

## REVOLUTION 4.0 AND CORONACRISIS AS A CIVILIZATIONAL CROSSROADS?

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### Abstract

The paper recapitulates the inspiration of the research of R. Richta and his collaborators for developments in the 21st century. In doing so, it interprets Richta as a precursor to Discussions 4.0. In doing so, it compares the text Civilization at the Crossroads with the output of the interdisciplinary team V. Mařík's Industry 4.0. The paper outlines the essence and direction of the so-called fourth industrial revolution concept, which can also be interpreted as another civilizational crossroads. The 4.0 projects are set in the broader context of theories of capitalist transformation, including the search for other so-called new economies. Richta's civilizational crossroads concerned the possibility of further securing the development of the productive forces in a harmonious way, including the development of their most important component - man, his abilities, and his intellectual life. In 2020, the global crisis COVID-19 comes, and projects of planetary transformation of economic, social, and cultural structures are raised. The globalist agenda comes up with the concept of the Great Reset. And the world finds itself at another crossroads of development.

**Key words:** Revolution 4.0, Scientific and Technical Revolution, challenges of 21st age

**JEL Code:** B5, N0, O3

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### Introduction

The Fourth Industrial Revolution (4IR) and the so-called 4.0 technologies are associated with the current phase of digitization or robotization. The basis for these considerations is Industry 4.0, supported by Industrie 4.0, and in the Czech Republic by Průmysl 4.0 projects (Mařík et al., 2016). Most of the titles dealing with this issue remain at the level of popularization and propaganda, sometimes even rather utopian. More severe works focus on technological and ICT (information and communication technology) aspects and neglect other contexts (Schwab, 2017; Boucas, 2020). We are referring to managerial, organizational, economic, and social challenges. A generally accepted definition of Processes 4.0 and a deeper theoretical basis are lacking. Official texts on 4IR argue for its epochal nature and impact mainly outside the industry, although this is where most of the focus is (Sirůček, 2017; Sirůček, 2018).

Around 2018, the era of the most fantastic technological illusions ends, and the 4.0 bubble begins to burst. However, its green phase is setting in, with climate alarmism pushing

technology in a green direction. Digitization and greening are being passed off as the salvation of the world. In 2020, the COVID-19 global crisis arrived, and planetary transformation of economic, social, and cultural, etc., are set in motion. The globalist agenda puts forward the concept of the Great Reset (Schwab, Malleret 2020). In the spirit of Richta's legacy, the direction of the so-called fourth industrial revolution can be seen as another civilizational crossroads. The article is an essay based on a literature review and is not based on original research. The authors interpret Richta as a precursor to 4.0 or 5.0 considerations and primarily pursue the inspirations of the research of Richta and his collaborators for the 21st century (Jurasek, Leinweber, Valencik, 2016). The methods of description, comparison, and qualitative analysis were used to achieve this goal.

The domestic "*bible*" 4.0 is represented by the material *Průmysl 4.0* (Mařík et al., 2016)<sup>1</sup>, published exactly half a century after the first edition of *Civilization at the Crossroads* (Richta et al., 1966). A comparison between them is offered. Both publications are the output of a large interdisciplinary team, and the government commissioned both. Both are intended to respond to the "*civilizational crossroads*."

However, it is a comparison of the incomparable. Richta and his interdisciplinary team wanted to communicate something fundamental to the world and thereby help transform the world in the direction of humanistic ideals. With a sometimes pathetic "*moral and humanist ethos*" (Richta, 1963a,b). Moreover, they also really had something to say to the world. Richta did not seek merely to capture Western trends (the famous so-called Third Industrial Revolution of the time) and prevent the decline of our competitiveness and develop and ultimately win the humanist socialist ideal. To improve the lives of people and man himself, not under the dictates of profits.

In contrast, the strategy outlined in (Mařík et al., 2016) consists - despite the soaring proclamations - in merely capturing and following the "*German footprint 4.0*" in the form of the vision of the Czech Republic; as a "*cooperating partner*." What about focusing on projects where we can not only passively accept trends but also co-create them? The Czech Republic should find an industrial activity in which it will tend to excel. The space industry, or super strategic raw materials (not only to extract and process and industrially exploit)? Which could be a specific Czech-Slovak strategy for the 21st century. And at the same time, at least a partial answer to Richta's civilizational challenge in the form of his concept of a specific Czechoslovak socialist Scientific and Technological Revolution (STR).

