Acta Cultura et Paedagogicae

journal for interdisciplinary studies in culture and education

ACTA CULTURA ET PAEDAGOGICAE

2022

ACTA CULTURA ET PAEDAGOGICAE

2022

Table of contents

Communication and Culture

Self, Narrative, Communication

Gábor, Szécsi[1]

[1]University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, e-mail: szecsi.gabor@pte.hu; Eötvös Loránd Research Network, Research Centre for the Humanities, Institute of Philosophy, e-mail: szecsi.gabor@btk.mta.hu

Abstract

This article examines how the concept of narrative crystallized within the framework of the philosophy of mind, cognitive linguistics and narrative psychology can shed light on the role of intentional state attribution in the process of communication. The primary aim of this investigation is to shed new light on the presupposition that narrative can be regarded as a tool of communicating representations of intentional relations and events between individuals by verbal and nonverbal means. The paper argues that by illuminating the meaning-creating role of conceptual relationships emerging within narrative frameworks, we can also grasp how to attribute intentional states (eg. intention, belief, desire, hope, or fear) to our communication partners using narrative-oriented interpretation schemes, and thus to infer their intentions in communication. Based on this tenet the present article suggests possible answer to questions like what basic types of narratives determine the effectiveness of everyday communication processes; and how this concept-meaning connection embedded in narrative structures can become a factor of self-creation in everyday discourse.

Keywords: narrative, communication, intentional states, intersubjectivity, narrative self

Introduction

The concept of narrative has become a cornerstone of disciplines like psychology, the philosophy of language, and contemporary linguistics targeting the facts of linguistic performance in relation to action, language and the mind.[1] In this article, I intend to investigate how the concept of narrative crystallised within the framework of the philosophy of mind, cognitive linguistics and narrative

---

[1] From the mid 1970-ies cognitive linguistics, as an emerging discipline within the field of cognitive science radically breaks away from the taxonomy-based traditions of linguistics using exclusively linguistic analyses. It examines linguistic phenomena that since they do not connect to the symbol-manipulation centered paradigm, can be described with methods in cognitive and brain sciences (Goldberg 1995, 2006; Lakoff 2008a, 2008b; Lakoff &Johnson 1999; Lakoff & Narayanan 2010; Langacker 1976, 1987, 2008; Talmy 1983, 2000; Ziemke et al. 2007).

psychology can shed light on the role of mental state attribution in communication. The primary aim of this investigation is to shed new light on the presupposition that narrative can be regarded as a tool of communicating representations of intentional relations and events between individuals by verbal and nonverbal means (Dennett 1985, 1987, 1991; Hutto 2007, 2008, 2009; Herman 2008; Scalise Sugiyama 1996;). I assume that by illuminating the meaning-creating role of conceptual relationships emerging within narrative frameworks, we can also grasp how to attribute mental states (eg. intention, belief, desire, hope, or fear) to our communication partners using narrative-oriented interpretation schemes and thus to infer their intentions in communication. Based on this tenet, I look for the answer to questions like what basic types of narratives determine the effectiveness of everyday communication processes; and how this concept-meaning connection embedded in narrative structures can become a factor of self-creation in everyday discourse.

With the argumentation and analysis below, I attempt to shed light on the mechanisms of the dual network of narratives. The starting point of this experiment is the general assumption that the simultaneous transmission and perception of an explicit and an implicit narrative in the communication process is a prerequisite for understanding. Every explicit, "told" story takes on a meaning concerning the underlying life stories and implicit narratives and becomes the basis for understanding and predicting behaviour. In other words, the meanings conveyed by the speaker of the communicative act can be made perceptible to the hearer in such a way that the tax makes clear to the hearer through an explicit and an implicit story the intentions, desires and attitudes leading to the communicative act in the given situation.

Narrative-oriented interpretation schemes in communication processes

Narratives that play a crucial role in everyday meaning formation and communication can also be identified as schemes for analysing situations or as data structures feeding from the rich system of relationships of the conceptual representation of actions and events. Therefore, narratives are nothing but conceptual networks functioning as frameworks of interpretation when identifying situations of action. The schemes of event structures activated by narratives can be regarded as patterns of interpretation present in all our conceptual representations and our experiences of problem-resolution actions. We rely on these when identifying the elements of situations of action, from the simplest forms of action to the most complex forms of communicative acts. Due to the internal relationship between the conceptual representations of narratives

and actions, the key to the structure of simple narratives guiding the understanding of everyday situations can be found in the structure of human action. When understanding narratives, we actually project our knowledge concerning interpersonal action on narratives guiding situation analyses. This observation is in harmony with the basic tenet of narrative psychology, a psychological meta-theory that sees our narrative and story-telling function as a general anthropological feature of the psyche, stating that the narrative form of thinking has a key role in the formation of the self and identity. This meta-theory gaining an increasingly significant role in the psychology of the self, sees narration as a process that gives sense and meaning to the mental construction of reality and hence examines the problem of identity in light of biographic narratives.

The hypothesis of constants that is consistent conceptual structures that form the gist of narratives, that are responsible for the "conservation" of emotions related to the elements of narratives, thus sheds light on the more general notion that narratives eventually capitalise on the cognitive structure shared by the members of the community in terms of human motivational factors, goals, emotions and action. This ensures that each member of the community has efficient schemes of situation analysis for the identification of communicative intentions and, therefore, ensures the interpersonal nature of communicative processes. The cognitive linguistic analyses targeting their emergence and functioning thus offer important contributions for the elaboration of models in the philosophy of language, focusing on the relationship of body, mind and language, that are based on the supposition of a mental world that determines the entire grammatical and semantic structure of language, unfolding before language acquisition. They also offer factors for the definition of the concept of the self that language philosophers, among them Davidson would like to use instead of the historically troubled, opaque and obscure notion of subjectivity (Davidson, 2001), one that is in harmony with the definition of Richard Rorty that "self is not something which 'has' the beliefs and desires but is simply the network of such beliefs and desires" (Rorty, 1991: 123).

In the practice of everyday communication, individuals in communicative relationships attribute intentions, desires, and beliefs to each other in a given situation in the light of recognised patterns of behaviour and interpret or predict each other's actions based on that. The predictive power of this folk or common sense psychology, our everyday way of rationalising intentional actions, lays the foundations for understanding, empathy and effective interpersonal strategies on the part of individuals in communicative relationships. This "naïve social

technology" (Dennett, 1987) serves as an everyday frame of interpretation for possible patterns of causation between perceptions, beliefs, intentions, and actions. It considers beliefs, intentions, desires, actions etc., as intentional events and states which are causally related to each other. These causal relationships can be described by general laws. As Dennett assumes, this type of common sense psychology is not an idealised rationalistic mode of calculus but a naturalistic, empirical descriptive theory that assigns to things the causal regularities revealed by a great many inductions about the experience (Dennett, 1985, 1987, 1991). These presumed regularities in the background of intentional causation suggest that everyday explanations of actions usually start out from the presumed rationality of interpreted actions. In other words, these explanations determine the causes of the actions by referring to the rationality of the actor. For this reason, we can consider folk or common sense psychology as a rationalistic interpretive and predictive calculus (Dennett, 1987). This rational calculus assumes, on the one hand, that the actions of the actor can be classified as true and relevant to the individual's cognitive needs and life history and, on the other hand, that the actor performs his action in the light of the facts relevant to his action plans.

Thus the explanations of actions referring to intentions, beliefs, and desires describe the mental processes leading to the performance of the acts by assuming the reasonableness of the actions; that is these explanations try to determine the real causes of the acts presupposing the rational behaviour of actors. As Jerry Fodor points out, "reasonable action" as a concept contains an essential causal element that all individuals in a given culture regard as a criterion of reasonableness (Fodor, 1975). This is why communicatively related individuals can approach each other as intentional systems, that is, as beings whose behaviour can be understood and predicted by attributing intentions, beliefs, and desires to them. These mental states, according to Dennett, are usually identified on the basis that individuals must possess them as a function of their life stories. In other words, when we understand the other person's behaviour, we assume that the mental states attributed to him are both true and relevant to his life as depicted in the narratives. Although Dennett does not analyse this process in detail, his explanations suggest that this process of interpretation takes place at the crossroads of narratives. The individual facing the other person's behaviour creates a narrative about the behaviour and its circumstances by attempting to reconstruct a life story that illuminates the relevance of the behaviour, thus serving as a kind of framework narrative for interpreting the narrative directly expressed by the behaviour. Based on this, he concludes that behaviour consists

of acts that are relevant and reasonable for the individual endowed with different mental states (beliefs, desires).

In my view, in communicative acts, individuals elucidate elements like role of action, background, conflict, main plot, resolution and corollaries using event-organizing actions offered by narratives. Obviously, we turn to narratives if we want to understand the motives in the actions of others and in the intentions, beliefs and desires feeding these actions. Thus, narrative-orientedness in thinking constitutes the main pillar of the mundane practice known as naïve- or folk psychology in the framework of which we understand others' actions and beliefs through attributing beliefs, desires, hopes, fears, and other mental states to them. The application and use of narrative explanatory schemes enable us to attribute desires, hopes and fears to others in our communicative acts, which in turn helps us understand the communicative intentions in the background of the messages conveyed. This is how we can see others' actions as being rational – provided they meet some given set of criteria for this – and predictable. In other words, the predictive force of folk psychology stems from the narrative nature of our mind and thinking, from our ability that when we understand the narrative of others, with our knowledge of the meta-narratives characteristic of our society that determine these personal narratives, we can actually predict which action the individual will most likely choose from among the potential options of actions that can be carried out in the given situation so as to achieve their goals. Such optional and potential acts to resolve problems are represented by community meta-narratives, while the individual represents their own relationship to meta-narratives with the help of autobiographical narratives through which they construct their self and identity. This is the framework in which their actions in a given communicative situation can be labelled as rational or irrational, with the tools of folk psychology, and this is how we can reconstruct the beliefs, desires, wishes or even the prejudice influencing their intentions. In the background of each narrative directly told, there is an immanent narrative whose task is to shed light on the reasons why in the given situation the narrator would choose the given communicative act from among the potential sphere of acts in order to convey the narrative at hand. The primary motive of the speaker, the individual carrying out a communicative act, is that the hearer should comprehend the narrative representing the speaker's intended choice in light of this hidden narrative. The primary condition for this is that the storyteller should also have information about the relationship of the potential actions acknowledged in society and the spheres of actions seen as possible by the hearer in the given situation; in other words, about the potential actions the hearer would take as a

reaction to the problem, the speaker desires to resolve, in the given situation. All in all, these pieces of information constitute the most important pillars of folk psychology operating in the given context. To understand the effects of narratives on our thinking, on our processes of comprehension, on our communicative acts, and our everyday actions to resolve problems, is therefore, not less than investigating the relationship of human nature and culture. Thinking in narratives is a natural ability that immanently defines our cognitive processes. As Roland Barthes says, narratives "like life, are just there" (Barthes, 1977: 79). Narratives function as a special meta-code embodying human essence in our everyday communicative processes that ensures that with the deciphering of communicative intentions the messages concerning the common world known for the hearer and the speaker can flow freely in the given culture, or between different cultures.

Narratives are not simply the condition of understanding, but they also constitute structures that shape meaning and create concepts. Our concepts, embedded in structures as they are, connect to each other, and become the building blocks of our knowledge. Just as our most essential experiences of action, our most complex mental constructions are also organised into narratives. In the process of cognition we create, convey narratives of ourselves and of the world, and with narratives we can make sense of our roles played in various situations of communication. In our communicative acts we process and display our personal experiences linked to communicative situations in the form of narratives. We communicate about our own selves and about our identity's social integration in narratives. Thinking in narratives connects us with other members of our community and enables us to understand the perspective of others in view of the relationship to our self. By acquiring the ability to produce and comprehend narratives, we also learn how to connect the beginning and the end of a series of events in a way to express our sense of belonging to a certain social-, ethical- or legal order, our cultural bonds and connections. Narratives structure our future and past; narratives make it possible for our past experiences to turn into the pillars of our plans and expectations for the future. Our concepts of right and wrong, of important and unimportant events are also organised into narratives. That is, we evaluate and organise our experiences with the help of narratives. Some experiences become salient and important as a result of the narratives they reside in, thus constituting the starting point of the evaluation and understanding of different entities and actions. Narratives also serve as a framework of the moral evaluation of actions. As Lakoff and Narayanan point out in their study,

"narratives enable us to function in the world in a sensible way, and to be central for our self-consciousness" (Lakoff & Narayanan, 2010: 24).

As a result of the above-mentioned claims, the statement that individuals experience their own life in the form of narratives has become the basic tenet of both narrative psychology and cognitive linguistics.2 They use and apply narratives for their own purpose, and projecting these onto the experience they have had, they search for a framework of interpretation, an explanation, so as to identify the reasons for the events they have experienced, and to find their own roles in these. The creation of our private, inner world is facilitated by autobiographical narratives in which the central figure of the narrator and the narrative activity is the same entity. We share different stories of our past, habits, motivation or planned future in the form of autobiographical narratives. Hence narratives like these are also of a somewhat intersubjective nature. Their source is a discourse between individuals, so they are inseparably linked to the intersubjective communicative situation.

