 The Technological Transformation of Leisure (Algorithmic Automation) and Sustainable Development

An important objective of research in the context of sustainable development should be to examine the impact of technologies on sustainable development. Research on the technological and commercial transformations of leisure must not assume only a positive contribution from these issues. A more likely scenario, as observed in research on tourism, is that leisure technology is as much a part of the problem as a potential solution/advantage.

The fundamental question that arises here is whether, in a capitalist society based on sophisticated technologies (algorithms) and the idea of acceleration, it is possible to rest. Secondly, leisure has become an element of the market, an object of consumption, a kind of social experience where almost every aspect of an individual’s life is or can be designed in advance.

Researchers agree on one thing: technologies increase the so-called “gray areas,” domains that cannot be classified exclusively as work-related or extra-occupational life, including leisure (Olson-Buchanan and Boswell 2006; Diaz et al. 2012; Olson-Buchanan, Boswell and Morgan 2016). Thanks to technology, individuals can efficiently respond to the demands of their professional or private life while at the same time being—psychologically or spatially—in a different domain of activity.

Laptops or mobile phones help to coordinate schedules, save time and perform several tasks simultaneously. In particular, a smartphone, thanks to its small size (miniature) and ease of portability, the ability to communicate from any place or “multi-task” (combining a watch, a notebook, a phone, a music player, a camera in one device), has saved time and money in many situations, giving them a sense of comfort and independence.

Technologies, which are entangled in the networks of social dependencies, act as a catalyst for broader processes related to the demarcation of work and life boundaries and ways of defining gray areas. In all analyzed cases, it was not possible to work without the use of mobile and communication technologies, which was further strengthened during the coronavirus pandemic (cf. Singer and Sang-Hun 2020). Technologies shape the way in which the examined individuals function in and out of work, but they are certainly not a direct factor determining the whole life of individuals. The role of technology is primarily limited to the fact that it determines a specific logic of functioning in the network, which can be modified by users and whose changes affect the organization of time, adaptation to the environment, and
mental states of individuals and their practices. In the network society, social divisions are formed around a new category: information (Castells 2000; Mroczkowska and Kubacka 2019; Kubacka and Mroczkowska, 2020). The ways of using technology show different rules of access to information. The dual role of mobile and communication technologies, indicated earlier, makes it possible to specify several main domains of its mediation in shaping border areas:

1. Technologies are part of everyday practice, and therefore make it difficult for the subject to see its role in his/her life. Laptops and smartphones are seen as necessary tools to manage everyday activities effectively. They become almost transparent, operating as if out of hiding and beyond the sphere of consciousness. More and more often, the use of technology becomes thoughtless and embodied.

2. The paradox of technology’s operation lies in the fact that it naturalizes the lack of borders by maintaining the appearance of its distinct existence. Their strength is expressed in the fact that they are unnoticeable and that they can belong to both facets of life at the same time (e.g. you can have a non-business laptop, but it is still a laptop with the same capabilities; use of one smartphone in both spheres of life).

3. Technologies increase the distraction between work and life in a non-invasive way. Today, it is unlikely, if at all possible, to be wholly disconnected from use. Its inclusion in the sphere of border areas is, therefore, a necessary condition for the adequate performance of professional and family tasks. The penetration of the area of work and life through technology is like a new form of adaptation to the environment and life in the gray areas.

4. Technology deepens the legitimacy of the existence of gray areas: it legitimizes them. This is due, among other things, to the fact that they lead to a situation that can be called mental bilocation. Individuals, cognitively and emotionally, are at work, at home, or conversely, at work but focused on family or personal matters. Mobile and communication technologies are becoming tools with which we give ourselves the right to control where the borderline is (de facto, it is a situation of loss of activity with our own consent). Technological devices created for the purpose of increasing individual freedom and independence (and, above all, decision-making, e.g. regarding the time and place of receiving information) lead to entirely different experiences (apparent freedom).