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<sup>1</sup> Critically presented in (Sirůček, 2017).

## 1 Researches of R. Richta

Academician, philosopher, sociologist, prognosticator, head of the interdisciplinary research team of R. Richta (1924-1983) is one of the leading Czech scientists of the 20th century. The focus of his efforts was on the study of the problems of the Scientific and Technological Revolution (STR) and its social and human context. He became famous in the East and West for his book *Civilization at the Crossroads* (Richta et al., 1966), which was in many ways ahead of its time.

Richta's difficult life fate, including health difficulties and research focus, or the work of Richta is recapitulated in (Sirůček, 2019) or (Sirůček, Džbánkuvá, 2018). In his scholarly work, Richta first focused on a critique of Masaryk's philosophical and sociological system, which he soberly analyses in the context of the development of philosophical thought in the late 19th century. And also, on the issues of communist humanism (Richta, 1963b). Later, he devoted himself entirely to the actual problems of the connection between the STR and socialist society, with emphasis on the advantages of socialism over capitalism. In collaboration with an interdisciplinary collective, he develops a Marxist conception of the STR, complex and unique in its time. He also dealt with civilizational transformations, the methodology of science, and prognostic considerations.

Richta tried to understand questions that had not been answered until then—and sometimes not even raised. He was brimming with creative and bold, innovative ideas. Already his early works had a profound impact on social scientists and the wider intellectual community. Especially the essays (Richta, 1963a) contribute to the term technology becoming one of the central concepts of philosophical reflection in the 1960s.

Quantitative indicators complement the qualitative analysis. Richta reflects on the "*technical challenges*", considers the productive forces of the new society, the "*technical conditions*" of man's creative self-empowerment, the conflict between technology and "*humanity*", or the modern question marks over the "*human factor*". Moreover, this is in close connection with the natural-historical conception of the development of society K. H. Marx (and F. Engels). In particular, the elaboration of this study culminates in the seminal work *Civilization at the Crossroads* (Richta et al., 1966).

Richta's entire work is imbued with humanistic ideals. Even *Civilization at the Crossroads* suggests how to achieve a general transformation and progress in society in the sense of man's self-realization as a self-purpose. The all-round development of man is to be the

basis and the goal of the development of the productive forces. Richta's humanist ideals partly contributed to the slogans about "*socialism with a human face*", excessively fashionable in the late 1960s. *Civilization at the Crossroads* is thus also credited with helping to open up public discourse to the reformist rhetoric of the social sciences on which much of the sociology, philosophy and economics of the 1960s was built. However, many critical voices have been raised from the right and the left of the political spectrum, pointing to the naivety (or outright dishonesty) of the reformers of the 1960s. Furthermore, more broadly, they warn of the illusory and dangerous nature of the concepts of the so-called third way.

The work of R. Richta, led by *Civilization at the Crossroads*, is still of serious interest to Western scholars from various disciplines. In the domestic environment, however, Richta is - traditionally - somewhat neglected or deliberately ignored. Developments dramatically reinforce this after 1989. Richta is blamed for his high academic and non-academic positions and his works themselves. He is often labelled as the "*chief normalizer*" of the Czechoslovak Academy of Sciences. Richt's work in the domestic social sciences is thus often relativized and interpreted as ambiguous. Although Richta was necessarily reflecting on his times on some issues, his work demonstrates both strength of spirit and a scientifically objective vision of the present and the future.

## **2 Civilization at the crossroads**

In 1966 R. Richta became the head of the interdisciplinary team for research on the social and human context of STR. This is the most penetrating contribution to the history of sociology and many other disciplines. The team was established at the instigation of the Central Committee of the Communist Party of Czechoslovakia and prepared a report for the XIII Congress of the Communist Party of Czechoslovakia in 1966. The report was published as *Civilization at the Crossroads: The Social and Human Context of the Scientific and Technological Revolution* (Richta et al., 1966). It seeks to provide a comprehensive and synthetic explanation of the STR, its context, and implications, including the human and social dimensions. This is against the background of the clash of two social systems - socialism and capitalism. The text contrasts the STR and the Industrial Revolution and illuminates their differences.

*Civilization at the Crossroads* is a collective work, but with the decisive and irreplaceable role and authority of R. Richta. It represents an economic, sociological, and technological prognosis of development, which deals with the transformation of the then industrial society into a modern society called, for example, information society. The text has

been gradually translated into at least twelve languages and is still one of the best-known outputs of Czechoslovak social sciences. It has become the world's most widely published original domestic work in philosophy, economics, and sociology.