As Lakoff and Narayanan claim, the event structures in narratives actually have several dimensions (Lakoff & Narayanan 2010: 24-25). Apparently, they have an important role in the transmission of ethical values and guidelines for the management of everyday life. Stories and fables that inherently comprise community meta-narratives, beyond their help in our understanding of the world around us, also offer solutions for moral and practical problems we might encounter. Narratives also constitute the basis of folk theories that shed light on the functioning and logic of events, the characteristics of humans, cause-and-effect relations, on plans that determine action and goals. Our life is nothing else but a series of consecutive narratives in the overlap that is fulfilled by people who play their roles – claims Erving Goffman, sociologist (1974). As Goffman suggests, each social institution and form of practice is like a drama with actors, dialogues, and fairly well-defined actions. Adapting to the needs of certain social situations is, after all, nothing else but the acceptance of relevant social roles, and the connected forms of action and behaviour.

---

2 Views in narrative psychology claim that telling narratives significantly determines the nature of human thinking. As Jerome Bruner emphasizes, our thinking and sensible functioning has two forms, and each organizes experience and thus constructs reality in a different way (Bruner 1986, 1990). In this differentiation one is the traditional style of thinking, of a paradigmatic, logic-based, scientific nature, which leads to detailed analysis, logical verification, reliable argumentation, and the raising of rational corollaries. The other form, represented by narrative style thinking, results in historical narratives, reports, and inherently belongs to our psychological reality.

Narrative structures and self-creation in everyday discourses

It is reasonable to ask, then how narratives can shed light on intentions, desires, goals, and plans in the background of the connoted message in the process of communication. How can narratives become the basis of understanding, forming elements of efficient communicative act? How can individuals portray their attitude concerning their communicative partner, the communicative situation at hand, or the content of the message, with the help of narratives, and thus make their behavior and action understandable for their partner in their communicative act? In answering these questions we should start out from the supposition that the conditions of mutual understanding lie in the simultaneous transmission and processing of an explicit and an implicit narrative in the communicative situation. Each explicit story "told" gains meaning in view of the implicit narratives and life stories in its background, and thus it becomes the basis of predictability and understandability of action. In other words, the meanings conveyed by the speaker of the communicative act can be made accessible for the hearer by making the intentions, desires and attitudes in the communicative act in the given situation clear, with the help of an explicit and implicit narrative. The processing of both of these two forms of narratives can make it clear which motive dominated the actions of the speaker in choosing the particular communicative act when conveying the given message from among the potential sphere of communicative acts that are socially accepted and sensible; and also help us see what desire, belief and attitude lie in the background of this motive. The reproduction of this motive and of the desire, belief and attitude in its background is the condition for the hearer to see the speaker and the speaker's action as rational in the given situation, to attribute meaning to the communicative act at hand in the light of this attributed motive, and to see the speaker's behaviour and acts as predictable in similar situations. Explicit narratives shed light on the motives behind the action to resolve the problem at hand in the given situation with the help of verbal and nonverbal tools. With this, the speaker can reveal why they have chosen the given activity to be the most efficient to resolve the problem in the situation from among the sphere of socially accepted possibilities and to convey the message connected to the resolution of the problem. Explicit narratives, being mental schemes, thus enable the hearer of the communicative act to understand, through the event structure at hand, what intention motivated the speaker to choose the given act due to the emergence of the problem. With this the speaker wants the hearer to understand their reason for choosing the particular communicative act to solve the problem at hand, as observed by the hearer. At the same time, however, the speaker, with their behaviour and action, conveys an implicit narrative as well,

which primarily intends to map the general attitudes of the speaker in connection with the situation at hand and with the problem observed in the concrete situation. With this narrative displayed with both verbal and nonverbal signs, the speaker wants to make it clear to the hearer how they generally connect to the problem in the given situation and to events similar to the concrete situation. These implicit narratives (using different stylistic devices, gestures, metacommunicative signs, paralinguistic elements) show the hearer the actions and behaviors the speaker reacts with generally, to problems similar to the one in question, in settings similar to the concrete situation at hand. The speaker makes use of these implicit narratives in order to apply autobiographic narratives shaping their identity in revealing their communicative intent. The condition for the understanding of the communicative message is that the speaker simultaneously computes the intentions, desires, beliefs and attitudes expressed by the implicit and explicit narratives revealed by the speaker. That is, understanding why the speaker chose the action observed by the hearer to convey the message at hand in order to discern the general attitudes of the hearer connected to the situation and problem in the given situation. In other words, the explicit narrative that sheds light on the details of why the speaker chose the particular act to convey the message in the given situation, from among the possible sphere of actions known for both the speaker and the hearer, becomes comprehensible only in light of the implicit narrative that suggests and reveals how the speaker reacts generally, in situations similar to the one at hand, with problems similar to the one at hand.

Communicational narratives, in this dual framework, ensure the conditions of efficient communication, from the simplest interpretative processes of folk-psychology, to the deciphering of the most complex meanings. These reveal why the speaker chose the concrete action in question to resolve the given problem in the given communicative situation, from among the sphere of possible actions socially accepted. The criteria for this is that both the speaker and the hearer must possess more-or-less the same knowledge about the potential sphere of actions accepted by society concerning the problem at hand and that with the attribution of this shared knowledge they encode and decode the meanings embedded in the narratives. In simpler discourses of folk psychology this means that an individual attributes intentions, desires and attitudes to their communicative partner in a way that they, on the one hand, understand their explicit narratives, which reveal why they chose the given act from the possible sphere of actions, and on the other hand, that they observe implicit narratives as well, which mirror the general attitudes of the speaker connected to the situation at hand. This is how they

attribute rationality to their actions and become able to predict behaviour in a given situation.

The notion concerning the inner relationship of thinking, action and narratives places the concept of the self in a new light because, if we accept this premise above, then we have to hypothesise an inner relationship between the self and the narratives that determine its development. It is enough to think of the claim that narratives build on schemes of event-structures incorporated by conceptual representations that represent action situations, where these schemes store intentions and beliefs connected to the communicative situation in a way that these can easily be recalled again and again. As these intentions and beliefs have been "conserved" in the framework of the self–other–shared context triad linked to intersubjectivity in the event-structure schemes, they not only constitute a source of understanding but also feed the concept of the self. This is how the self itself can become a network of intentions and beliefs and the centre of narratives storing intentions and beliefs. In a more radical conceptualisation, we can claim that the self is actually a result of a narrative activity. In order to form a narrative construction, but at the same time to be able to experience mental states, feelings, senses, desires, thoughts, etc., the self needs a cognitive system in a wider context in which the self is not only the narrator of events, but it is, at the same time, the entity that experiences the narrated events as well.

The intentionality of the narrative self is not at all a derived concept since it acts, feels and thinks in the form of mental state networks that build on the narratives that construct the self itself. That is, we can claim that the formation of the acting self actually precedes the birth of the narrative (autobiographical) self, just as body use precedes language use. The acting self, however, does not disappear from the mind, but as Damasio (1994) and Johnson (2007, 2014) point out, it helps us in our everyday decision-making processes when we have to choose the adequate narrative from among a set of competing narratives. In this we heavily build on somatic markers (Damasio, 1994), that is, the bodily senses and feelings that accompany narratives. In view of this claim, Lakoff (2008a) also argues that the "action field" of narratives can be linked to different bodily networks in the context of embodied cognition. Lakoff sees narratives as conceptual frameworks with distinct scripts and gives a typology of the structure of narratives in the following way, suggesting two types: a) the dramatic structure of the narrative – this includes scripts of conceptual frameworks and the roles of conceptual frameworks as well; b) the emotional structure of the narrative – in this latter phase the dramatic structure of the narrative engages with emotional, sensorimotor and other bodily networks, therefore, the narratives actually have

an embodied dimension as well. Lakoff believes that narratives function in the same way as cognitive metaphors do, but in this case, the emotional structure of the narrative is seen as the source domain.

It is no surprise, therefore that the hypothesis stating that the formation of the self as embodied agent can be linked to narrative activity in cognition has become widespread among the thinkers theorizing on the notion of embodied cognition (Damasio, 2010; Gallagher, 2006; Gallagher & Zahavi 2012; Lakoff, 2008b; Menar,y 2008; Turner, 1996;).3 Narratives of self-creation in this conceptualization derive straight from the direct experiences of the embodied subject (Menary, 2008: 76). In the context of embodied cognition it is not verbal narratives that drive the experiencing of events, but, throughout the development of cognition, it is an experience that structures the organisation of narratives first, which, in turn, gives a framework for the use and realisation of verbal narratives. The self is, above all, an embodied mind that experiences the framework structure and chronology of events in bodily interaction with the world. The narrative structure of action in the world, in the framework of the embodied cognition hypothesis, necessarily shapes the structure of cognition, which later gives the basis of higher-order cognitive skills like language use and thinking. The narrative self, functioning at the level of reflections, later emerges in the verbal interactions of the intersubjective relationship between the triad of the self—other—shared context, as a result of the development of cognitive abilities, and then, turning into an inner speech, it enriches the self with the dialogues between the self and "ourselves".

In view of all of the above, the notion that individuals in fact experience their life in narratives has become a central claim both in narrative psychology and in cognitive linguistics as well. They make use of narratives that serve their own purposes, and projecting these parabolically onto the events they experienced,

---

[3] In order to understand how the conceptual representations of communicative situations become factors that determine meaning and thus factors that fundamentally determine understanding, we first need to see the role of situatedness in cognition. For this we can rely on the terminology of the notion of *embodiment* determining the development of cognitive linguistics, a terminology resulting from attempts to describe bodily, sensorimotor experience continually present in language and thinking. Being situated in the world, importantly, does not only mean being in any physical context, but it means that we actually keep in touch with conditions having bodily meaning. It is no surprise that cognitive science, in its rebirth with the notion of *embodiment* has been characterized by the intention to put being-in-the-world (Dasein) and its logical priority in the center of attention in methodological research on the mind, rather than examining how the mind works in general. As Margaret Wilson states: "cognition is not an activity of the mind alone, but is instead distributed across the entire interacting situation, including mind, body, and environment" (Wilson, 2002: 629-630).

they want to find a framework of interpretation, an explanation to understand the reasons for the events experienced, and to find their own roles in these. The understanding of the inner, private world is facilitated by autobiographical narratives in which the central figure of the narrator and the narrative are the same entity. We share different stories in the form of autobiographical narratives, in connection with our past, habits, motivations, or planned future. For this reason, autobiographical narratives actually have an intersubjective nature. They stem from interpersonal discourse, hence they are inseparably linked to intersubjective communicative situations.

Conclusions

With the argumentation and analysis above I intended to shed light on the mechanisms of the dual network of narratives. I hypothesize, how it penetrates the everyday worldview of the person building their communicative relationships and how narrative production and reception can become a pillar of human communication and cognition. With that, I primarily aimed to prove that such investigations can fruitfully contribute to the preparation of psychological, linguistic and philosophical models targeting the functioning and formation of narratives capitalising on the shared cognitive structures of actions, emotions, goals and human motivational factors. They, furthermore, offer a conceptual framework to illuminate the meaning-creating role of conceptual relationships emerging within narrative structures and the narrative pillars of mental state attribution in the process of communication.

This is how linguistic, psychological and philosophical models on the relationship between narrative and communication can help us shed new light on the results of investigations in semantics, pragmatics and the philosophy of language targeting the relationship of mind, action and language. We can, therefore, attempt to give a synthesis of theories describing the processes of meaning construction, conceptualisation, functioning and structure of the mind encapsulated in narratives from an interdisciplinary approach. A synthesis that yields a clear picture of the forces of how narrative-based communication shapes humans, communities, societies, and cultures.

References

Barthes, R. (1977). *Image, Music, Text*. Hill and Wang, New York.
Bruner, J. (1986). *Actual minds, possible worlds*. Harvard University Press, Cambridge.
Bruner, J. (1990). *Acts of meaning.* Harvard University Press, Cambridge.

Damasio, A. (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*. Penguin Books, New York.

Damasio, A. (2010). *Self Comes to Mind: Constructing The Conscious Brain*. William Heinemann, London.

Davidson, D. (2001). *Subjective, Intersubjective, Objective.* Clarendon Press, Oxford.

Dennett, D. (1985). *Brainstorms*. MIT Press, Cambridge

Dennett, D. (1987). *The Intentional Stance*. MIT Press, Cambridge.

Dennett, D. (1991). Real Patterns. *The Journal of Philosophy*, 88(1), 27–51.

Fodor, J. (1975). *The Language of Thought.* Harvard University Press, Cambridge.

Gallagher, S. (2006). The narrative alternative to theory of mind. In Richard Menary (ed.), *Radical Enactivism: Intentionality, Phenomenology and Narrative*. John Benjamins, Amsterdam. 223-229.

Gallagher, S., & Zahavi, D. (2012). *The Phenomenological Mind*. 2nd edition. Routledge, London and New York.

Goffman, E. (1974). *Frame Analysis: An Essay on the Organization of Experience.* Harper and Row, New York.

Goldberg, A. (1995). *Constructions: A Construction Grammar Approach to Argument Structure*. Chicago and London University of Chicago Press.

Goldberg, A. (2006). *Constructions at Work: The Nature of Generalizations in Language.* Oxford University Press, Oxford.

Herman, D. (2008). Narrative theory and the intentional stance. Partial Answers. *Journal of Literature and the History of Ideas*, 6(2), 233-260.

Hutto, D. (2007). The Narrative Practice Hypothesis: Origins and applications of folk psychology. *Narrative and Understanding Persons: Royal Institute of Philosophy Supplement*, 82, 43–68.

Hutto, D. (2008). *Folk Psychological Narratives: The Sociocultural Basis of Understanding Reasons.* MIT Press, Cambridge.

Hutto, D. (2009). Folk Psychology as Narrative Practice. *Journal of Consciousness Studies*, 16(6-8), 9-39.

Johnson, M (2007). *The Meaning of the Body: Aesthetics of Human Understanding.* University of Chicago Press, Chicago and London.