5. Technologies serve to increase efficiency (e.g. taking a nap on time) and to reduce time—they make individuals feel compelled to respond more and more quickly to messages or to notifications. It also becomes necessary to manage the sphere of private and professional activity through mobile devices in such a way as to simultaneously combine and demarcate online accessibility (because, for example, the superior can see that the employee ignores the e-mail but is available on social networking sites). There are norms of simultaneity, which emphasize the immediacy and simultaneity of activities undertaken in different spheres of life.
In a more sophisticated form, i.e. algorithmic automation, these boundary areas are sifted through subtle—which in this context means invisible or unaware—technologies (Fernández-Macías 2018; Paško Bilić 2018). Automated decision-making based on large amounts of data, systematically collected by supercomputers, is used in many areas of social functioning, including the “organization” of work and leisure. AMD (Automated Decision Making) systems, combining advanced technical infrastructure with social procedures, are used to make a number of decisions (traditionally under human control) by computer algorithms. Officially “supporting” the human decision-making process, they can in fact “replace” it, following a program, and learning (by machine) logic (the so-called artificial intelligence).

Algorithmic automation in the context of leisure time, in addition to functions supporting human decisions, can serve to predict the needs and behavior of entire human populations. Taking into account the above-mentioned “standard” communication technologies, the algorithmic automation contributes to diagnosing and modeling the structure of work and forms of spending leisure. It is potentially a key determinant influencing in a “technologically internalized” way the perception of social welfare in general (objective, material) as well as subjective (psychological) terms.

Among the significant and signaled changes, one should point out: firstly, the process of making working time more flexible; secondly, the (not apparent) process of shortening working time in favor of leisure time; and thirdly, the acceleration of the pace of life (and the paradoxes resulting from these three processes).

The development of work flexibility supported by new information and communication technologies favors 24-h availability, 24 h a day, seven days a week. Leisure time in such a situation is blurred, the boundaries between leisure and working time are becoming more fluid, and the internal organization of both fields is less obvious, as it is subject to a continuous process of recording changes and suggesting solutions (including the intentional organization of leisure).

Shortening working time is an important strategy of sustainable economic policy on a declarative level, but in fact it may mean “surveillance capitalism,” the term from Shoshan Zuboff (2019).

The 1960s witnessed the flourishing of the concept of leisure time in a society or civilization—a left-wing utopia according to which the amount of working time should decrease in favor of leisure time accessible to all (cf. Dumazedier 1967; Kelly 1978; Gershuny 1992). Schor wrote that “in the 1960s, optimists expected that by the twenty-first century, citizens of the advanced industrialized nations would be living lives of leisure, perhaps suffering from a ‘crisis of leisure’, brought on by boredom and a failure to know how to spend time” (Schor 2006, p. 203). This included the British sociologist Gershuny, who supported his thesis about the imminent advent of the “leisure age” with projections of working time, which was shrinking under the influence of economic and technological change. Schor (2006, p. 203) went on to state that, instead of boredom, a significant shortage of time and high levels of stress in everyday life was commonplace. The supporters of the idea and vision of leisure society under the influence of the transformations taking place gradually rejected or modified their previous positions. In the case of K. Roberts, a British researcher on
the subject, we can observe the evolution of views and their radicalization, which caused him to reject the ideas of the leisure society, treating them as utopian and naive (Roberts 1978, p. 146). J. Dumazedier wrote that the transformations taking place required broader and different visions than the previous ones. Thus he rejected the notion of a “leisure society” in favor of the “possible arrival of a civilization of leisure,” which is not a “golden age beginning tomorrow,” but “a collection of new social and cultural problems that must be seriously considered today” (follow Veal 2009, p. 39). Kelly (follow Veal 2009, pp. 60–61) pointed out the main reasons why the “leisure time era” did not come, stressing: firstly, the decline in working hours, which did not take into account the rising unemployment and the diversity of working hours, especially in the growing services sector; secondly, that the indicators of prophetic economic development did not work and the changes associated with globalization exacerbated social inequalities; and thirdly, that most of the “gains” in leisure time were absorbed by television and additional work, including domestic work, increasingly involving childcare and consumption.