The significance of *Civilization at the Crossroads* remains multifaceted to this day. It became a bestseller when it attracted extraordinary attention at home and abroad (Kumar, 1972; Rodnick, 1973; Sommer, 2017). In its day, it was even referred to as the "*Capital of the Twentieth Century*". Interest was aroused by its consistently critical approach (to capitalism and so-called real socialism), its holistic scope, originality, and extensive use of new findings from world scholarship. The study also led to the creation of a new scientific discipline of STR. It was exceptional for its time in its genuinely interdisciplinary approach, with experts from philosophy, sociology, economics, urban planning, medicine, etc., participating in the work. Also significant is the effort to systematically compare developments in capitalist and socialist countries and to search for valid statistical indicators for this purpose.

Richta promotes the term STR and the related theory of substituting mental work for physical work. His original concept of STR highlights the transformations of the productive forces and later attempts to analyze the possibilities of change from the nature and type of science. Richta illuminates the nature of the transformations of the technical and human components of the Marxist category of productive forces and the overall changes in the historical position of man and the growth forms of civilization.

The authors of *Civilization at the Crossroads* build on the fact that there is a transition between two stages of society's development. Production increasingly relies on science and technology (automation of production, artificial matter, nuclear energy, etc.). Human labour is freed from monotony and can devote itself to making production more efficient. The economy is moving away from the mechanical mass production that has prevailed since the Industrial Revolution. He depicts these processes as STR, which overturns the elementary technical, economic, social and anthropological conditions of civilizational development. In contrast to industrialization, science and its technological applications become the decisive parameter for the growth of the productive forces, ultimately developing man and his creative powers. These changes derive the need for a pervasive transformation of the economy into a dynamic organism that will constantly renew the source of its own growth. Investment in human capital, specifically in science, education, and human skills, is a major social investment. The more human power the STR releases from mechanical labour, the more it is possible to channel these resources into the further development of the socialist economy. Furthermore, since this is to

be creative work, it will also increase the overall self-fulfillment of human beings in the spirit of humanistic values.

Civilization at the Crossroads brings many ideas that were groundbreaking in their time. What is meant by "*crossroads*"? The crossroads referred to the possibility of further securing the development of the productive forces in a harmonious way, including the development of their most important component - man, his faculties, and his mental life. Richta & al. warned in the 1960s that all the economic difficulties, disproportions and the impossibility of further industrialization signaled the actual presence of a "*nodal point*" of modern civilization. Beyond this line, the further development of the productive forces is no longer manageable by existing methods but only by a transition to STR.

Some voices point out that this is precisely how Richta strikes at the deep essence of the problems of the system of so-called real socialism (or proto-socialism). What remains significant is Richta's warning about the danger of ignoring developmental trends. Also, that finding the right direction at the civilizational "*crossroads*" requires systemic changes. Richta's work implies that it is necessary to change people and the relationships between them for systemic change. People will change if they use their free time to develop.

There are other interpretations of Richta's civilizational "*crossroads*". Richta's works are supposed to be a socialist reflection of a deep and multidimensional crisis, including the existential crisis in which industrial civilization is mired. This crisis is manifested in the civilizational ferment of the 1960s, in the East and the West. Many intellectuals and experts in various disciplines are looking for ways to solve the crisis in the 1960s, and are drawing up ideas of an ideal post-industrial society, etc.

The work of Richta and his team can also be described as a precursor of the Club of Rome and its cautionary forecasts. *Civilization at a crossroads* is sometimes accused of not explicitly considering the limits to growth, e.g., in terms of the depletion of natural resources. Richta does not automatically associate the ever more perfect satisfaction of human needs with the ever-greater consumption of natural resources. The "*growth imperative*" perception can also be interpreted differently - in the context that traditional industrial growth was about to hit its ceiling. In particular, some of the early reports of the Club of Rome have called for a halt to growth, for limited, sometimes even negative, growth. This is not the same thing as Richta's suggestions about "*optimizing growth*" in the spirit of time economics, which was supposed to provide the first truly scientific picture of efficiency. In much broader terms and with a critical emphasis on subjectivity. On man himself, on a new space for his overall development. Richta's lifelong effort to overcome the degradation of man in the sense of an alienated productive force.

