

Literacy for the future! – Lessons from foresight case studies

*Tamás Gáspár*¹

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Abstract

Doing foresight is not common sense; neglecting foresight is a loss of a part of reality. Being future literate, using futures consciously for specific purposes is an emerging necessity for people, mainly in business practice and education. This paper shows that the skill to use futures is available and can be developed. Ten case studies on different adaptations of strategic foresight are compared in terms of their topics, use of the future and the methods and techniques to be adapted. The case studies – most of them PhD student research – are apprentice exercises to develop, learn, and experience using futures. The results show that the use of closed and semi-closed Anticipation for the Future (preparing and planning) are still dominant, while the methods and tools get new understandings and very creative combinations to use.

Keywords: futures literacy, strategic foresight, case studies

JEL: A12, A29, O22

INTRODUCTION

Foresight is a mature discipline of social sciences; however, only a little of its capacity has been harnessed until recently. The Future has always been a part of political, social, economic and technological development, either as the embedding environment in which organisations have to adapt to, or as the expecting reality that the trends articulate, or as a plan to be executed. By now this palette has been extended to discovering optional futures in terms of scenarios, identifying wild card events that may threaten changes, or more recently to understand and develop skills of anticipation. Companies, governmental organisations and civil initiations express high interest in foresight perspectives and methods, there is also an increasing number of practitioners and consultants who provide foresight.

The Budapest Business University (BBU) launched a Strategic foresight course in the Doctoral School and is preparing for a management master's programme to be articulated in the near future. The PhD students got deeply involved in futures studies and expressed their enthusiasm to gain a new perspective of research. On the basis of some conceptual and methodological foundations, they had to adapt the futures framework, and students in small groups worked on case studies. An international conference at the university in May 2023 offered the opportunity to present these research results and discuss the messages students had learned from the work.

In addition, it was a good opportunity to open the call to other colleagues at the

¹ Associate Professor, Budapest Business University. Email: gaspar.tamas@uni-bge.hu

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university to add a foresight perspective to their research projects and present their insights. In the framework of the Centre of Excellence for Future Value Chains at BBU we organised a session to detect foresight in research as well as edited conference proceedings to collect and present the results.

This book contains ten different papers, of which seven were written by doctoral students and three by colleagues of different faculties and departments. On the one hand, these are apprentice exercises to use the future and to adapt techniques properly. On the other hand, while doing futures case studies, it raises the awareness of what future to use and how to use it under different circumstances. This latter develops skills and capacities to enhance the potential of future work. Hence we provide some lessons for adapting foresight in academic research.

The aim of this introductory paper is to provide an insight into the rationale of futures studies and to summarise the main experiences of the futures work: to what extent do they show similarities and differences in terms of topics, research questions and methods? What is the way they use the future and what results these approaches produce?

WHY FUTURES LITERACY AND FORESIGHT?

Future consciousness and future orientation are immanent and specific features of the human species. Thomas Lombardo dedicated a thick book to discover the nature and historical development of the human capacity to think about the future (Lombardo, 2008). Loveridge (2009) also gives examples of how foresight has been used in the main cultural eras of our history and concludes that “foresight is not new, only newly rediscovered after one of its periodic sojourns in the intellectual and political wilderness” (ibid, p.8.).

This rediscovery started with the social, economic and political crises of the post-war world in the 1970s, and searched for the risks and consequences of the bipolar-welfare world system as well as for alternative futures that may emerge from the transition starting. The technological and scientific advances, the first computers gave a strong impetus to futures work in terms of world modelling. The Limits to growth, book of the Club of Rome (Meadows, 1972), is a famous example of the rebirth of futures studies. The greater than human and increasing capacity of calculations and feed-back analyses enabled and encouraged scientists to have a better insight into systemic thinking and to detect the potential paths of the complex world.

However, in recent decades we are facing the crisis and the transition of the global world, which depicts the present as a volatile, uncertain, complex and ambiguous world (Johansen-Euchner, 2013; Sombala, 2019). The deconstruction of former social narratives and values and the emergence of the post-modern world, arm-in-arm with the new technological revolution have created a living environment of uncertainty and ambiguity in networks with the speeding up feed-back mechanisms. Hence technological, economic and social networks pass into highly complex systems that perform inconstant futures. In this world one anchor is the ability to navigate in the blows of change by possessing futures consciousness, foresight framework and techniques.