Johnson, M. (2014). *Morality for Humans: Ethical Understanding from the Perspective of Cognitive Science.* University of Chicago Press, Chicago and London.

Lakoff, G. (2008a). *The Political Mind: A Cognitive Scientist's Guide to Your Brain and Its Politics*. Penguin Books, New York.

Lakoff, G. (2008b). The neural theory of metaphor. In Gibbs, R. (ed.), *The Cambridge Handook of Metaphor and Thought*. Cambridge University Press, New York. 17-38

Lakoff, G., & Johnson, M. (1999). *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. Basic Books, New York.

Lakoff, G., & Srini, N. (2010). Toward a Computational Model of Narrative. In Finlayson, M. (ed.), *Computational Models of Narrative: Papers from the AAAI Fall Symposium*, 21-28. https://www.aaai.org/ocs/index.php/FSS/FSS10/paper/view/2323

Langacker, R. (1976). Semantic Representations and the linguistic relativity Hypothesis. *Foundations of Language, 14*(3), 307-357.

Langacker, R. (1987). *Foundations of Cognitive Grammar.* Stanford University Press, Stanford.

Langacker, R. (2008). *Cognitive Grammar: A Basic Introduction*. Oxford University Press, New York.

Menary, R. (2008). Embodied Narratives. *Journal of Consciousness Studies*, *15*(6), 63-84.

Rorty, R. (1991). *Objectivism, Relativism, and Truth.* Cambridge University Press, Cambridge.

Scalise Sugiyama, M. (1996). On the Origins of Narrative: Storyteller Bias as a Fitness-Enhancing Strategy. *Human Nature*, *7(*4), 403–425.

Talmy, L. (1983). How Languages Structure Space. In Pick, H., & Acredolo, L. (eds.), *Spatial Orientation: Theory, Research and Application*. Plenum Press, New York. 225-282

Talmy, L. (2000). *Toward a Cognitive Semantics*. MIT Press, London.

Turner, M. (1996). *The Literary Mind.* Oxford University Press, Oxford.

Wilson, M. (2002). Six views of embodied cognition. *Psychonomic Bulletin & Review, 9*(4), 625-636.

Ziemke, T., Jordan, Z. & Roslyn, F. (eds.). (2007). *Body, Language and Mind, Embodiment*. Mouton de Gruyter, Berlin and New York.

Poet vs. Philosopher

Shem Tov ben Joseph ibn Falaquera's significance regarding the antecedents and reception of Maimonides

Antal Babits[1]

[1] The Jewish Theological Seminary, University of Jewish Studies, Budapest, Hungary; E-mail: antalbabits@gmail.com

Abstract

Shem Tov ben Joseph Falaquera (ca. 1225 - ca. 1295) in his youth he was a poet and afterwards declared that he was quitting poetry to devote himself to less frivolous pursuits; but this was perhaps only a figure of speech. His poetry is in contemporary taste, without further distinction. As a philosopher he was not original and did not wish to be. He was also a writer of occasional poems, and probably in the fashion of the time, received gifts from wealthy patrons. This occupation, however, he early abjured as little suited to his taste and temperament. In his mature age, Falaquera declared that to pursue poetry is a dangerous profession as it is not engaged in truth but in beauty and rhetorics instead!

Keywords: philosophy of religion, jewish history, jewish philosophy

„A word fitly spoken is like apples of gold in a setting of silver." **(Proverbs 25,11)**

Shem Tov ben Joseph Falaquera was born in northern Spain or Provence *ca.* 1225, and probably died *ca.* 1295. The Falaquera family was one of the richest and noblest of Tudela, but it seems that Shem Tov himself was rather poor and retiring; at all events, he was not an important member of the community and intervened in public affairs only once when he supported the philosophers in the anti-Maimonidean dispute. In his youth, he was a poet and afterwards declared that he was quitting poetry to devote himself to less frivolous pursuits, but this was perhaps only a figure of speech. His poetry is in contemporary taste, without further distinction. As a philosopher, he was not original and did not wish to be. His numerous works often consist of excerpts from Arabic treatises, which he translated into Hebrew rather than personal compositions. Thus, he translated

and quoted a number of Neoplatonic texts, including the *Book of the Five Substances* by Pseudo-Empedocles, especially in his two little encyclopedias, *Reshit Hokhmah (The Beginning of Knowledge)* and *Sefer ha-Mevakesh[1] (The Book of the Seeker).*

Previous research work into this topic in Hungary

As far as I know, it was Lajos Venetianer[2] who first published extensively about Shem Tov ben Joseph ibn Falaquera[3] in Hungarian in Magyar Zsidó Szemle („Hungarian Jewish Survey").

Lajos Venetianer, rabbi and historian was born in Kecskemét on May 19th, 1867 and died in Újpest on November 25th, 1922. Between 1881 and 1891, he studied at the rabbinical seminary based in Budapest and meanwhile also at the Breslau Rabbiner-Seminar for an academic year. In 1890 he received his master of arts degree in Budapest and then officiated as rabbi in 1892. He graduated from the university in Cluj Napoca as a secondary school teacher of Hungarian and German literature and language, which he actually taught at the grammar school in Csurgó while he was active there as a pastor. In 1893 he moved to Csurgó, then in 1896 to Lugos, In 1897 he was officiated as the chief rabbi of Újpest. He was deputy chairman of the National Rabbi Association, since 1910 a member of Joseph Franz National Rabbi Training Institute managing board, and a part-time lecturer of theology with the same institute. For the lower-level courses he regularly taught Jewish religion studies, Bible studies and Jewish history, whilst for the upper-level ones, he was a lecturer on the legal and judicial conditions of the Israelite congregation in Hungary and the methodology of religious education after the death of Ignác Goldziher he also taught religion philosophy literature. He was an industrious and fertile cultivator of Jewish studies excelling with his works as a historiographer. Of his oeuvre, special mention should be made of his studies in history with reference and associations of the Jewry in the latter half of

---

[1] SIRAT, Colette: A History of Jewish Philosophy in the Middle Ages. Cambridge University Press, 1995. p. 234.

[2] „Hungarian rabbi and writer; born May 19, 1867, at Kecskemet. He studied at the rabbinical seminary, the University of Budapest, and the Jewish Theological Seminary and the University of Breslau, 1888-89 (PhD 1890, Budapest). Receiving his diploma as rabbi from the seminary of Budapest in 1892, he officiated as rabbi at Somogy-Csurgo from that year to 1895, holding at the same time the chair of Hungarian and German literature at the Evangelical Reform Gymnasium of that city. In 1895 he was called to the rabbinate of Lugos and in the following year to that of Ujpest near Budapest. Venetianer is the author of: "A Fokozatok Könyve," [The Book of Degrees] on the sources of Shem-Ṭob ibn Falaquera (Szegedin, 1890)." https://jewishencyclopedia.com/articles/14665-venetianer-ludwig [SINGER, Isidore: VENETIANER, Ludwig]

[3] VENETIANER, Lajos: *Semtób Ibn Falakéra, adalék az arab-zsidó philosophia történetéhez a 13. században.* [Semtób Ibn Falakéra, further data on the history of Arabic-Jewish philosophy in the 13th century] Magyar Zsidó Szemle [Hungarian Jewish Review], Budapest, 1890. pp. 74-82, 144-155.

the 19th century. Chief work: *A Magyar zsidóság története* (1922, The History of the Hungarian Jewry).[4]

There is no doubt about the significance of professor Venetianer as a teacher and a scientist. He was a permanent contributor to Magyar Zsidó Szemle, and his outstanding publications enhanced the prestige of this periodical.

Shem Tov ben Joseph ibn Falaquera (ca. 1225 – ca. 1295) was one of the best-informed and most critical talents of philosophy of his age. In his youth, his ambition was to become a poet, but later on, he declared to quit poetry to devote himself to less bohemian activities, although it was actually only a stylistic statement or twist on his side. His poems reflect contemporary tastes and nothing beyond that. Many of his writings are not his own original creations but actually poetic excerpts from Arabic works, which he translated into Hebrew.

Used in several variations in sources, Falaquera is a nickname originating probably from Beaucaire, a town in France referred to as Bellicadrum in the Middle Ages. Back in those days, town names were often used before the surnames of people of significance. This must have been the case with Shem Tov ben Joseph, as the Hebrew transcription of Belcairo was changed twice amongst the community of Spanish Jews: the initial letter „beth" weakened into „pe", and moving „yodh" in front by chance resulted in the version „Falaqérá". It has been confusing ever since that a wide variety of this name has been used internationally in literature: Palquira, Palquera, Palkiera, Palgira, Phalkira, Phalkera, Phalchera, Falaquera, Faláqérá etc.

However, none of the above compromise Shem Tov ben Joseph's significance. We hardly know any fact about his life.[5] He was relatively unknown, which may be explained by the facts that he stayed away from public disputes, did not hold any office or rank, and he retired to devote himself exclusively to science. In his youth, he engaged in poetry, which he later regarded as „a child's game" and just gave it up in order to pursue science instead, the one and only interest which was important for him. After studying the Holy Script and Talmud, at the age of about 30 he was more intensely immersed in philosophy. He was especially engaged in the philosophies of Aristotle, Al-Farabi, Ibn Sina (Avicenna), Averroes, Ibn Gabirol, Judah Halevi and Abraham ibn Ezra. Finally, he evolved into an excellent expert and interpreter of *the Guide* by Maimonides.

---

[4] Magyar zsidó lexikon. [Hungarian Jewish Lexicon], Budapest, (ed. ÚJVÁRI, Péter), 1929. p. 945.

[5] Ibid. p. 77.

Aged appr. 60 (in ca. 1285) he completed his chief work titled *Moré ha-Moré*t (The Guide to the Guide),[6] which was used as a source by every commentator later on thanks to is interpretations of certain passages of *The Guide of the Perplexed*.[7] There must have been a commentary of the Holy Script and an explanation for the Talmud *aggadah* written by him which apparently have not come down to us. His chief work titled *De'ot ha-Pilosofim*[8] *(Opinions of the Philosophers)* and another writing on ethics have remained in manuscripts till now. The introduction to *De'ot ha-Pilosofim* is a clear statement of Falaquera's intellectual approach:

„Originating from the Proclaimed *Law* and the wise as well, it is known and accepted everywhere and by everyone that the ultimate and genuine happiness of humans is to know and reach the Creator in thoughts to the extent human intellect has the capacity of. Besides, the genuinely wise also agree that this knowledge is achieved by humans through grasping divine deeds and having an intellectual image of them, because what has already separated from the material can only be the subject of human perception via its actions."

There are two approaches open to people: prophecies and science. Falaquera[9] reaches far back to the *Neoplatonic* tradition in his introduction to *the Guide*, but also relies on Avicenna when declaring that a prophet gets to know everything directly through and by the grace of the Eternal One, which in turn means that his knowledge is perfect and whole even without his studying it; there is no need for him to advance and move upward step by step; his knowledge is not different

---

[6] „In the third appendix to Moreh ha-moreh (Guide to the Guide), Falaquera critiques Ibn Tibbon's (and occasionally Al-Ḥarizi's) Arabic translations. In Moreh ha-moreh, Falaquera has taken pains to translate Maimonides precisely so that the author's intention is not lost. The Guide includes many words that hint at a deeper meaning, he notes, and only one who is schooled in philosophy and science will understand this complexity. If these words are not translated properly, explains Falaquera, their deeper meaning will be lost."
ROBERTS-ZAUDERER, Dianna Lynn: Metaphor and Imagination in Medieval Jewish Thought Moses Ibn Ezra, Judah Halevi, Moses Maimonides, and Shem Tov Ibn Falaquera. Palgraven Mecmillen, Springer Nature Switzerland AG 2019. p. 175. (eBook) https://doi.org/10.1007/978-3-030-29422-9

[7] VENETIANER, Lajos: Semtób Ibn Falakéra, adalékok az arab-zsidó philosophia történetéhez a 13. században. [Semtób Ibn Falakéra, further data on the history of Arabic-Jewish philosophy in the 13th century], Magyar Zsidó Szemle, [Hungarian Jewish Review] Budapest, 1890. p. 79.

[8] In his comprehensive encyclopaedia titled „De'ot ha-Philoszophim he introduced and presented the sciences of physics and metaphysics. Although the two surviving manuscripts show Ibn Tibbon as author, Zunz (Parma, de Rossi, 1640), and (Schr, 3 (1876), 277ff.) Steinschneider has proven with certainty Falaquera's authorship."Encyclopaedia Judaica CD-ROM, FALAQUERA [Moshe Nahum Zobel]

[9] „In the dispute against Maimonides he was defending Maimoni, who even wrote a public letter to defend the Guide for the Perplexed. Just like Maimoni, he believed that developing the intellect leads to salvation. In 1280 he wrote a Guide to the Guide, a highly valuable commentary in which he presents Maimonides' philosophical views." Ibid.

from that of a philosopher; however, in contrast with the latter he does not acquire it via demonstration and evidence, but through his intuition. A philosopher may be more or less a scientist or a philosopher; whilst a prophet is entirely and exclusively a prophet with a knowledge which is complete. There is yet another aspect which distinguishes a prophet from a philosopher: he enjoys and bears divine providence.