Concepts such as hunger for time, haste, striving, or time pressure characterize the temporal situations of contemporary people as well as their culture, increasingly often referred to as the culture of high speed or civilization of haste (follow Tarkowska 2001; Klein 2004; Szollos 2009). Godbey defines the lack of time as the greatest deficiency of the postmodern world (Godbey 2008, p. 76). Robinson and Goodbey, 1997, p. 25) point out that time has become the most valuable commodity and the greatest deficit for millions of Americans. Since the 1960s, the percentage of Americans who claim that they “still feel busy” has increased by more than half by those who indicate that they “work hard all the time” and often “stay at work until late.” In a 1996 study by the same authors, 40% of Americans indicated that lack of time is a greater problem than lack of money (Robinson and Goodbey, 1997, p. 25).

Southerton and Tomlinson (2005) point out the problem of the dizzying pace of life and the associated sense of “shrinking” time among the English, Welsh and Scots. Researchers pointed to three phenomena that favor the experience of “shrinking” time, namely: actual overload, uncoordinated rhythms and temporal density (Southeron and Tomlinson 2005, pp. 232–236). The first process concerned “the time required to complete sets of tasks regarded as ‘necessary’, and refers to the changing distribution of practices in time” (Southeron and Tomlinson 2005, p. 232).

It was related both to the increasing number of activities that we consider necessary today, and to the more time that individuals spend on some of them, such as consumption. G. Godbey drew attention to the growing sense of “what is necessary” that triggers this mechanism of actual overload, which means that the idea of leisure time spent on pleasures loses its raison d’être regardless of how many hours that individuals actually have off from work (Godbey 2008, pp. 34, 43–47). It is this growing sense of “what is necessary” that translates into additional activities for which individuals feel obliged to find time, which explains the paradoxical situation in which—despite gaining extra free time—people today feel busier than they did twenty or thirty years ago when they spent much more time at work on average. The second process indicated by the authors (Southeron and Tomlinson
2005, p. 233) raises problems related to the synchronization of activities in a situation where institutionalized—and thus relatively stable and universal in the scale of a given society—temporal systems are eroded under the influence of individualized time management practices and the rhythm of work and leisure. The third is related to the allocation and compression of activities over time, the accumulation of a large number of activities that individuals have to perform in a relatively short period of time, forcing them to “juggle tasks” and do several things at once (Southeron and Tomlinson 2005, p. 233). And these things are not “triggered,” and are increasingly organized by algorithmic automation, which is increasingly taking the form of “leisure technology” (cf. Turel 2019).

As indicated by the authors of the research, the particular intensity that characterizes such situations brings a sense of action under substantial time pressure, causing a state defined by anguish (cf. Martini 2017). Being tormented by time resembles the rush and persecution of time in the sense that people are in a hurry to perform the tasks set before them for a limited period of time, or feel crushed by the burden of obligations towards others. People who are particularly vulnerable to living in times of under-treatment are relatively young, well-educated middle-class people with a high professional status, whose lifestyle is characterized by “cultural omnivorosity,” understood as an attitude towards consumption that involves chasing a wide variety of cultural experiences while at the same time not involving a significant amount of time and energy in the consumption of each of them (cf. Peterson and Simkus 1992; Peterson and Kern 1996).

The shrinkage of time and in particular the processes associated with uncoordinated rhythms and temporal densification are the result of much shorter intervals for attracting the attention of individuals as well as the fragmentation of time blocks, which is associated, among other things, with the transition from the sequential to the asynchronous experience of time (Jung 2011, p. 65) or the temporary accumulation of time (Ericksen 2001, pp. 155–156). The last phenomenon refers to the rapid accumulation and compression of more and more information, possibilities and experiences in ever shorter time periods; in other words, the accumulation of fragment hegemony. Images, information, news and offers fill all free time spaces (Ericksen 2001, p. 90; cf. Gleick 2003, pp. 18–19).