Being aware of what future we use and how we use it in thinking and decision making is what we call: futures literacy (Miller, 2019). Unconsciously, we regularly use futures in planning or expectations, but the navigating power derives from the conscious distinction among aims, types and methods of futures, while knowing the way how the proper aims, types and methods fit each other. *Ipsa scientia potestas est* (knowledge itself is power) – wrote Bacon in his *Meditationes Sacrae* (1597), which today can be interpreted as ‘knowledge of the future is power’. Many, for long time try to bridle the future: either to forecast or to plan it. However, epistemologically there is no knowledge of the future; the power is in the navigation by the different uses of the future for present decision making. The VUCA characteristics of our times abreast release the past boundaries of time, open the plausible scope of the future and enable

people to shape their own lives by purposive activities and continuous reflections. Both the ability of permanent adaptation and shaping the future are evolutionary advantages in our global world.

All of the above-mentioned activities we call foresight, the application of future intelligence; no wonder that Loveridge (2009) refers to it as ‘the art and science of anticipating the future’. Rohrbeck and Kum (2018) also highlight that in the corporate field the foresight activities are expected to help companies unbind path dependency, develop a wider and more intensive approach to management as well as enhance company performance.

Bishop and Hines (2012) have created a framework for foresight activity by collecting the experiences of many institutions and companies. These are framing, scanning, forecasting baseline and alternative futures as well as visioning, planning, and acting as parts of the strategic approach. The process detects ongoing trends and emerging issues, reveals the scope of futures in order to have a wider and more intensive sense of the present for decision making and action (Miles and Keenan cited by Saritas et al., 2022). This is the framework that gives the foundation for most of the papers.

OVERVIEW OF THE CASE STUDIES

This volume contains ten very different kinds of paper both in terms of topic and futures use. The structure of the volume follows the time frame the papers adapted: it runs from the distant future to the emerging issues of the present. The following section gives insight into the papers as follows.

Körtvési and Szendrei-Pál (2023) discuss the futures of higher education institutions. Recent social and economic crises, among them the Covid-19 pandemic, opened a new era by challenging the standard education system. The paper traces what transformation to quality education may emerge in the changing world. The authors identified drivers by horizon scanning, define baseline future and consequences by futures wheel, articulate scenarios, and apply PESTEL to test risks and opportunities. Finally, they present the Hybrid mode as preferred future and its implications. This type of education ensures the development of both social and digital competencies, creates effective knowledge transfer and e-learning materials that are easy to update, while the value of a degree does not depreciate.

Scenarios for sustainable mobility in Budapest also face 2030 in the paper of Ács, Ekrami and Mammadova (2023). The changing lifestyle of new generations, the faster way of life and the technological changes demand new infrastructure and urban travel networks. The paper makes a critical foresight view of the Budapest Mobility Plan 2030. The research is based on impact-uncertainty analysis and focus group discussions. Four possible scenarios are created by socio-economic conditions and political support: Green Transformation, Power of the Market, Green PR and Unsustainable city. The authors conclude that scenarios provide insight for policymakers and stakeholders in order to make powerful decisions, develop strategies and to prioritise sustainable transportation for Budapest.

Virtual reality (VR) is the topic to discuss from a foresight point of view in the paper of Shi, Tian and Wu (2023). What they search for is what factors influence the successful adoption of VR technology in tourism marketing and what optional future implications of VR utilisation may emerge in tourism marketing for Chinese tourists. Virtual reality is an emerging technology that leads to a new interpretation of reality and the environment embedding strategic decisions. Tourism in China is one major area where the adaptation of the new technology may have an outstanding influence. The research is based on a wide range of methods, including quantitative and qualitative techniques, which result in tendency forecasts and optional scenarios. The authors find that virtual reality in marketing can increase brand recognition, foster innovation and enhance immersion.

Artificial intelligence (AI) and ChatGPT is a hot topic that challenges many social institutions and activities. Balla, Csiba and Simon (2023), as PhD students were mainly interested in the impact of AI on academic work. AI is rapidly changing, and societies have no experience yet of how to live together with intelligent technologies, how it changes the information, learning and decision-making processes. The aim of their research is partly to unfold plausible scenarios on the impact of ChatGPT in the academic field, and partly to identify the wild cards in the scope of the AI future. In terms of the scenarios, the authors link the possible-plausible options with opportunities and threats, and clearly distinguish positive and negative futures within the scenarios. These findings serve the easier navigation in the emerging future of artificial intelligence by making the most of the benefits, while mitigating the risks.