An anticipatory attitude, the rejection of making statements, his firm attachment to juxtapositioning things. All this is highly characteristic of Falaquera, but it is also highly questionable to what extent he was an original thinker.[10] He refrains from searching for any kind of original solutions, does not propose anything new as if everything was fine as it is, and as if he viewed the philosophical tradition as a solid and coherent system. There is only one exception associated with creation itself. This is the occasion wen Falaquera takes sides firmly as he thinks this is the most important issue of all for a believer. In his letter defending Maimonides, he explains two reasons why he believes Maimonides wrote *the Guide.* Firstly, to highlight that philosophical reasonings are not right when it comes to the creation of the world; secondly, to fight anthropomorphism. According to Falaquera, Maimonides believed that the world came into being as created, and he explains its various stages accordingly. The explanation of miracles by Maimonides is based on creation, whilst creation itself is the foundation for the acceptance of divine revelation. Falaquera rejects proving the existence of the Eternal One by the primary mover (The Guide to the Guide pp. 74–78.), in his work, there is a remarkably precise historical study on the evidence of the existence of the Eternal One, because this proof presupposes the eternity of the world itself. Maimonides, as Falaquera declares, presented two different methods of proving the existence of the Eternal God:

– via eternal motion, and

---

[10] „Falaquera was not an original thinker of the first order. But the breadth and depth of his knowledge of Judaism, philosophy and science qualify him as an important figure in the development of Jewish philosophy. Unlike Maimonides, who explicitly wrote for an elite intelligentsia, Falaquera wrote most of his works with the explicit aim of raising the cultural level of the Jewish people. It is therefore perhaps precisely such a personality as Falaquera who can best indicate the extent to which philosophy succeeded in finding a home in Judaism. The pioneering philosophical efforts of the earlier luminaries attained an enduring impact on the course of Jewish history and the religious life of the Jewish people, it may be maintained, through the consolidation of those efforts at the hands of Jewish philosophers like Falaquera. Their contribution is onless important for the fact that their light was often a reflected one." JOSPE, Raphael: *Torah and Sophia, The Life and Thought of Shem Tov Ibn Falaquera.* Hebrew Union College Press Cincinnati, 1988. p. 1.

– contingency (the Eternal One being a self-evident being), whilst the existence of creation as a whole is only possible, and depends on the Eternal One.

The first method of demonstration is conflicting with faith; Maimonides himself declared later on that only the proof via the contingency of the world is of genuinely philosophical relevance. For the Guide to the Guide (p. 77.) Falaquera regarded both the textual interpretations and philological methods applied by Maimonides.[11] Falaquera treated the issues scientifically and emphasised the aspects that can bridge the gaps. In his works, his ambition was to prove the agreement between scientific achievements and traditional beliefs.[12] Similarly to Maimonides, Falaquera also states that a prophet is to be perfect both rationally and morally.[13]

Falaquera wrote his works in order to educate via philosophical teaching material any Jew lacking a certain background of philosophy and knowledge of the Arabic language. This may have been a topic also present in *the Guide* by Maimonides and is rooted in the rabbinical tradition, according to which certain philosophical teachings are not to be taught to several people simultaneously.[14]

---

[11] „The exegetic sections, which he regarded as the heart and marrow of the book when he wrote the introduction, should accordingly be the place to start in the search for intentional inconsistencies. A learned medieval commentator assumed as much insofar as the fifth category, the exigencies of exposition and pedagogy, is concerned. He speculated that Maimonides' reference to inconsistencies belonging to that category had in view the "explanation of terms that he undertook at the beginning [of the Guide], the treatment of those terms being imprecise in comparison to what Maimonides explained later." Shem Tob FALAQUERA: Moreh ha-Moreh. Pressburg 1837, p. 10. In: A. DAVIDSON, Herbert: The Man and His Works. Oxford University Press, 2005. p. 390.

[12] VENETIANER, Lajos: Semtób Ibn Falakéra, adalékok az arab-zsidó philosophia történetéhez a 13. században. [Semtób Ibn Falakéra, further data on the history of Arabic-Jewish philosophy in the 13th century], Magyar Zsidó Szemle, [Hungarian Jewish Review] Budapest, 1890. p. 80.

[13] „Like Maimonides, Falaquera maintains that the prophet must be perfect rationally and ethically, ethical perfection being prior in time. Also like Maimonides, Falaquera interprets the statement in the Talmud that prophecy applies only to a person who is wise, strong, and rich, to mean that these include all the rational and ethical virtues." JOSPE, Raphael: Torah and Sophia: The Life and Thought of Shem Tov Ibn Falaquera. Hebrew Union College Press, Cincinnati, 1988. p. 112.

[14] „ShemTov Falaquera describes his works Reshit Chokhmah, Sefer ha-Ma'alot, and De'ot ha-Pilosofim as intended to guide a certain Jew with no background in philosophy or knowledge of Arabic through the philosophical curriculum. This may have been a topos, exemplified in Maimonides' Guide and rooted in the rabbinic tradition, that certain philosophical doctrines are not to be taught to more than one at a time. But it suggests the absence of established schools to which those who wanted systematic training in philosophy could turn. All of this indicates a pattern of philosophical study described by Colette Sirat: there was "no organised teaching of the sciences, no school, but only a transmission from master to pupil." SAPERSTEIN, Marc: The social and cultural context: thirteenth to fifteenth centuries. In: *History of Jewish Philosophy*. Edited by Daniel H. FRANK, and Oliver LEAMAN, London and New York,1977, Routledge, pp. 303-304.

Shem Tov ben Joseph was not only the very first but also the most significant interpreter of Maimonides with his comprehensive background and well-preparedness, and fantastic ability to perceive the essence. Despite his steady ambition, he was unable to advance to the level to further enhance the achievements of contemporary philosophies. A characteristic component of his works is his explanation and comments with a critical approach, but his intellectuality would not go beyond the limits of the genre of commentary[15]. His insight enabled him to spot even the minor „flaws" (ambiguity) of Maimonides or the misinterpretations in Ibn Tibbon's translations[16], but his excessively critical attitude changed into sarcasm or taunt, which would not allow him to take his own independent path in science walk. Shem Tov ben Joseph (besides Ibn Tibbon) is almost the very first commentator of *the Guide*. He interpreted more than a quarter of the text: the most important parts, that is. Although he was familiar with Maimonides' warning that others should not interpret his works by any means, he felt entitled to it as he was aware of a large number of misinterpretations. [17] He primarily criticised certain parts of Ibn Tibbon's translation, and he actually re-translated the chapters concerned. According to his own view, he could not let Maimonides' teachings suffer and be compromised. It is typical of his explanations that he tends to refer to himself, and he was aware of the fact that he interprets *the Guide* in an innovative way.

The very first printed edition of *Moreh ha-Moreh* (The Guide to the Guide): Pressburg, 1837. As far as I know, it has not had an official new edition ever since, but in 2008 in Jerusalem, I got the answer in an Orthodox bookshop that sometimes there are customers in the ultra-orthodox district who would need some dozens of copies of reprint editions. For those not lucky enough to get one, I recommend international auctions or downloading the online digital version used by me.

Back in the age when Falaquera lived, the majority of Jews had already forgotten to speak Arabic, but they could read works by scientists of the previous periods in Hebrew translations. Although he was considered an epigone by some people, his translations as well as his own original works have had formative significance

---

[15] „Most of my words in this book are the knowledge of excellent philosophers and professionals. I have not contributed to them with any kind of novelty…" – he wrote in his introduction. www.plato.stanford.edu   Stanford Enc. Phil., Shem Tov Ibn Falaquera

[16] "In his philosophical work, Falaquera created a scientific terminology which distinguishes itself from Ibn Tibbon's Hebrew terms in many respects." Encyclopaedia Judaica CD-ROM, FALAQUERA [Moshe Nahum Zobel]

[17] www.plato.stanford.edu   Stanford Enc. Phil. [Shem Tov Ibn Falaquera]

till now for those wishing to learn more about Maimonides and medieval Jewish philosophical thinking.[18]

Outstanding scientists preceding Falaquera

When assessing the significance of Shem Tov ben Joseph Falaquera's philosophy of religion, I suppose it is important to at least briefly present his immediate intellectual predecessors as well as his successors with reference to medieval Jewish scientific thinking. Just like Falaquera, they were the ones primarily excelling with the interpretation of *the Guide* by Maimonides.

Samuel ben Judah ibn Tibbon[19]

He translated *The Guide of the Perplexed* and *The resurrection of the dead by* Maimonides, as well as the introductions (the philosophical parts) from *Commentary on the Mishna*, and in 1213 he compiled a glossary of the terms of *the Guide* which he found difficult to interpret. He completed this latter work on board a ship on returning from *Alexandria* near Karthagenos, one and a half days' walking distance from Tunis. His translations and glossary form the foundations of the „traditional" Maimonides exegesis. His correspondence with the Master,[20] and the respect and love with which he responded to this contributed to Samuel's advance into an „official" interpreter of texts as well as head of this school to whom everyone referred to on a regular basis. What we regard as his own works are his comments on the ambiguous or more challenging parts of Maimonides' oeuvre.

---

[18] „The labels "epigone" and "unoriginal" ignore Falaquera's own stated purpose for translating and collecting scientific and philosophic works. The Jews of northern Spain, France and Germany in his day were generally not conversant in either written or spoken Arabic. Falaquera views himself as a disseminator of Aristotelian knowledge and takes it upon himself to provide an encyclopedic survey of Arabic Aristotelian philosophy in Hebrew, which he does in the three-volume De'ot ha-filosofim. He also distills Maimonides' philosophical ideas in the single-volume text Moreh ha-moreh." ROBERTS-ZAUDERER, Dianna Lynn: Metaphor and Imagination in Medieval Jewish Thought. Palgrave Macmillan, Switzerland, 2019. p. 166.

[19] „Samuel was perhaps born at Lunel, where he lived; but he also lived in Arles, Marseilles, Toledo, Barcelona and, it seems, spent a short time in Alexandria. The year of his birth is not known, but he is known to have died ca. 1232. As a youth, he rather disappointed his father, who found that he did not take enough interest in his studies and wrote a particularly vivid and lively moral testament for his edification." SIRAT, Colette: A history of Jewish Philosophy in the Middle Ages. Cambridge University Press, 1995. p. 217.

[20] „In his letter to Ibn Tibbon, the translator of Maimonides (A. Marx,: JQR, 25 [1934-35], 374-81) he advises to study Aristotle with Greek commentaries, as well as his contemporary, Averroes." Encyclopaedia Judaica CD-ROM, MAIMONIDES, Influences on Maimonides [Arthur Hyman]

According to Samuel ibn Tibbon, the world was undoubtedly created *ex nihilo* in time, and the only reason why Moses did not state this explicitly is that the primary objective of the *Torah* is to be useful for the wider public: actually, it is a political law and not the illuminating source of the wise. Indeed, truths are hidden in a certain way in the *Torah*, but Moses intentionally revealed certain concepts for the ignorant that corresponded with their meanings at that certain moment in history but were far from the genuine truth.

Another issue, with which Samuel ibn Tibbon was preoccupied, is *Ma'amar Yikkawu ha-Mayim* (*Let the waters be gathered), in which he discusses the concept of providence* extensively. He had been investigating it since translating Book III of *the Guide.* Chapters 17 and 18 actually provide a definition of providence which Ibn Tibbon entirely agreed with, but Chapter 51 apparently contradicted these two chapters. Briefly, he was not actually engaged in the issue itself but in the contradiction found in Maimonides' text. He also appears to have written to him for this very reason in 1199 (although the date is somewhat uncertain). The letter must have arrived after Maimonides' death, as we have no information about his reply.

Samuel ibn Tibbon thus drew the conclusion that Maimonides wrote Chapter 51 of Book III of the Guide to meet the needs of the public and prevent questioning the truth of providence.

Ibn Tibbon's work (*Lexicon* or *Glossary of Unusual Words to be found in the 'Guide'.*)[21] had enormous significance for the historical influence of *the Guide*. Jewish posterity studied *The Guide of the Perplexed* in the Hebrew-language translation by Ibn Tibbon, and his glossary of the unknown words was regarded as the authoritative interpretation and the very first comment of *the Guide*. Owing to his prestige, Ibn Tibbon was considered an „official" interpreter of Maimonides' thoughts already in his lifetime. It is not by chance that from the second edition on (Venice, 1551) each Hebrew-language edition included the *explanation of unusual words* as an appendix. Samuel ibn Tibbon wrote this work of his in 1213, nine years after completing the Hebrew translation of the *Guide*. The author set these objectives. On the one hand, he wanted to explain the meaning of Hebrew philosophical terms. Thanks to his translation, Ibn Tibbon had a key role in shaping the Hebrew terminology of philosophy, on the other hand, he provided explanations of concepts indispensible for the studies of philosophy, including

---

[21] MAIMONIDÉSZ: *A tévelygők útmutatója*. [Maimonides: Guide for the Perplexed], Budapest, Logos Kiadó, 1997. (1st complete edition, ed. BABITS, Antal, transl. KLEIN, Mór), Explanation of unusual words in the Master's work. (translated: SCHMELOWSZKY, Ágoston and VISI, Tamás] pp. 1061-1116.

those not found *the Guide*. Considering all this, we inevitably conclude that Ibn Tibbon was the first „official" commentator of *The Guide of the Perplexed* as well as the most significant one ever since.

Reception and the earliest reflections

Maimonides' oeuvre had immediate impact. In the East he was criticised for the „anti-religiousness" of his philosophy, not so much for his employment of philosophy, especially his attitude tothe afterlife; his most fervent opponent in this dispute was Samuel ben Ali to whom Maimonides himself replied in his essay on *The resurrection of the dead*.

The Guide of the Perplexed had been less influential amongst Jewish philosophers living in Moslim environment compared to those with a Christian context. At least this is the impression the famous Joseph makes, for whom *the Guide* itself was written: undoubtedly, it is Joseph ben Judah of Ceuta who died ca. 1226. Maimonides kept corresponding with him till his death and was highly fond of him.