The abolition of traditional dichotomies and the resulting thinking that assigns responsibility to the subject redefines (but does not abolish) the traditional functions of leisure time, which are updated on different principles. The ways of experiencing leisure time are changing slowly as we have pointed out; the catalogue of functions and activities carried out within the framework of free time, and thus its properties, as a socio-cultural category is changing. Although, as Roberts pointed out, most leisure time activities are characterized by permanence, thus we are increasingly dealing with a kind of kaleidoscope of continuation and change (Roberts 1999, p. 49). Known activities often gain only different forms of realization, new ways of use or different functions and meanings. This situation illustrates the way leisure time is shaped on different principles determined by the changing context and a different degree of reflection on the “I” and self-design, which means that even watching TV or reading books means something completely different today and is realized on
different principles than 20, 30 or 40 years ago. The very organization of proposals to watch or read (read: algorithmic automation) takes into account the big data port about us and about our previous choices, which not only support but also replace our decisions.

4 From Leisure Society Theses to Civil Leisure and Emotional Labor in the Context of Sustainable Development

Research approaches to leisure characteristic of the 1960s and 1980s were quantitative in nature, which resulted from the dominant positivism and functionalism theories; according to these approaches, free time that performed important functions towards or for the benefit of the system contributed to its consolidation and to the legitimacy of social practices in accordance with the system of dominant economic, political or cultural values. Studies on leisure during this period indicated progress and development, focused on restoring and maintaining social order and improving the social and cultural condition. Leisure time was primarily an objective, quantifiable and classified value, which manifested itself in the dominance of strictly quantitative, budgetary research, which was the basis for determining the fundamental trends in leisure (Veal 2006, pp. 3–22). The quantitative approach was based primarily on the understanding of leisure time and working time as being born out of the nature and logic of an industrial society, and thus perceived through opposition. The work/leisure dichotomy marked and ordered the direction of early reflections on this issue, and some researchers such as Critcher et al. (2001) point out that the history of leisure time began with this distinction.

A fundamental sociological reflection on developing leisure established and defined it in opposition to working time, thus creating a rather rigid, divisive and dichotomous picture of the reality of working and leisure time (Wilensky 1960; Parker 1971; Dumazedier 1974; Roberts 1999, pp. 54–57). Work was identified with compulsion, boredom and monotony, an instrumental attitude that was essentially intended to bring profit. Leisure, on the other hand, was understood as time outside work, where individuals could experience the freedom to choose behaviors and activities that allowed them to express themselves and their own lifestyle (as part of a broader social welfare phenomenon).

Since the early 1980s, leisure researchers have begun to point to the usefulness of a phenomenological and naturalistic approach to leisure research, particularly in relation to the research neglected in the previous period around individual meanings and experiences in various situational contexts of leisure (e.g. Scott and Godbey 1990; Henderson 1991; Pedlar 1995; Weissinger et al. 1997). The American researcher Hemingway (1995, 1996) advocated a more hermeneutical interpretation of depth in the study of entertainment, and Kelly and Kelly (1994) called for critical social
constructivism to be included. One of the visible signs of change was the introduction of the concept of “experience in leisure” into free time analysis.

North American social psychologists such as Neulinger (1974), Mannel and Kleiber (1979), Iso-Ahola (1980), as well as researchers from Australia and New Zealand in the context of the quality of leisure time (healthy lifestyles, mental hygiene and stress issues) were essential contributions to leisure time research. Some researchers raised the importance of understanding the personality variables that determine the needs and levels of motivation for leisure activities with a particular focus on internal motivation (Iso-Ahola 1980; Mannellet al. 2006). Others analyzed the factors determining satisfaction with leisure time activities and measured the strength with which individual groups of factors are responsible for such satisfaction (Stebbins 1992). Others discussed the perception of possibilities (Driver and Bruns 1999) and limitations (Jackson and Scott 1999) in leisure time and ways of experiencing leisure time, including the issues of well-being and flow, which Csikszentmihalyi (2005) introduced into consideration of the quality of leisure time. Scientists created a number of new publications, laboratories, quasi-experimental methods, modified diary studies, and methods that allowed for studying current emotional states, such as the Experiencing Sampling Method (ESM), visual methods or autobiographical interviews (Hektner et al. 2007). Detailed analyses of conditions governing motivation and experience have shown that free time is a much more diverse and infinitely diverse category. The concepts and research of the representatives of qualitative approaches have pointed towards higher, subjective, and continually more individualized forms of experiencing free time (e.g. flow, self-realization, happiness).