Chen, Cai, Fu and Wei (2023) also chose modern technology for the foresight work in terms of new energy vehicles in China. Renewable energy and electric cars are ongoing discourses and have a wide range of literature as new trends in energy transformation. The paper is based on quantitative data to discover the Chinese market for new energy vehicles, and hence give a comprehensive view on the past and present. In terms of the futures the authors use the past experience to forecast the tendencies of the market, which they find very promising, and to be in line with China's 14th five year plan in terms of economic transformation. However, to be able to navigate in this emerging field, they also detect risks and wild card futures as well as articulate policy suggestions in terms of taxation, production support and infrastructure development. They consider the main contribution of the paper that it gives a competitive evaluation of new energy vehicles and forecasts the comprehensive competitiveness of the market for new energy vehicles based on the current situation.

ChatGPT is so challenging that Forman, Papashvili, Szántó and Tóth (2023) also chose to discuss its future in higher education, more specifically on bachelor programmes. One of the main areas of ChatGPT is to revolutionise teaching and learning processes as well as methodologies. The authors have traced the experience and perspectives of teachers by interviews to detect what potential impact of ChatGPT may have on higher education. These results were combined with media outlet analysis and Z-number cognitive mapping. The authors find that ChatGPT has the potential to significantly impact higher education in the coming years; however, it is multifaceted. It may enhance personalisation, improve engagement, increase efficiency; it could revolutionise course delivery, student assessment, and learning outcomes, while raises ethical concerns and pedagogical challenges when AI is integrated in the classroom. As a conclusion they state that AI researchers, educators and policymakers need to collaborate closely to make the most of the potential of ChatGPT.

Sustainable mobility in Budapest is also a returning topic for research. However, while Ács et al. (2023) seek for optional future scenarios, Tran, Sithole and Amakwah (2023) take the perspective of students in terms of the baseline future. The embedding environment is similar, it highlights Industry 4.0, new urbanisation, high density of the population and environmental concerns. The future of transportation has a crucial role owing to its controversial impacts on society and the environment. The authors also take the vision for 2030 as an orientation point, but critically discuss if the ongoing transition meets the preferred future. They do so by using impact-certainty analysis from a PESTEL framework, focus group discussions and futures wheel. They find that the accessibility of public transport increases mainly by underground infrastructure, while road congestion is worsening. Governmental policy supports low-to-zero emission vehicles and provides them by extended fuel stations.

The last three papers of the research focus on the transformation of the present. Fekete and Divéki (2023) detect how quality courses can be redesigned for the future by the characteristics and needs of Generation Z. The background of the research is again the technological change that determines the capabilities, habits, behaviour and social relations of young people. The basis of the analysis is the expectations of 21st century skills, and the authors

seek to understand how redesigned courses can contribute to the possession and development of these skills. They made an experiment with Gen Z students in study skills courses. Surveys, student reflections and interviews provided data to evaluate the ongoing structures and to prepare a dynamic and interactive syllabus. The results support that students are partners in and they are satisfied with redesigning courses, and the action research they participated in has contributed to skills development.

Ábel, Hegedűs, Nagy and Tóth (2023) search for new understandings of and futures reasons for inflation. They claim that recent economic theories and policies are not capable to explain completely the present changes of prices. In that perspective discussing the future also means finding new contents for well-known concepts. The research takes new approaches in inflation research, and finds increasing profit margins of companies as an influential factor that emerges from the restructuring of the world economy in transition. The behaviour of the participants of global value chains seems to be more sensitive to reply to market shocks with changing the prices rather than attacking market shares. The conclusions are supported by a wide range of company data analyses.