Joseph of Ceuta was often mistaken for his contemporary, Joseph ben Judah ibn Aknin, as the short work which has come down to us titled *Ma'amar bimehuyav ha-metsiut ve'eykhut sidur ha-devarim mimenu vehidush ha'olam (A Treatise as to* (I) *Necessary Existence* (2) *The Procedure of Things from the Necessary Existence and* (3) *The Creation of the World),* bears the name Ibn Aknin, and was published in his Hebrew translation, and then also published in English. We do not know whether these three treatises were written before or after Joseph of Ceuta and Maimonides met. The latter is not referred to by the author and the opinions attributed to the philosopher are actually those of Avicenna.

Toledo witnessed the spread of the whole movement that saw in the word and the letters of the alphabet an esoteric science superior to philosophy and comprising everything. This philosophy relies on traditional texts, especially on *Sefer Yezirah (The book of Creation),* but also on other *aggadic* and *midrashic* additions proving letter combinations hallmarked by Judah ha-Cohen and Abraham Abulafia, among many others, reveals a *Neoplatonic* orientation – when it comes to the world perceptible via ration at least –, and mysticism also drew plenty of inspiration from it.

Joseph ben Judah ibn Aknin

Joseph ben Judah ibn Aknin[22] was by and large Maimonides' contemporary and they got acquainted with each other during his stay in Africa. Three of his works are at least partly philosophical: his Hebrew-language book titled *Sefer ha-Musar (Book of the Morality)* on morals, which is a commentary akin and close to *Pirkei Avot (The fathers' sayings)* and *Tibb-al-nufus (The Hygiene of Healthy Souls and the Therapy of Ailing Souls),* a psychological work of which only the chapter on parenting and education has been published so far. According to Aknin, studies of sciences, logics and mathematics should be postponed till the age of thirty to solidify in-depth traditional education and to avoid endangering the firmness of religion by philosophical doubts –, and finally *Jnkishtif al-asriir wa/uhur ai-anwar (The Divulgence of Mysteries and the Appearance of Lights),* which is a commentary on the *Song of Songs.*

The man in love in the *Song of Songs* is the last intellect: the *Active Intellect*, whose lover is the human soul, which is obliged by the *Active Intellect* to acquire what is conceivable by the intellect and leave behind everything belonging to the material. The structure of the commentary does not make it easy for us to reveal a sort of systematic thinking; otherwise, Aknin does not seem to have done more than accept contemporary Arabic *Aristotelianism.* He explains the individual verses according to three various exegeses that are layered on one another without inconsistencies:

1. The literal exegesis primarily offers grammatical explanations based on works of such authors as Saadiah, Judah ibn Balaam etc., and the Spanis *grammarians*.

2. The rabbinic one makes a selection of midhrasic texts and reveals the historical and eschatological meaning of the discourse between Israel's community and the Eternal One.

3. The allegorical interpretation is a scientific (logical, psychological and philosophical) explication for which the author takes full responsibility. He declares that he is the first to provide a philosophical explanation for the entire *Song of Songs,* and thus is also launching a long-established tradition, but as

---

[22] „Joseph ben Judah Ibn Aknin was more or less a contemporary ofMaimonides, whom he met during the latter's sojourn in North Africa. Born at Barcelona in about 1150, he lived in Fez, concealing his Judaism, until about 1220. His numerous treatises deal chiefly with the *Mishnah* and the Talmud. Three of these works are philosophical, at least in part. *(I) Sefer ha-Musar (Book of the Morality),* written in Hebrew, is a commentary on the *Pirkei Avot,* and is close to Maimonides' commentary." SIRAT, Colette: *A history of Jewish Philosophy in the Middle Ages.* Cambridge University Press, 1995. p. 207.

opposed to his followers, such as Moses ibn Tibbon, Caspi and Gersonides, he also mentions *The Guide of the Perplexed.* Nevertheless, according to him, and also in Maimonides' and his commentators' views, the *Song of Songs* and the *Active Intellect* actually describe the human soul aspiring to join and the love of the *Active Intellect* for the smart spirit.

One can ask whether this allegorical interpretation, which the author regards as the best one, may result in the believers' discarding the literal explication.

It is a kind of risk Maimonides was also afraid of, and he warns us against it in *Mishneh Torah*, declaring that „the one revealing the face of the *Torah*, and not interpreting the commandments word by word, is a heretic".

Abraham ben Moses Maimonides

Abraham ben Moses Maimonides[23] (1186–1237) had to defend his father against his eastern opponents attacking *the halakhic words*, just like against the *Provencals* who fought against philosophy. He certainly follows his father's opinions and firmly believes in divine incorporeality, and he based his defence of Maimonides in his *Milhamot Adonai (The Wars of the Lord)* on this theory. He was not a philosopher himself and had a tendency to accept a sort of religious mysticism approximating *asceticism* and *Sufism.*

Efodi (Isaac ben Moses Levi)

Efodi, a.k.a. Isaac ben Moses Levi lived in the late 14th and early 15th century. Originating from Catalonia, he stayed in Hispania during the persecutions in 1391. He did not write comprehensive philosophical works, his thoughts and teachings are found scattered all over his various writings[24]: His commentary to Maimonides' *The Guide of the Perplexed* rather literal; more often than not he was working on the rejection of interpretations which seem to depict Maimonides as

---

[23] „Abraham ben Moses Maimonides (I 186-1237) was forced to defend his father against his oriental opponents, who attacked the halakhic works, as well as against the Provencals, who opposed the philosophy. It is certain that on many points, he followed his father's views, and, especially, he firmly believed in the incorporeality of God, basing his defence of Maimonides on this fundamental thesis in his Milhamot Adonai (The Wars of the Lord). He himself was not a philosopher and quite clearly tended towards a religious and ascetic mysticism very like Sufism." Ibid. p. 209.

[24] „Efodi's work is encyclopedic, comprising medicine, grammar, philosophy, arithmetic, astronomy and astrology, and various controversies. His polemical works show his profound knowledge of Christian culture; in Kelimat ha-Goyim (Opprobrium of the Gentiles), most probably dedicated to Hasdai Crescas and composed in 1397, Efodi points out the errors in the translation of Jewish texts ill the New Testament and in the Church Fathers; he also made use of the arguments of internal Christian criticism." Ibid. p. 353.

a philosopher apparently despising the *Torah*, and he also quite expertly recognizes the dangers involved in certain statements phrased by Maimonides.

Although mysticism has not been proven, one must admit – says Efodi –, that the *Torah* and the prophets are far more in harmony with these teachings than with those of the philosophers, and if we can trust what is told about the mystics – that with miracles they could „change" (in the spiritual sense) the very nature of created entities –, that would confirm their truth-claims even more. However, they are far from reaching an agreement, which means that the risk of fallacy is greater than elsewhere.

Efodi's final conclusion is that one must return to the study of the *Torah*, because this is the only safe road to ultimate happiness. And if it is true that the *Torah* is entirely made up of god names, then the study of the Scripture is like prayers, as it spreads and shares the efficiency of the names of the Eternal One. The various books of the Holy Script more or less also have such powers in case they are studied in the Hebrew language.

His commentary on *The Guide of the Perplexed* is an integral part of the edition translated by Ibn Tibbon even today.

David ben Joseph Kimhi

Philosophically, David Kimhi[25] is more versatile and interesting than he may appear at first, as he requested Abraham ibn Hasdai to translate Isaac Israeli's *Book of the Elements.* Besides, his philosophy faithfully follows Maimonides and in many respects Ibn Ezra, even though he sometimes quotes the Jewish *Neoplatonists* and Aristotle. David Kimhi was not an original philosopher and his contribution to this science is meagre, but he played a key role in disputes on philosophical studies that prevailed throughout the 13th century.

Some Jews accused *The Guide of the Perplexed* of heresy, and Franciscan monks even burnt the copy of this book at their disposal in public. David Kimhi, who

---

[25] *„David ben Joseph Kimhi* (116o?-1235?) is the very type of the average Provencal philosopher. He was also a remarkable exegeje. David's father, Joseph Kimhi, was a celebrated grammarian, exegete, translator and polemicist, who emigrated to Narbonne from Spain during the Almohad persecutions. His son wrote, apart from works on grammar, a biblical commentary (on Genesis, the Prophetic Books, Psalms, Chronicles), the renown of which almost equals that of the commentaries of Rashi and Abraham Ibn Ezra. Very clear and readable, his exegesis tends to give a philosophical explanation of the text, without however neglecting homiletic explanations, which are quite distinct from the literal sense. Only two of his commentaries are philosophical, a commentary on the Story of Creation (Genesis) and another on the Story of the Chariot (the first chapter of Ezekiel), and both are more or less an amplification of passages of the *Guide of the Perplexed."* Ibid. p. 222.

was down with an illnes at the time in Avila, was desperate and accused Slomo ben Abrahamo of reporting *the Guide,* but it is highly unlikely that he was the one. This is the beginning of a sad story: that of the inquisition and a themass destruction of Hebrew books.

We should also mention here a minor non-fiction work titled *Ruah ha-Hen* (*Spirit of grace*). Many have attributed it to Samuel ibn Tibbon or Jacob Anatoli. However, their authorship is unlikely, and the unknown author must have belonged to the philosophers of Provence or Italy. This work probably dates from ca. 1240. It was widely read and copied, as a total of 80 copies exist, all in manuscripts, with the latest one dating from 1824.

In the introduction, the author says as follows: „…a few useful words to understand *The Guide of the Perplexed*. I had a lot of difficulties with them, and found some of them as uttered by writers, the others in written books." This reveals that the author used statements from speech as well as written texts.

Not all of the written sources have been identified. The author drew inspiration from Maimonides, Averroes, Avicenna and most certainly also from Neoplatonic texts.

This little book is significant for the history of ideas because it reflects the level of ordinary people: there is no doubt this was the minimum of scientific knowledge that everyone had to acquire in order to „be on a level" and avoid being despised as clueless, and able to read *The Guide of the Perplexed*. Even today, this is one of the best introductions to medieval Jewish philosophy. We should not forget about a unique circumstance, namely the fact that Kimhi – influenced by Maimonides – also wrote two esoteric works to the Book of Ezekiel.[26]

The intellectual horizon of contemporaries and successors Abraham ben Samuel Abulafia

One of the earliest medieval mysticists, who passionately devoted his life to philosophical studies and *the Guide* by Maimonides.[27]

---

[26] „Kimhi used Maimoni's *Guide* as an example. It was preceded by his writing of two esoteric studies to Esekiel's first chapter." *Encyclopaedia Judaica* CD-ROM, KIMHI, DAVID [Frank Talmage] – We should not view it as a coincidence as the two books actually closely correlate even according to Maimoni himself as well!

[27] http://www.jewishencyclopedia.com ABULAFIA

For Abraham ben Samuel Abulafia[28] (1240–1291) *The Guide of the Perplexed* and *Sefer Yezirah (The book of Creation)* were texts of primary importance. Judah ha-Cohen and Judah ben Nissim interpreted the world and the Eternal One according to the Neoplatonic scheme, in which *Intellect* is the first emanation. Abraham Abulafia argued that *Active Intellect* is the last separated *Intellect* both, according to *Aristotelians* and Maimonides, but categorically stated that the „letter-science" should not be used for any other purpose than contemplation and reaching prophecy.

His works are numerous, and include more than 30 titles; the majority of which remained in manuscript, and they show a degree of development reflecting the author's gradual progress in philosophy, prophetism and then messianism.

He always respected and appreciated Maimonides and often referred to his writings, although he was dissatisfied with philosophy and other fields of knowledge in general. At the age of thirty-one, he started studying *Sefer Yezirah (The book of Creation)* as well as its commentaries. Explanations and interpretations by Eleazar of Worms largely influenced him, which in turn intensified his mystic tendencies. He also researched several symbols, such as the numeric values of letters and the symbols of vowel signs, as well as the practice of combinations and permutations and the meanings of the tetragrammaton. He was the first to discover a link between the Christian „trinity" and the *kabbalah*, which others could see as a faint light of hope. Later on in *Sicily* appeared as a prophet and „*Messiah*"…[29]

Isaac ben Abraham ibn Latif

Latif was a great admirer of the *Aristotelian* Maimonides, and yet was occupied with the criticism of his Aristotelian philosophy whilst being deeply iinfluenced

---

[28] „Quite different was the fate of the work of Abraham Abulafia, Judah ben Nissim's contemporary. For Abraham ben Samuel Abulafia, the two basic texts were the Guide of the Perplexed and the Sefer Yecirah. Judah ha-Cohen and Judah ben Nissim conceived the world and God according to the Neoplatonic schema, where the Intellect is the first emanation. For Abraham Abulafia, the Active Intellect is the last of the separate Intelligences, as in the Aristotelians and Maimonides. Judah ha-Cohen's principal research was directed towards the appreciation of the various sciences and their claim, real or imaginary, to understand the world and God. Judah ben Nissim, whose ontological schema agrees more or less with that of Judah ha-Cohen, was more particularly interested in the utilisation, theoretical and practical, of the science of the letters. Abraham Abulafia declared categorically that this 'science of the letters' should not be used for ends other than accession to contemplation and prophecy." SIRAT, Colette: A History of Jewish Philosophy in the Middle Ages. Cambridge University Press, 1995. p. 262.
[29] http://www.jewishencyclopedia.com ABULAFIA

by Maimonides' philosophy. His methods and style, as well as his language and view on providence were especially influential on his mindset.[30]

Isaac ibn Latif[31] wrote in Hebrew, but had an admirably in-depth knowledge of Arabian philosophy. Although he does not rely on translations by others, he was familiar with two Hebrew-language translations of *The Guide of the Perplexed*. He quotes his sources, which were partly Greek and/or Arabic translations, but also used many sources of Neoplatonicc Jewish philosophers, especially Slomo ibn Gabirol, whom he does not refer to by name, but quotes as a poet only. The reason for this may be because he believed his teachings were one of the „secrets" that should not be revealed to the public.