Sociologists who take up the subject of leisure time see that their sub-discipline requires theoretical renewal. Building a new theory on old foundations is no longer sufficient, given that these foundations have always been the subject of criticism (cf. Rojek 1995, 2005, 2010) and the ways of spending free time are constantly but slowly changing (Roberts 1999). The criticized concept of leisure society is increasingly being replaced by theses on civil labor (Rojek 2001, 2002) or emotional labor (2010). Rojek suggests that the separation of work from subsistence needs in Western societies has allowed people to develop suites of activities through which they can express their identities. Rojek has termed this mix of activities—which can include paid and non-paid work in addition to leisure—as “civil labor,” in recognition of its self-determined (civil) utility (work) in forming and displaying identity (Rojek 2001, 2002). Deploying the construct of “civil labor” provides an explanation for phenomena such as “down-shifting,” in which decisions are made to replace some paid work with other, usually non-paid activities as a means of achieving a desired “work-life balance”.

Moreover, in the book The Labour of Leisure, Rojek introduces the term “emotional labor” to the issues of leisure, where he examines the concepts of emotional intelligence and emotional labor in order to propose that leisure practice is not time off or free time, but a specific form of informal labor. Leisure is the paramount setting for developing the people skills that translate into the prized cultural capital needed for the labor market and social networks. In leisure, we acquire the “coaching” skills
that translate into the two ethical principles that underpin Western society: care for the self and care for the other (Rojek 2010a, pp. 3–4, 2010b). Even the emotional labor theme is linked to new technologies, which some researchers do not see because their approaches are too narrow. Let us mention the vast literature on cognitive capitalism (cf. Moulier-Boutang 2011; Peters and Bulut 2011), and related phenomena such as sharing economy, gig economy or platform capitalism (cf. Baranowski 2019b, pp. 16–17).

Focusing solely on leisure limits the view of broader implications in terms of the new technologies and globalization already mentioned. Leisure is not only a current experience of the surrounding reality, but also a process of its constant updating and changing, current reformulation, reflection and negotiation, which makes it possible to treat it both as a certain dimension of social reality and a certain type of individual experience. Leisure, which is entangled in the social and cultural context of the transformations taking place, as well as in the subjective activities of reflective individuals, constitutes a space through which individuals experience themselves and others.

We understand leisure itself broadly. First of all, leisure time is subjectively experienced; individuals create their own concept of what we call rest as part of their everyday life. Finding time for oneself is a continual process of building private subspace, recognizing moments or adapting to changing situational frameworks. Such behavior guarantees space for the relative freedom of choice, opportunities for individual self-expression and self-determination. Secondly, leisure time can therefore be understood as a time of relative freedom from external forces, pressures, and conditions in order to be able to act freely from internal motivation in a way that is personally pleasing and intuitively worthy, the basis of motivation. The perspective understood in this way does not essentially refer to time and activity, but to the state of mind and daily experience. Thirdly, leisure time is dynamic and negotiated, which shows that on the one hand it remains placed within a specific framework that regulates its functioning, while on the other hand individuals have the ability to transform this framework, resulting in its constant openness and readiness for revision, the ongoing construction of action by individuals interacting with each other under different social, political or economic conditions. It can be said that the semantic and experiential field of leisure time is in fact much broader, much more multidimensional and internally more complex than it would appear from the usual ways or contexts, at least in sociology, of theming the terms “leisure time,” “rest” or “entertainment.”