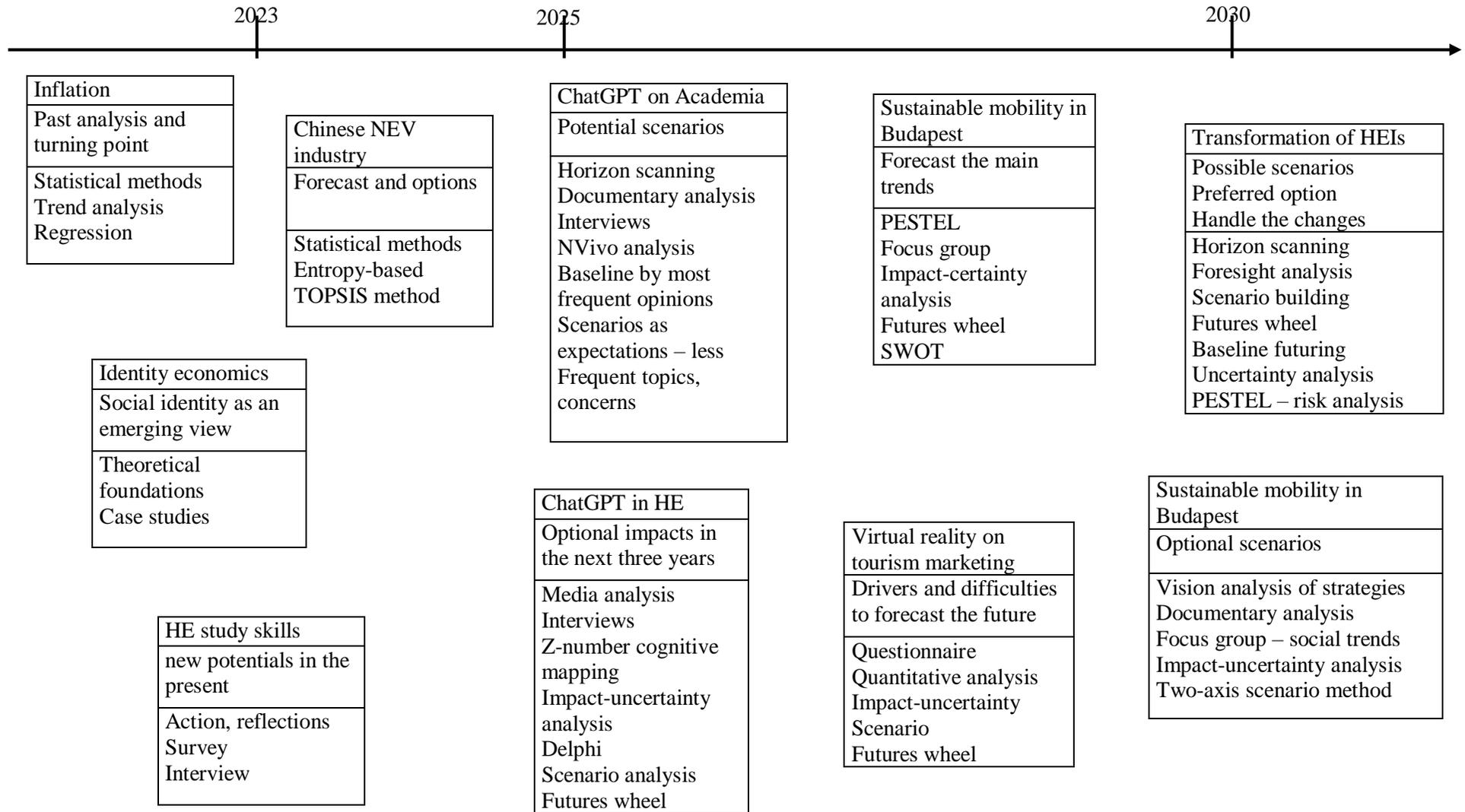
The paper of Tóth and Rados (2023) returns to the starting problem of the collection and hence completes the framework of the case studies on futures. While the transformation of higher education discusses how the technological infrastructure and human need can meet, this paper challenges the rational-individual decision making. Future thinking does not calculate all possible and accessible information but rather follows motivations and attitudes that are socially determined. Identity economics, as an emerging branch of behavioural economics, takes social identity to be the foundation of expectations and decision making. Using a wide range of literature the authors give a comprehensive view of identity, which is a part of the individual's utility function, the basis of conflicts, the basis of morality, appears as relationship, and which is embedded in the social individual. The paper collects case studies as empirical evidence for social identity and conclude that the present lack of unified theory and methodology offers a “future opportunity to achieve the often-coveted goal of unifying social scientific approaches to economic transactions by recognizing their embedded nature into social interactions, and the individual's and social groups' emotional and deterministic look of the future as factors”.

USE OF THE FUTURES – WHATS AND HOWS

Figure 1 summarises all papers of this volume along a timeline by the topic they chose, what future and how they used it, and the technique the authors adapted. This structuring provides an insight into the different usage of the futures that the case studies present.

All chosen topics are hot issues in the present world, both in terms of the subject and the technology linked to it. China is an emerging power of the world, where not only the leadership but also the perspective of development is challenged. The operation of the economy, price stability is raised to question with tourism and marketing as core areas of present economic growth. Higher education and academic research have a crucial role in the transformation of social-economic systems. These issues are linked with the most challenging human and technological potentials: ChatGPT, virtual reality, electric vehicles on the one side, and 21st century soft skills, social identity and sustainability on the other side.