Ibn Latif, who regarded himself as Maimonides' follower, reveals secrets of a Neoplatonic world perceivable only with intellect amongst the proliferation of symbols.

Latif worked out a unique system: that of mystic philosophy, which was actually a new school of thinking. He merged mysticism with the Neoplatonic philosophy, and he even united this with Ibn Gabirol's views, but also integrated the esoteric doctrine of *sephira* in his system.

Ibn Latif's works were greatly appreciated by later masters cited them frequently: such as Josep Albo, Samuel Motot, Cemah Duran, Moses Botarel, Isaac Arama and Isaac Abrabanel. In the modern times we can trace Latif's influence in writings by Nachman Krochmal.[32]

Jacob ben Abba Mari Anatoli and His Pupil

Anatoli was a famous doctor, preacher and translator in the 13th century. In his philosophical *exegesis* he frequently used allegorical interpretations. He faithfully followed Maimonides' teachings and worked in this spirit. The collection of his teachings was published titled *Malmad ha-talmidim (Incentive to the pupils)*. (Lyck,

---

[30] Encyclopaedia Judaica CD-ROM, LATIF, ISAAC BEN ABRAHAM IBN [Sara O Heller-Wilensky]

[31] „Isaac ben Abraham Ibn Latif seems to have lived at Toledo, between 1210 and 1280. In 1238 he finished the first and most important of his works; a shorter version, not bearing his name, composed ca. 1230, has been attributed to various authors, including Solomon Ibn Gabirol. This work, Sha'ar ha-Shamayim (The Gate of Heaven) is soon to be published; the introduction has already appeared. Several other works by Ibn Latif exist in print. These are a commentary on Ecclesiastes; Ginzei ha-Melekh (The treasures of the King); Zurat ha-'Olam (The Form of the World); Zeror ha-Mor (Bouquet of Myrrh), dedicated to the celebrated Talmudist Todros ha-Levi Abulafia; Rav Pe'alim, a collection of aphorisms; and philosophical response. A commentary on Job and another on the Sefer Yecirah seem to have been lost." SIRAT, Colette: A History of Jewish Philosophy in the Middle Ages. Cambridge University Press, 1995. pp. 255-256.

[32] Encyclopaedia Judaica CD-ROM, LATIF, ISAAC BEN ABRAHAM IBN [Sara O Heller-Wilensky]

1866.) His activities largely promoted the philosophical development of contemporary Jewry in Italy.[33]

During his stay in Naples, Jacob Anatoli[34] introduced Maimonides' tradition in the 13th century. His pupil, Moses ben Solomon of Salerno (who died in 1279) wrote a Commentary to accompany *The Guide of the Perplexed*, which has remained in manuscript format ever since. His commentary on the first two parts of *the Guide* is an interesting example of the cooperation between Jewish and Christian philosophers. Moses ben Solomon of Salerno does not only permanently refer to the Latin translation of *the Guide* but also provides the vulgar Latin equivalents of many Hebrew concepts. As their contexts are different, these terms do not always make perfect matches.

We have hardly known anything about contemporary Italian philosophers recently. Research, however, which is carried out by G. Sermoneta and his pupils nowadays in Jerusalem, has already yielded great results and we can now outline the typical characteristics of Italian Jewish thinking.

It was Samuel ibn Tibbon's son-in-law, Jacob Anatoli and Zerahiah ben Gracian who took Maimonides' exegesis to Italy, which was also enriched then by the influence of Juda ha-Kohen. Italian philosophy differs from the other trends because it accentuates the significance of Latin *scholastic* texts often quoted and referred to in Hebrew translation, whilst *scholastics* had a less spectacular influence on the Provencal movement. Some scientists attribute the essay titled *Ruah Hen (Human Intellect)* to Anatoli, which serves as an introduction to *the Guide* by Maimonides.[35]

---

[33] Encyclopaedia Judaica CD-ROM, ANATOLI, JACOB BEN ABBA MARI BEN SAMSON [Umberto Cassuto]

[34] „Anatoli, Samuel Ibn Tibbon's son-in-law and pupil, continued his work of translation and exegesis of the traditional texts. Under his father-in-Iaw's direction, Anatoli studied mathematics and began to make scientific translations from Arabic into Hebrew of works on logic and astronomy. In 123 [he became a physician at the court of Emperor Frederick II. of Hohenstaufen at Naples. There he met the famous Christian scholar Michael ScoU, who was translating Arabic works into Latin, and it is possible that Anatoli collaborated in these translations. His only original work is the Malmad ha-talmidim (Incentive to the pupils), a series of philosophical sermons arranged according to the pericope for each week of the year! However, almost everyone of these sermons begins with a verse from Proverbs, and the sermon is rather a commentary on this verse than the exegesis of the pericope. In this sense, Anatoli continued the exegetic study of the Solomonic literature that Samuel Ibn Tibbon had begun and Moses Ibn Tibbon had concluded with a commentary on the Song of Songs." SIRAT, Colette: A history of Jewish Philosophy in the Middle Ages. Cambridge University Press, 1995. p. 226.

[35] *Encyclopaedia Judaica* CD-ROM, ANATOLI, JACOB BEN ABBA MARI BEN SAMSON [Umberto Cassuto]

Shem Tov ben Joseph Falaquera's significance for religion philosophy

Once again, about Shem Tov ben Joseph Falaquera's significance for religion philosophy, we can conclude that the intellectual chaos today as well as the lack of encyclopaedic knowledge which was characteristic of Maimonides' age[36] make it difficult for us to understand works written by polyhistor scientists. It is partly due to the fact that Shem Tov ben Joseph's work is not researched as extensively as it should be today. Exceptions are those who have comprehensive knowledge and also the capacity to go on their own intellectual way. Such an exception was Solomon Munk, who compiled the critical edition and standardizing French translation of the original Judeo-Arabic version of *the Guide* in the mid-19th century and in his explanatory notes provided guiding principles relevant even today including references to Shem Tov ben Joseph's commentary, based on which he even emendated the text on several occasions. In his wake, the excellent Hungarian translator of *the Guide*, Klein Mór also made a meticulous comparison of the original text with Ibn Tibbon's Hebrew translation and some corrections of the text by Shem Tov.[37]

Although Falaquera's most important work, the *Moreh ha-Moreh (Guide to the Guide)* had and could never have been integrated as the focus of Jewish thinking, it can provide guidelines for those who have in-depth knowledge of t*he Guide*[38] even today as a commentary of significance. [39] As a philosopher he paid special attention to the appropriacy of terminology, and carefully selected the

---

[36] BABITS, Antal: Határolt – határtalanság, Maimonidész istenkeresései. [Maimonides: Limited – Unlimitedness, Maimonides' God Searches], Budapest, 2015. Logos Kiadó, [Logos publisher] pp. 157-172.

[37] „Schem Tob used the burnt bird expression to mean fake ideas that perishes when truth is searched for. (Comm. for More end of 5,8)." MAIMONIDES: A tévelygők útmutatója. [Guide of the Perplexed], Budapest, (1st complete edition, ed. BABITS, Antal, transl. KLEIN, Mór), Logos Kiadó, 1997. p. 72.

38 BABITS, Antal: Maimonidész vallásbölcseleti módszere. [Maimonides' methodology of religion philosophy"], In: Babits Antal: Végtelen ösvények, zsidó bölcselet vagy/és misztika. [Endless paths, Jewish philosophy and/or mysticism], Budapest, (ed.. UHRMAN, Iván), Gabbiano Print, 2011. pp. 57-89.

[39] „Maimon in the Guide clearly explained on several occasions that teaching it should be limited to references. Knowing this, his „silence" concerning Ibn Tibbon can thus be interpreted as an „approval". It is also proven by the fact that this translation is studied in the religious Jewish communities, along with the commentaries that have evolved into a sort of classic by now. It is not by chance that the majority of interpreters of the generations after Maimoni's death who had direct contact with the spirituality represented by Maimoni also relied on this translation," For more details: Babits Antal: Hermeneutikai csapdák a Maimoni-recepcióban, „epigonok", „epikajres-zek" és episztemológusok vélekedései az Útmutatóról. [Traps of Hermeneutics in Maimoni's reception, opinions of „epigones", „epicaires" and epistemologists on the Guide], In: A The heart has two parts. A collection of essays in honour of Prof. Dr. József Schweitzer on his 90th. birthday. (ed. Koltai Kornélia), Budapest, 2012. MTA Judaisztikai Kutatócsoport – L'Harmattan Kiadó, pp. 265–282.

philosophical phrases he used. [40] Falaquera presented philosophy and science in a creative way. He was one of the first Hebrew authors to write philosophical dialogues, a scientific-philosophical encyclopaedia as well as a commentary to *the Guide*.[41]

In his commentary, he appears as a critical thinker, speaking in his own name and only accepting views and opinions even from the greatest philosophers that he regarded as firm ones also from a philosophical aspect. He was more familiar with Arabic philosophical works than any scientists from among his contemporaries and he translated many of them into Hebrew. Although originality was not his ambition, he proved to be highly creative in philosophy and science and was one of the earliest authors publishing in Hebrew in the genre of dialogue. It was typical of his writings that he wanted the sources he quoted to speak for themselves.

Ibn Falaquera opens the Moreh ha-Moreh (*Guide to the Guide)* with a brief poem in praise of the *Guide* and Maimonides. The text is multi-layered, replete with biblical borrowings and linguistic puns that would be difficult if not impossible to reproduce in translation. He may also have practised medicine. For the physicians of his day, he does not appear to have great esteem.

Here is a typical example from Falaquera's poems:

Quoth Fate unto the Fool
A doctor be; Who, killing folks off, netteth income large;
So hast thou yantage o'er Death's Angel;
He Must take the lives of people free of charge!

---

[40] Stanford Encyclopedia of Philosophy, https://plato.stanford.edu/entries/falaquera/#FalEnc

[41] „Falaquera did not seek originality, yet was quite creative in his presentation of philosophy and science. He was, for example, one of the first Hebrew authors to write a philosophic dialogue, an encyclopedia of science and philosophy, a commentary on the Guide of the Perplexed, and poetic philosophic tales. His method of seamlessly blending various philosophic texts together to form a coherent whole is perhaps unique to him. But the fact is that his most important works are comprised of Hebrew versions of the writings of others. We have seen that his personal views on theological-philosophical matters may be discerned from his Moreh ha-Moreh, particularly when he speaks in his own name. Yet even in his earlier works, he often asserted his personal views, but he usually let his sources do the talking. When proper care is taken in the study of these works not to jump to conclusions regarding his views on the basis of his translations, it is possible to uncover his own theology. The role played by his occasional critical comments in his commentary is played by the selection, blending, and abridgement of sources in the earlier works." In: Stanford Encyclopedia of Philosophy, Summer 2009 Edition, Falaquera as a philosopher http://plato.stanford.edu/archives/sum2009/entries/falaquera/

He was also a writer of occasional poems, and probably in the fashion of the time, received gifts from wealthy patrons. This occupation, however, he early abjured as little suited to his taste and temperament. Eking out thus an uncertain livelihood, he did not complain of his lot, forgetting hardship in his devotion to learning.

We should be in error if we inferred from Falaquera's indifference to wealth and power and his absorption in study and contemplation that he was one of the dreary ascetics, so numerous at that time in the church, with whom mortification of the flesh was a merit. From such fantastic doctrines ,he was saved by the teachings of Judaism, to which asceticism has been repugnant, and by the Aristotelian ethics, which warned its disciples to avoid all extremes.[42]

At his mature age, Falaquera declared that pursuing poetry is a dangerous profession as it is not engaged in truth but in beauty and rhetoric instead!

References

Babits, A. (2011). Maimonidész vallásbölcseleti módszere. [Maimonides' methodology of religion philosophy"], In Uhrman, I. (ed.). *Végtelen ösvények, zsidó bölcselet vagy/és misztika.* [Endless paths, Jewish philosophy and/or mysticism]. Gabbiano Print, Budapest.

Babits, A. (2015). *Határolt – határtalanság, Maimonidész istenkeresései.* Maimonides: Limited – Unlimitedness, Maimonides' God Searches. Logos Kiadó, Budapest.

Babits, A.(2012). Hermeneutikai csapdák a Maimoni-recepcióban, „epigonok", „epikajres-zek" és episztemológusok vélekedései az Útmutatóról. [Traps of Hermeneutics in Maimoni's reception, opinions of „epigones", „epicaires" and epistemologists on the Guide], In Koltai, K. *A The heart has two parts.* A collection of essays in honour of *Prof. Dr. József Schweitzer on his 90th. birthday.* MTA Judaisztikai Kutatócsoport – L'Harmattan Kiadó, Budapeset.

Davidson, H. (2005). *The Man and His Works*. Oxford University Press, Oxford.

Encyclopaedia Judaica (1977). CD-ROM, Falaquera [Moshe Nahum Zobel] Judaica Multimedia.

Encyclopaedia Judaica (1997). CD-ROM, Kimhi, David [Frank Talmage] Judaica Multimedia.