This area seems to be even more complicated and subtle when we try to analyze leisure impregnated with new technologies from the perspective of the normative concept of sustainable development.
5 Conclusions

The contemporary discourse on sustainability points to the need for substantial, if not radical, shifts in relation to productivity, the environment, consumption, and identities in ways that bring or restore its balance to intersecting domains. The literature on leisure shows excellent examples contributing to full ecology planning approaches. Nevertheless, the approach to leisure and the changes taking place within it cannot be abstracted from the more general projects that outline the area of social welfare sustainability, as well as from the technological changes taking place in the life of each of us.

We think that leisure is a central feature of the future of sustainability and also society, and an understanding of this is an essential ingredient for all policy-makers, academics, and service providers. Looking at leisure through the prism of external processes and transformations allows us to see that the relations between the external context and the practices implemented within it are much more complicated, which in turn makes it difficult to maintain precision and unambiguity in defining the category itself. This makes it more dynamic and open, and forces us to open up research fields that have so far escaped the attention of researchers, or to look at the problems posed so far in a new light. Thus, contemporary thinking about leisure is not only an attempt to classify and quantify its activity, to look for clearer and standard definitions of it, but above all, to individualize the experience, filling it with private, idiosyncratic experiences or interpretations.

However, any attempt to explore leisure without taking into account the influence of “invisible” technologies operating in the background, which have a measurable impact both on our working practices and on the structure of thinking about and organizing extra-work time, lacks real explanatory power. While we smile at the fact that the motive behind the algorithmization of life in general lies in the commercialization of reality, it is impossible to exclude the analysis of leisure time from this area. Leisure time is an attractive bite for large corporations and small enterprises, whether, through commoditization, drawing conclusions from algorithmic analyses in other areas of human life, or “subcutaneous” generation of “optimal” decisions and needs. This chapter, as a contribution to highlight what is by definition invisible in the context of leisure time and sustainable development, was intended to draw attention to the potential role of new technologies based on big data and algorithms in leisure. With the exception of tourism (cf. Souffriau et al., 2008), this area has not seen advanced research combining leisure time practices with general concepts of sustainable development.

References

All C (2011) Energy use and leisure consumption in Norway: An analysis and reduction strategy. J Sustain Tourism 19(6):729–745. https://doi.org/10.1080/09669582.2010.536241
Algorithmic Automation of Leisure from a Sustainable … 35

Bailey AW, Fernando IK (2017) Routine and project-based leisure, happiness, and meaning in life. J Leisure Res 44(2):139–154. https://doi.org/10.1080/00222216.2012.11950259

Baranowski M (2017) Welfare sociology in our times: how social, political, and economic uncertainties shape contemporary societies. Przegląd Socjologiczny 66(4):9–25. https://doi.org/https://doi.org/10.26485/PS/2017/66.4/1

Baranowski M (2019a) The struggle for social welfare: towards an emerging welfare sociology. Soc Register 3(2):7–19. https://doi.org/https://doi.org/10.14746/sr.2019.3.2.01

Baranowski M (2019b) Sociology of knowledge in times determined by knowledge. Soc Register 3(1):7–22. https://doi.org/https://doi.org/10.14746/sr.2019.3.1.01

Baranowski M (2020) A contribution to the critique of worthless education: between critical pedagogy and welfare sociology. Global Soc Educ 18(4):391–405. https://doi.org/10.1080/14767724.2020.1732195

Bilić P (2018) A critique of the political economy of algorithms: a brief history of google’s technological rationality. tripleC 16(1):315–331. https://doi.org/https://doi.org/10.31269/triplec.v16i.1.914

Blackshaw T, Long J (1998) A critical examination of the advantages of investigating community and leisure from a social network perspective. Leisure Stud 17:4. https://doi.org/10.1080/026143698375088

Castells M (2000) Network society: the information age: economy, society and culture, vol 1, Wiley

Critcher C, Brannham P, Tomlinson A (2001) Sociology of leisure. Spon Press, London