1. Figure Topics, the use of future and methods of the papers in terms of time horizon



Source: Compiled by the author

The time horizon is not too wide. The figure shows that most of the case studies are grouped around 2025, with some prospects to 2030. One reason is definitely the chosen topic: the authors clearly state that in terms of artificial intelligence it is unreliable to articulate any statement for more than just a few years. Another reason is the aim: in terms of inflation or identity economics the papers make a past evaluation and seek for emerging issues of the present, which otherwise may become influential or dominant for the long run future. In addition, our learned automatism in terms of the use of the future, prefer controlling the future either by foreseeing or by handling it.

A group of the case studies focus on detecting the present in terms of turning points, emerging view or new potentials. Another group aims at tracing main trends and forecasting as well as unfolding the drivers of these changes and their consequences. A third group focuses on potential scenarios of the future. Certainly, these groups and aims overlap; moreover, the understanding and the intention behind ‘forecasts’ or ‘scenarios’ are quite different.

Baseline futures are part of the research in almost all cases. This is understandable and correct since the PhD course used the Bishop-Hines (2012) foresight framework where baseline forecast is an essential element of the foresight activity. However, in addition to the methodology, authors’ research questions in terms of the future are also more linked to the discovery of the future than to its invention.

One can trace this characteristic by investigating the scenarios. Following the foresight framework, the majority of the papers turn to unfolding the potential futures, and define three, four or even more scenarios. These options sometimes appear as varieties of baseline conclusions. Sometimes they are rather optional consequences of the ongoing tendencies with definite positive or negative evaluations of the authors. In one case scenarios become the basis of articulating the preferred future. However, the reverse tendency is also available. In the case studies, forecasts are never single futures. Even by quantitative methods authors detect optional outcomes of the expected futures.

The overlapping of the baseline and alternative uses of the futures can be discovered by linking the case studies to the timeline. It is worth noticing that the very short run and longer horizon research do not necessarily match the forecast – scenario types of using the future, as it regularly happens. Authors deal with ‘scenarios’ even in the projection type of papers, though in different interpretations, and baseline futures are highly influential in longer perspective types of research.

In terms of the methods and techniques applied to different futures, one can experience a wide scope that partly follows the foresight framework, and partly suits the topic in question. The PhD students were very much open to experiment with new techniques and to match them with other types of research methods. All case studies were based on mixed methods, combinations or sequences of different approaches, either in the quantitative or qualitative fields. Sometimes authors adapted techniques from their own narrow field of research, such as TOPSIS, NVivo or Z-number cognitive mapping, and used them for foresight purpose.

Most striking is the creativity of newcomers in the futures field, and how they adapt and use methods in a ‘non-standard’ way. For instance, futures wheel embedded in scenario analysis completes the research by detecting what complex and controversial consequences an optional future might have. Uncertainty analysis is regularly the basis of scenario research, since the drivers that have several, qualitatively different optional outcomes can differentiate future scenarios. However, in some cases of this volume uncertainty analysis either appears as a monitoring tool to test the stability and reliability of the foresight activity, or rather the certainty (instead of uncertainty) of the drivers the authors measured and adapted.

All in all, the collected set of papers reflect that the formal education of foresight and applied case studies contribute to develop individual futures literacy. The authors are all aware of what type of future they use regarding the topic to research, and what methodologies and methods

they adapt to do so. Using Riel Miller's ontological and epistemological framework for futures literacy (Miller, 2019), these papers belong to the closed and semi-closed Anticipation for the Future categories with the final aims of foreseeing what may come and emerge, or expecting what should come. This is in line with Miller's finding that most of the use of futures belong to these categories, mainly this is so in the business and economics fields.

CONCLUSION

Foresight is an increasingly important field in the business world in order that companies, industries and their researchers may safely navigate. Futures literacy as the conscious way to use futures for specific purposes is becoming a fundamental soft skill for entrepreneurs and analysts. The case studies of this volume prove that adapting foresight perspectives and methods to regular business strategy analyses widens the scope of understanding, enriches the space of orientation for management, and provides new perspectives to ask the most adequate questions.

The similarities and differences of adapting strategic foresight reflect that all topics and problems are open to futures studies. The methodology offers several ways to design the research, and the methods and techniques are also open to creativity - how to use and to combine them. The results and conclusions of the papers highlight that the foresight approach unfolded understandings, optional futures or risks that were out of regular thinking and images, even in the case of classical forecasts.

Enhancing futures literacy, becoming an expert in using the future the most appropriate way in different cases, is utmost important in higher business education. Fortunately, the Budapest Business University is open and supportive to adapt futures courses to help students and colleagues develop futures literacy.

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