Despite the undeniable limitations of the time, Richta's theory of STR encompasses most of the social and civilizational growth or development factors. Furthermore, it does so concerning human needs and developmental changes of man and society. One of the key inspirations is Richta's emphasis on the spheres of science and research, which are, in fact, nowadays also considered by standard economics as a key source of growth. This includes the fundamental question of whether science and research can be left to markets alone? Closely related to this is the emphasis on education, the role of the human factor, and the importance of investment in this direction. On the other hand, however, one can be critical of the one-sided optimism and the almost unquestioning influence of STR on education in Richta's visions.

### **3 Contemporary crossroads of civilization**

The recognition that our civilization is once again at a fateful and dangerous "*crossroads*" may contribute to at least a partial fulfillment of Richta's - still unappreciated - legacy. On the one hand, there are the achievements of 4IR (and the coming 5IR), and on the other, the bankrupting neo-liberalism that is still reproducing itself. Moreover, this is even in the neo-liberal form of the EU.

A recapitulation of how the predictions and theses contained in Richta's work have or have not come true is presented in a collection of papers (Dinuš et al., 2019). It can be noted that Richta's theoretical analysis of STR has only been partially fulfilled. The power disputes of the great powers, the competitive struggle of global groupings, and, above all, the collapse of so-called real socialism came into play. Thus, Richta's ideas about the shape and form of the STR under socialism, which can in some respects be regarded as "*political idealism*", were not realized. The modern conditioning of Civilization at the Crossroads (Richta et al., 1966), which fell in the era of techno-optimism, should not be overlooked. Nevertheless, STR and its social and human contexts are still at a crossroads. Development and changes in science, technology, and human factors are ongoing permanently.

The formation of global capitalism and the multidimensional crises of civilization in the 21st century can be recalled in the context mentioned above. In the context of capitalism's adaptation to new conditions and the limits of this adaptation, Richta's hypothesis "*about the limited base of capitalism and industrial civilization*" can be highlighted (Dinuš et al., 2019, pp. 146-147). Thus, in the technological sphere, the question can be formulated as to whether the capitalist economy can fully absorb new technologies, which may have already been evident in the bursting of the dot.com bubble around 2000. The Great Recession may then have "*cleared*

*the ground*" not only for automation and robotization, but more broadly for sharing-based technologies, which may, however, bring a different quality and be associated with the current civilizational crossroads. Richta's work may also be inspiring in considering the unsustainability of the "growth fetish".

Richta's work brings many critical impulses to discussions about the economy and society 4.0 or 5.0. Including the "green" stage of 4.0 (Sirůček, 2020), coronacrisis, and 5.0 visions and projects (Breque et al., 2021).

## Conclusion

Bubble 4.0 is bursting, and (hyper)globalists are looking for ways to save neoliberal globalization. The current dramatic developments can be interpreted as the collapse of neo-liberal globalization in the making. However, globalism has already destroyed the resilience of national economies before the pandemic (Sušová-Salminen and Švihlíková, 2020). In 2020, the coronacrisis came, and the further fate of Bubble 4.0 remains open. Through the liberal progressives, the globalizers interpret the crisis as a springboard to even more massive digitization, which no longer serves the people, but quite the opposite. Digitization and greening are supposed to be the salvation of the debt union. At stake is launching gigantic projects such as European carbon neutrality or the American "green destiny".

Another appreciated aspect of *Civilization at the Crossroads* (Richta et al., 1966) is the conception of science and technology (and the whole of STR) as a social process, which, after all, is announced by the subtitle of the book itself. Richta's suggestions include that scientific investigation of industrial or technological processes, upheavals, or outright revolutions should reflect their complexity, including their social and human contexts. In doing so, it must make use of the findings of various scientific disciplines and fields. Richta's inspiration and contribution lie in the topics he dealt with and the unprecedentedly robust dialogue between different disciplines, and the desire to think in new ways about science, its new horizons, and its close relationship to social development.

Richta's key message is that economic or economic policy measures should be human-centered. The economy remains the decisive element of human destiny. In all sectors and directions, the ultimate goal should be a man and his development.

To conclude, let us recall Richta's cautionary-prophetic recapitulation: "*Such has been the tragedy of modern civilization: with his own powers, the man looks more and more helpless, in*



*the midst the products of universal co-operation he feels more and more alone, admit of the greatest human work he feels least of all human"* (Richta, 1963a, p. 62).

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