Dumazedier J (1967) Toward a society of leisure. Free Press, New York

Dumazedier J (1974) Sociology of leisure. Elsevier, Amsterdam

Diaz I, Chiaburu DS, Zimmerman RD, Boswell WR (2012) Communication technology, pros and cons of constant connection to work. J Vocat Behav 80(2):500–508

Driver BL, Bruns DH (1999) Concepts and uses of the benefits approach to leisure. In: Jackson EL, Burton TL (eds) Leisure studies: prospects for the 21st century. Venture, State College, PA, pp 349–369

Duran DC, Gogan LM, Artene AE, Duran V (2015) The components of sustainable development—a possible approach. Econ Fin 26:806–811. https://doi.org/10.1016/S2212-5671(15)00849-7

Ferguson L, Alarcon DM (2015) Gender and sustainable tourism: reflections on theory and practice. J Sustain Tourism 23(3):401–416. https://doi.org/10.1080/09669582.2014.957208

Fernández-Macias E (2018) Automation, digitalisation and platforms: implications for work and employment European Foundation. Publications Office of the European Union, Luxembourg. https://digitalcommons.ilr.cornell.edu/intl/636/. Last accessed 3/24/2020

Gershuny J (1992) Change in the domestic division of labour in the UK 1975 to 1987: dependent labour versus adaptive partnership. In Abercrombie N, Warde A (eds) Social change in modern Britain. Polity Press, Cambridge

Godbey G (2008) Leisure in your life. New perspectives. Venture Publishing Inc., Pennsylvania

Hektner JM, Schmidt JA, Csikszentmihalyi M (2007) Experiencing sampling method. measuring the quality of everyday life. Sage Publications, Thousand Oaks-London-New Delhi

Hemingway JL (1995) Leisure studies and interpretive inquiry. Leisure Stud 14:32–47

Hemingway JL (1996) Emancipating leisure: the recovery of freedom in leisure. J Leisure Res 28(2):27–43

Hemingway JL (1999) Leisure, social capital, and democratic citizenship. J Leisure Res 31(2):150–165

Henderson K (1991) Dimensions of choice: a qualitative approach to recreation, parks, and leisure research. PA, Ventrure Publishing Inc., State College

Iso-Ahola SE (1980) The social psychology of leisure and recreation. C. Brown Company Publishers, Dubuque, IA, Wm