Jospe, R. (1988). *Torah and Sophia, The Life and Thought of Shem Tov Ibn Falaquera.* Hebrew Union College Press Cincinnati.

Maimonidész: *A tévelygők útmutatója*. [Maimonides: Guide for the Perplexed]. Logos Kiadó, Budapest. (1st complete edition, ed. Babits, A., transl. Klein, M.),

---

[42] MALTER, Henry: *Shem Tob ben Joseph Palquera, A Thinker and Poet of the Thirteenth Century*. In: THE JEWISH QUARTEREY, 1910. pp. 159-160.

Explanation of unusual words in the Master's work. (translated: Schmelowszky, Á., & Visi, T.)

Malter, H (1910). *Shem Tob ben Joseph Palquera, A Thinker and Poet of the Thirteenth Century*. In: THE JEWISH QUARTEREY.

Roberts-Zauderer, D. L. (2019). *Metaphor and Imagination in Medieval Jewish Thought Moses Ibn Ezra, Judah Halevi, Moses Maimonides, and Shem Tov Ibn Falaquera.* Palgraven Mecmillen, Springer Nature Switzerland AG 2019.

Saperstein, M.(1977). The social and cultural context: thirteenth to fifteenth centuries. In H. Frank, D., & Leaman, O. (eds.) *History of Jewish Philosophy.* Routledge, London and New York.

Sirat, C. (1995). *A history of Jewish Philosophy in the Middle Ages.* Cambridge University Press, Cambridge.

Újvári, P. (1929, ed.) Magyar zsidó lexikon. [Hungarian Jewish Lexicon], Budapest.

Venetianer, L. (1890). *A Fokozatok Könyve*, [The Book of Degrees] on the sources of Shem-Ṭob ibn Falaquera, Szegedin.

Venetianer, L. (1890). *Semtób Ibn Falakéra, adalékok az arab-zsidó philosophia történetéhez a 13. században.* [Semtób Ibn Falakéra, further data on the history of Arabic-Jewish philosophy in the 13th century] Magyar Zsidó Szemle [Hungarian Jewish Review], Budapest.

Epistemological foundations of economics: the philosophical problem of ranking

Balázs Szabó[1]; Zsolt Nemeskéri[2]

[1] Doctoral School of Philosophy, University of Pécs Faculty of Cultural Science, Education and Rural Development , Pécs, Hungary; E-mail szabobali@gmail.com

[2] University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, e-mail: nemeskeri.zsolt@pte.hu

Abstract

In our article, we examine the philosophical challenges of ranking that are economically significant from multiple angles. With our findings, we want to demonstrate that ranking in the actual world is a far more sophisticated, partially context-dependent behaviour enacted via specialised decision-making systems. In some ranking scenarios, the exact preference relation may vary depending on whatever basic set of phenomena we are discussing. On this basis, we can limit the scope of economic modelling to exclude, for instance, aesthetic value judgments. In the study, we would like to demonstrate the importance of the philosophical substantiation of economic phenomena.

Keywords: economic philosophy, ranking, modelling

Introduction

Nowadays, the economy – as the dominant subsystem of society – participates in the significant transforming of the whole society, hence we may say that this subsystem seeks to reshape and orient the entire system. From a philosophical point of view, the question arises: what is the role of the economy from the metaphysical, ontologicall, aspect of existence, including the human person with self-reflective capabilities? From this perspective, what does value creation mean, and how does it relate to the real good? How does this value relate to society, its structure, and the structure of existence? In the economic philosophy program of the Doctoral School of Philosophy of the University of Pécs, we conduct research related to the above issues.

In our planned series of studies, we would like to flash certain slices of the topic for interested readers. We hope that the raised topic provokes wider interest and generates a productive professional dialogue.

In our first, introductory study, we examine the philosophical issues of ranking. The importance of this field is indicated by the fact that, hitting almost any introductory book on economics, sooner or later we will come across the concepts of preference ordering, and utility, in a short ranking. Nonetheless, the conditions for this possibility are not decisively addressed by economically oriented works, since strictly speaking, this is not covered by economics studies – at least at the introductory level. However, for the explanatory power of theoretical models to increase, the former question cannot be avoided. It is necessary to explore the basic epistemic fringe conditions that are necessary for ranking.

We note that, from a psychological point of view, several works have been produced that seek to capture the basic motifs and characteristics of the bearing of economic actors (see, for example, Simon, 1955, 1991; Tversky & Kahneman, 1973, 1974). And this means that the need has arisen to revise the anthropological concept of economics. However, this has not led to a complete paradigm shift, since in many sub-areas, the traditional image of man and the few epistemic boundary conditions formulated in connection with it still prevail. Although attempts are made to weave the phenomenon of learning or limited rationality into theoretical economic models, all this runs into certain reasonable limits due to the strongly formalised construction of the models (beyond a point, the model becomes overly complicated, the possible computational need associated with it will increase).

Within the management science that studies the business sphere and the life of organisations, the importance of narratives has been discussed for years now (see Ibarra & Barbulescu, 2010). Consequently, the significance of philosophical, or more precisely, interdisciplinary grounding, is not a novelty these days. However, all this has not necessarily been realised either by the academic side or by corporate executives.

We would like to narrow this hiatus somewhat with the help of this study. As mentioned earlier, we do this by epistemological examination of the phenomenon of ranking. Our work is by no means exhaustive, but we hope to contribute to the development of a productive discourse that can have an impact on the disciplines involved.

Our study is divided into three units in terms of content. We deal with the interrelatedness of

1. ranking and context;
2. prioritization and decision;
3. ranking and truth.

In the first-mentioned unit of content, we examine the contextual definition of ranking or evaluation, in the second the relationship of ranking to the decision, and in the third, the truthfulness of statements related to ranking.

Ranking and context

In order to talk about ranking at all in any scenario (possible world), it is necessary to assume phenomenon-level heterogeneity, as well as succession for the formation of ranking. Without the latter, the system of alternatives is unintelligible and cannot even be established. If these are given, the next step is to assume that the set of objects for which I want to rank can be sorted according to some set of criteria. Érdi (2020) formulates this as the need for something that ensures comparability. This set of criteria allows two different objects to have something in common that can form the basis of the ordering (e.g., in the case of a gymnastics row, such an aspect is the height).

At this point, we would like to emphasise that in order to be able to order the elements of the set of objects in question, it is not necessary to quantify them, in other words, to assign some kind of numerical value to them (colloquially speaking, translate them into the "language" of numbers). However, because of order, it is certainly possible to assign values to them (for example, nonnegative natural numbers, see Likert scale) in a way that, with the "usual" ordering relation, exactly the same sort "pattern" will appear as the result of prioritisation on the elements of the set of objects. Of course, this does not necessarily mean that any "acceptable" interpretations can be associated with the assigned values, but rather that they have a kind of technical function in terms of sequencing.

Note that we can imagine cases where the relationship between these values makes a lot of sense (which is why, for example, weight ratios in decision theory are very important respectively). So instead of talking about entities that can be quantified or have only qualitative characteristics, we follow the former division and talk about quantifying an object that can be interpreted locally or remain unintelligible. Local interpretability refers to the fact that a number of boundary conditions can shape the content of the interpretation, which is, therefore not

independent of the situation or context that designates the relevant boundary conditions, so it may not be possible to speak of temporal permanence.

The mentioned quantification can also be called evaluation, so it is worth thinking about ranking as the ordering of evaluated or value-carrying sorting objects. Here the question immediately arises: what is the relationship between evaluation and ranking? Are they simultaneous phenomena, or does one necessarily precede the other? Based on what we've seen so far, it seems that ranking is an epistemological problem, although later it turns out that metaphysical dimensions can also be opened.

The question arises, how is the value generated, that is, how is the valuation carried out, can all objects be valued at all, and if so, how unambiguous is this? What about incommensurable objects (see Érdi, 2020: 17)? In this context, it is important to see that value formation is essentially a social construct. At this point, we note that we do not intend to take any dualistic approach, and we would also like to avoid the contraverse approaches of both supervenience and ontological individualism. In connection with the above, we would like to draw attention to the factors of ethologist Vilmos Csányi that shed light on the formation and dynamics of communities, which are as follows (Csányi, 2007/2006):

1. joint actions,
2. common constructions,
3. common beliefs,
4. and loyalty as a result of the former.

Taking into account the above factors, we mean by social construction a combination of community construction and beliefs. Consequently, we are not assuming an otological individualistic position since, for example, the construct includes the object created, not only the social meaning attributed to it (i.e., but it is also not a phenomenon constituted exclusively by individuals). The problem, however, is that communal constructs and beliefs are not well defined, i.e. their boundaries are blurred, and certainly their semantic field is not disjointed. Beliefs can also be seen as a kind of construct, and the former are also elements of the identity-forming narrative that is the result of the constructional activity of the community at all times. Henceforth, constructs, beliefs, and loyalty make a fundamental contribution to the phenomenal character that is an integral part of the evaluation.

Continuing our train of thought, for example, at an auction, the (monetary) value of a given work of art is created through bidding, which has nothing to do with the inherent (aesthetic) value attributed to the work. In this example, monetary value is the end result of a process (unintelligible quantification), while aesthetic value is the result of subjective "interaction" with a work of art. Thus, a number of cases can be thought of where the ranking established by aesthetic interpretation is radically different from the ranking resulting from monetary valuation, which is merely the result of numerical ordering. Consequently, it can be stated that the unanimity of the assessment is far from being ensured.

In line with the above, a further explanation is that value formation in one case or another is context-dependent, which may have different strengths. There may be situations where you can't appreciate a thing. In this case, there is usually a lack of any relevant information "background base", and presumably, no social reference is given. Another aspect of the assessment may be functionality. I address value to an entity in so far as it is functionally useful to me in a given situation. Finally, it also seems plausible that the values of objects are in constant dynamic interaction with each other, which obviously affects the ranking itself.

From the above train of thought, the conclusion arises that value formation is really nothing more than the assignment of a dynamically changing "orientation point" to elements of a particular set of objects. And since it is an "orientation point", it is necessarily related to the other elements of the set. In addition, the value of a thing is added to the meaning of what it influences, nuances. Consider that in colloquial speech, it is more than once the case that a question about the meaning of a particular object is answered with an assessment: "What is this interestingly shaped thing in your room?"; "Just a worthless junk." In the latter case, for the respondent, in the given situation, the meaning of the object being asked is almost exhausted by the value judgment that appears in the answer.

In the context of evaluation, the question of whether it is necessary to assume some kind of absolute, "platonic type" of (meta-) value – as a reference, an unchanging standard – in order for ranking to be carried out cannot be ignored? Another question is whether value actually corresponds to "something" that embodies the "value" concerning the value bearer, or is it a purely social and subjective construct? In other words, is the value bearer merely a semantic phenomenon that provides a particular interpretation of an object?

To try to answer the first question, it is necessary to clarify the concept of metavalue. If by metavalue I simply mean a point of reference formed by experience as a result of my dynamic existence in the world, then the answer is

affirmative. However, we take a rather skeptical position if we approach the reality denoted by the concept in question as an objectified ideal being (edios), permanently present. For our part, we consider the reference back to the previously mentioned invaluable objects to be a plausible argument, since if there were any metavalue that would allow the evaluation of an arbitrary object regardless of my own epistemic situation, then they could not be invaluable as well as incommensurable objects.

In connection with what we have seen so far, we will write down two analytic lines of thought that condense some pivotal findings into them:

(P1) Local ranking requires an assessment in a specific context.

(P2) For evaluation, it is necessary to have heterogeneity at the level of phenomena in a given context.

(K) If no epistemic difference between objects can be established in a given context, then evaluation cannot be performed in that context, i.e. no local ranking is possible.

(P1)' The individual $i(w)$ performs the evaluation $e(w, f_i(w))$ dependent on the condition $f_i(w)$ in a given context $c_i(w)$ in a possible world w.

(P2)' The individual $i(w)$ performs the evaluation $e(w, f_i(w))$ in a given context $C_i(w)$ in a possible world w if $C_i(w)$ context is not substantially different from $c_i(w)$ in an epistemic sense.

(K)' If an individual $i(w)$ cannot perform the assessment in $C_i(w)$, then $C_i(w)$ and $c_i(w)$ are epistemically significantly different (epistemically incomparable).

In this line of thought, if we consider $f_i(w)$ as part of each context, then $e(w, f_i(w))$ can be written $e(w, C_i(w))$. And (P2)' can be paraphrased:

(P2)'' The individual $i(w)$ performs the evaluation of $e(w, C_i(w))$ in a given context $C_i(w)$ in a possible world w if $C_i(w)$ context is not substantially different from $ci(w)$ in an epistemic sense.

Please note that it does not seem to be possible to reverse the direction of implication within (P2)' or (P2)''. This is because a situation cannot be ruled out in which, despite the epistemic incompatibility between the different contexts, the assessment is feasible in both cases.