Jackson S, Scott S (1999) Risk anxiety and the social construction of childhood. In: Lupton D (ed) Risk and sociocultural theory: new directions and perspectives. Cambridge University Press, New York, pp 86–107
Kubacka M, Mroczkowska D (2020) The importance of communication and mobile technologies in work-life borders management practices among working full-time and self-employed people. Miscellanea Anthropol Et Sociol 20(3):43–60
Kelly JR, Kelly JR (1994) Multiple dimensions of meaning in the domains of work, family and leisure. J Leisure Res 26(3):250–274
Kelly JR (1978) A revised paradigm of leisure choices. Leisure Sci 1:4:345–363. https://doi.org/10.1080/01490407809512894
Klein O (2004) Social perception of time, distance and high-speed transportation. Time Soc 13(2/3):245–263. https://doi.org/10.1177/0961463X04043504
Law A, Wearing SL (eds) (2015) ‘Alternative’ cultures and leisure. creating pathways for sustainable livelihoods. Routledge, London
Leitao RB (2018) Diet and physical activity as a universal foundation for childhood development and lifelong health. Soc Register 2(2):131–148. https://doi.org/10.14746/sr.2018.2.2.07
Lekkai I (2020) Unaccompanied refugee minors and resilience: a phenomenological study. Przegląd Krytyczny 2(1):33–54. https://doi.org/10.14746/pk.2020.2.1.03
McCoile D, V ogt Ch (2011) Informing sustainability decisions: the role of parks, recreation, and tourism scholars in addressing unsustainability. J Park Recreation Admin 29(3):38–54
Mannell RC, Kleiber DA (1979) A social psychology of leisure. PA, V entrure Publishing, State College
Mannel RC, Kleiber DA, Staempfli M (2006) Psychology and social psychology and the study of leisure. In: Rojek C, Shaw S, Veal AJ (eds) A handbook of leisure studies. Palgrave Macmillan Ltd., London
Margaris D, Vassilakis C, Georgiadis P (2017) Knowledge-based leisure time recommendations in social networks. In: Alor-Hernández G, Valencia-García R (eds) Current trends on knowledge-based systems. intelligent systems reference library. Springer, Cham
Martini N (2017) Praktykowanie czasu wolnego w sytuacji niedoboru i nadmiaru. Przegląd Socjol Jakościowej 13(4):94–117. https://doi.org/10.18778/1733-069.13.4.06
Moulier-Boutang Y (2011) Cognitive capitalism. Polity Press, Cambridge
Mroczkowska D, Kubacka M (2019) On the treadmill of everyday life: work-family boundary dynamics among working full-time and self-employed people. Przegląd Socjol Jakościowej XV(1):136–153. https://doi.org/10.18778/1733-8069.15.1.08
Olson-Buchanan JB, Boswell WR (2006) Blurring boundaries, correlates of integration and segmentation between work and nonwork. J Vocat Behav 68(3):432–445
Olson-Buchanan JB, Boswell WR, Morgan TJ (2016) The role of technology in managing the work and nonwork interface. In: Allen TD, Eby LT (eds) The oxford handbook of work and family. New York, Oxford University Press, pp 333–348
Pappas JB, Pappas EC (2015) The sustainable personality: values and behaviors in individual sustainability. Int J Higher Educ 4(1):12–21
Parker SJ (1971) The future of work and leisure. Praeger, New York
Pedlar A (1995) Relevance and action research in leisure. Leisure Sci 17(2):133–140
Peters MA, Bulut E (eds) (2011) Cognitive capitalism, education, and digital labor. Peter Lang, New York
Peterson RA, Simkus A (1992) How musical tastes mark occupational status groups. In: Lamont M, Fournier M (eds) Cultivating differences: symbolic boundaries and making of inequality. The University of Chicago Press, Chicago, London, pp 152–168
Peterson R, Kern R (1996) Changing highbrow taste: from snob to omnivore. Am Sociol Rev 61(5):900–904
Roberts K (1999) Leisure in contemporary society. CABI Publishing, UK
Robinson J, Goodbey G (1997) Time for life. the surprising ways Americans use their time. The Pennsylvania State University
Rojek C (1995) Decentring leisure. rethinking leisure theory. Sage Publications
Rojek C (2001) Leisure and life politics. Leisure Sci 23(2):115–126
Mariusz Baranowski is an assistant professor of sociology at Adam Mickiewicz University in Poznan. He was educated at the same university within the Inter-Area Individual Studies In the Humanities and Social Sciences (achieving two Master’s degrees: one in Sociology and the other in Philosophy), where he received his Ph.D., and his areas of specialization include economic sociology, social movements, methodology, and social welfare practice and policy. He was awarded research scholarships in Norway (University of Oslo), Germany (University of Potsdam), the Netherlands (Erasmus Universiteit Rotterdam), Greece (Aristotle University of Thessaloniki), Spain (University of Murcia), the Czech Republic (Masaryk University). He has published numerous articles, and his books include Corporate Governance Effectiveness in Poland: Socio-economic Analysis of Listed Companies (2011), The Network Society—Between
*Freedom and Slavery* (2012) and *Democracy and the Role of the Citizen: On the Tension among the State, Society and Globalisation Processes* (2014).

**Dorota Mroczkowska** sociologist, psychologist, assistant professor of sociology at Adam Mickiewicz University in Poznan. Her research interests focus on the sociology of everyday life, the sociology of leisure and sociology of emotions, quality of life and border areas. She was a head and a member of many research teams, and she was the author of many expert reports for companies both in Poland and abroad. She has published 3 monographs in the area of leisure studies and over 50 articles (including scientific and popular science).