Ranking and decision

When it comes to ranking, of course, we are always faced with a decision situation. Approaching the phenomenon in a naïve and superficial way, we discover circularity in the fact that the establishment of a ranking is preceded by a decision, but at the same time ranking is necessary for a decision to be made. However, if we look at this more closely, we need to realise that our perceived individual narrative, which plays a role in how we understand it, how much it matters, what content we fill our concepts with, what kind of normative character they acquire, or even what emotional implications they have, are embedded in a broader narrative. Without the latter, the former is meaningless and even impossible. We encounter the broader (frame) narrative in question in the course of our socialisation, and this in turn, fundamentally determines the individual mental model that underlies our decisions. We mobilise this model at every moment, often without actually knowing it. In view of this, the following statement, quoting Nietzsche, is of substantial importance:

"Thus he [Nietzsche] maintains that there can be no 'absolute knowledge', and that there are no 'facts'; and that, rather than either, there are only 'interpretations' – or (even more pugnaciously) only 'beliefs.'" (Schacht, 1984: 79)

In order to make the description above, which seems a bit alien to life, more picturesque, we will engage in a short thought experiment. If we imagine, for example, that Katie heard from her parents the importance of conscious nutrition from childhood, and then this was further reinforced by her environment in her later life stages (i.e. the secondary, tertiary steps of her socialisation) (say, through a number of positive emotional feedbacks), then healthy eating will be central to the narrative that is the point of reference for Katie and directs her thoughts and actions. Then, if Katie has to decide whether to buy, say, vegetables, fruits, or high-carb foods containing a number of artificial compounds when shopping, her narrative is that she chooses the former, preferring them. Moreover, her mental model – aside from the possible circumstances – even plays a role in her decision to choose a multinational grocery store or the corner vegetable shop.

Ranking and truth

The preference ordering that appears during ranking can manifest itself in statements such as: "I prefer B over A", "I like D better than C" or simply "E is better than F". The former, in a formalised way, appears like this: A ≺ B, C ≺ D, as well as E ≺ F. It is clear that in each statement the relation "≺" corresponds to a different sequence of signs. In the first case, it is in the place of "I prefer", in the

second it is in the place of "I like it better than", while in the third it is in the place of "better than". Consequently, the preference relation depends on what objects you bring into a relationship. For example, it makes sense to say that "Toyota is better value for money than Renault", but that "blue is better value for money than yellow" no longer makes any sense.

After so many introductions, let's raise the question of whether every statement linked to a preference ordering (more precisely, the proposition "behind" the statement) can be a truth bearer? Obviously, it can't be. Whereas, while on the basis of certain community-accepted criteria, the statement "Toyota is better value for money than Renault" can be determined to correlate with reality, the truthfulness of the statement "Rodin's thinker is more beautiful than Leonardo's Mona Lisa" is by no means so clear – at least if we think in terms of collective standards. For the former, there are procedures and protocols in the communal narrative by which this statement can be called "true" or "false," but with regard to the latter, "beauty" is not a quality that is inherent in the works of art in question – at least not in an objectified sense – so we cannot point to any method that would allow for a clear resolution.

In view of what has been said so far, the following quote from Quine should be considered:

"It is obvious that truth in general depends on both language and extralinguistic fact. [...] Hence the temptation to suppose in general that the truth of a statement is somehow analysable into a linguistic component and a factual component. [...]

The totality of our so-called knowledge or beliefs [...] is a man-made fabric which impinges on experience only along the edges. [...] A conflict with experience at the periphery occasions readjustments in the interior of the field. Truth values have to be redistributed over some of our statements." (Quine, 1951: 34, 39)

Summary

In our study, we analysed the economically relevant philosophical problems of ranking from several perspectives. In each of the areas presented here, questions arise that provide grounds for further investigation, which are partly interpreted as a given and partly not raised by economic theories; ab ovo they imply as a given, a self-evident, natural phenomenon.

With our analyses, we wanted to point out that ranking in real life is a much more complex, partly context-dependent act that is expressed through specific decision-making mechanisms. In some ranking situations, the specific preference relation

may differ depending on which basic set of phenomena we are talking about, and with regard to certain types of rankings, there are not necessarily socially prescribed standards that make a statement unquestionably a truthbearer in a collective sense. The latter statement identifies the range of phenomena that may be considered in a way that makes any sense at all from the point of view of economic modelling that is relevant in practical terms. Based on this, we can delimit the scope of economic modelling, excluding value judgments in the field of aesthetics, for example.

We hope that in the study, we managed to demonstrate the importance of the philosophical substantiation of economic phenomena. As indicated at the beginning of the article, our discussion is far from complete. We are confident that our thoughts, formulated with the need for interdisciplinarity, can be a kind of far-fetched point in both domestic economic and philosophical thought and can bring about further discursiveness in this topic.

References

Boros, J. (2018). *Immanuel Kant.* MTA Bölcsészettudományi Kutatóközpont Filozófiai Intézet, Budapest.

Brandt, R. (1998). Transzendentale Ästhetik §§ 1–3 (A19/B33–A30/B45). In. Mohr, G., & Willaschek, M. (eds.), *Immanuel Kant: Kritik der reinen Vernunft, Klassiker Auslegen*, Bd. 17/18. Akademie Verlag, Berlin. 81–106.

Csányi, V. (2007/2006). *Az emberi viselkedés.* 2. kiad. Sanoma Budapest, Budapest.

Epstein, B. (2015). *The Ant Trap: Rebuilding the Foundations of the Social Sciences*. Oxford University Press, New York, NY.

Érdi, P. (2020). *Ranking: The Unwritten Rules of the Social Game We All Play.* Oxford University Press.

Ibarra, H., & Barbulescu, R. (2010). Identity as Narrative: Prevalence, Effectiveness, and Consequences of Narrative Identity Work in Macro Work Role Transitions. *Academy of management review, 35*(1), 135–154.

Kuhn, T. S. (2000). *A tudományos forradalmak szerkezete.* Translated by Bíró, D.. Osiris Kiadó, Budapest.

Quine, W. V. O. (1951). Main Trends in Recent Philosophy: Two Dogmas of Empiricism. *The Philosophical Review, 60*(1), 20–43.

Schacht, R. (1984). Nietzsche on Philosophy, Interpretation and Truth. *Noûs, 18*(1), 75–85.

Simon, H. A. (1955). A Behavioral Model of Rational Choice. *The Quarterly Journal of Economics*, 69(1), 99–118.

Simon, H. A. (1991). Bounded Rationality and Organizational Learning. *Organization Science, 2*(1), 125–134.

Tversky, A., & Kahneman, D. (1973). Availability: A Heuristic for Judging Frequency and Probability. *Cognitive Psychology, 5(*2), 207–232.

Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science, 185*(4157), 1124–1131.

Wittgenstein, L. (1998). *Philosophische Untersuchungen.* Hrsg. von Eike von Savigny. Akademie Verlag, Berlin.

Yovel, Y. (2018). *Kant's Philosophical Revolution: A Short Guide to the Critique of Pure Reason.* Princeton University Press, Priceton, NJ.

Sustainability and Education

Sustainability and innovation in an educational context[1]

Tamás Szilágyi[1]; Fanni Dudok[2]

[1] 'Environmental Philosophy, Bioethics and Green Philosophy' Research Group, University of Pécs Faculty of Cultural Sciences, Education and Regional Development, Pécs, Hungary, E-mail: tamas.szilagyi@gmail.com

[2] Institute of Applied Pedagogy, University of Szeged, Szeged, Hungary; E-mail: dudok.fanni@szte.hu

Abstract

Innovation and sustainability will be of utmost importance in the educational workshops of the next decades and will necessitate distinct techniques and specialised skills. Regarding education, sustainability, and environmental awareness, the European Union has issued a number of suggestions to its Member States. These proposals include objectives such as incorporating sustainability into teaching and learning, integrating environmental consciousness into the education system as a whole, and supporting the acquisition of awareness, comprehension, and action-based competencies. Innovation in education is essential to modernising the nation's educational system and preparing pupils for the future. Developing an inventive mentality is a crucial objective of education, as it stimulates creativity, the development of problem-solving abilities, and the capacity to adapt to rapid change. Sustainability and innovation are essential components of contemporary education because they help students prepare for the future, provide chances for practical learning, improve career preparation, and increase environmental consciousness. Students that incorporate these ideas into their schooling will be better equipped to face future obstacles and capture opportunities.

Keywords: sustainability, innovation, education

Sustainability and the green turn

The 'green turn' on a worldwide scale is causing fundamental changes in economic and political life, with increasingly noticeable cultural implications. The package of ideas for the European Green Deal to be adopted by the European

---

[1] Prepared with the professional support of the doctoral student scholarship program of the Co-Operative Doctoral Program of The Ministry Of Innovation And Technology financed from the National Research, Development And Innovation Fund.

Commission in 2021 outlines a goal for Europe to become a climate-neutral continent by 2050. This green transition will result in an extraordinary reevaluation of the role of innovation, bolstered by the Horizon Europe initiative (2021-2027), which views innovation as a critical instrument for ecological and economic transformation and supports a new generation of research and innovation partnerships. With the adoption of the so-called "Innovation Principle" in 2019, the Commission has assumed responsibility for analysing the impact of future initiatives on innovation and will work to guarantee that new rules and policy decisions promote innovation. In 2016, the European Commission's statement "Closing the loop - An EU action plan for the circular economy" established the notion of "Innovation Deals," which encourages voluntary partnerships between entrepreneurs, regional and local governments, and the EU. The European Institute of Innovation and Technology (EIT) is tasked with stimulating innovation at a pan-European level by supporting the development of long-term partnerships, and an essential part of its activities is not only to support innovation in existing companies but also to encourage the creation of new businesses (particularly start-ups) (European Environment Agency, 2015; O'Brien, 2020; Siddi, 2020; Tataridas et al., 2022).

We are witnessing a paradigm change that will forever define the interaction between humans and the environment, changing the prevailing viewpoints of science by incorporating moral elements into the discourse on the relationship between nature and social subsystems, for instance. With the changing interaction between humans and nature, new dimensions of responsibility and corresponding cultural changes have evolved; hence, cultural studies must also consider the long-term effects of present acts (Szilágyi, 2021).

Increased responsibility in science is complemented by a collaborative urge that provides enormous problems for the humanities and social sciences, establishing new qualification standards and new jobs that necessitate an abandonment of closed-systems thinking. How compatible are our established thinking structures and traditions with this new reality, and to what extent can education, sociology, or ethics as a sectoral study contribute to the humanisation of technology? The natural sciences are now confronted not only with technological and methodological issues but also, in almost all cases, with ethical ones; this greatly benefits the humanities; however, can the humanities, for instance, become an equal partner in transdisciplinary scientific cooperation, and can the results of this cooperation be reflected in education? In scientific progress, can moral responsibility or the culture-shaping impacts of development be given the same weight as anticipated or economic benefits?

Sustainability and innovation are two themes that the majority of researchers address from an economic standpoint. In reality, however, the humanities are currently developing as an equal participant in research in both domains, contributing new dimensions to the disciplinary approaches of other disciplines in response to paradigmatic shifts that are shaping the era. We are convinced that the complexity of some occurrences transcends disciplinary borders and that the dispersion of information and research capacity among disciplines precludes a thorough understanding and study of the phenomenon. When a phenomenon or process involves multiple subsystems or impacts society as a whole, sometimes necessitating significant changes to the social order, a thorough understanding of the phenomenon or process is particularly crucial. Additionally, certain issues disregard the distinctions between fields. It is important to adopt a new scientific methodology to comprehend a phenomenon on the cutting edge of human knowledge. Mattei Dogan (1996), a French social scientist, employs the term hybridisation to explain the specialised disciplines that form between sub-fields of certain disciplines. When we discuss the emergence of green thinking in the realm of entrepreneurship or innovation, we are in a hybrid zone. Innovation and sustainability will undoubtedly play a pivotal part in educational programmes in the coming decades, and teaching them will necessitate the use of distinct techniques and specialised talents. Following is a concise overview of this procedure (Dogan, 1996; Szilágyi, 2021).

Education for innovation and sustainability

Innovation will be a crucial weapon for sustainability in the coming decades, according to one of the key conclusions of the disciplines concerned with sustainability. Through innovation, new solutions to environmental concerns might arise, thereby contributing to sustainability. For instance, the development of energy-efficient technology, the utilisation of renewable energy sources, and the introduction of novel ways to the sustainable use of resources are all indicators of sustainability (Kougias et al., 2021). Individual industrial actors can also contribute to sustainability through innovation by adopting sustainable production processes, inventing environmentally friendly products, or eliminating negative environmental impacts. Nonetheless, this connection is bidirectional: sustainability may also drive innovation and contribute to the sustainable running of businesses (EMF, 2021).

The problem of sustainability is also gaining importance in education, as the responsibility of future generations in expanding sustainability to as many areas as feasible is crucial. In contemporary educational courses, sustainability is

usually integrated into environmental education programmes, science topics, social sciences, and educational policies and regulations. Education for sustainability and environmental awareness is not limited to a single stage of life, but is continuous; yet, values and attitudes related to the preservation of our environment are fostered from a young age and are fostered, among other places, in institutional settings (Dudok, 2021a; Education Office, 2020). The preservation of values for future generations begins with the teaching of the current generation, making it vital to educate about sustainability and environmental culture, which are currently dealt with jointly (Heuting & Reijnders, 1998). The United Nations designated the first decade of the twenty-first century (2005-2014) as the Decade of Education for Environmental Culture and Sustainability; hence, the emphasis shifted from promotion to education. This has permitted the implementation of environmental education in schools, resulting in a halt or fall in the growth of ecological problems (Dudok, 2021a; Major, 2012). In 2019, the European Commission coordinated its operations with the UNESCO framework, generating an Education for Sustainable Development (ESD) development agenda up to 2030 (UNESCO, 2021). (UNESCO, 2021). Within the framework, ESD focuses on accomplishing and enhancing the 17 SDGs, emphasising policies, learning environments, educators, and youth (UNESCO, 2019). These education guidelines also contribute to mainstreaming sustainability in education by encouraging the creation of sustainability-based education programmes. These programmes attempt to teach students how to reduce their environmental effects and implement sustainable solutions.

Currently, the European Union is encouraging educational sectors in many nations to join the Green Education project through various programmes designed to support the green transition and develop and reinforce students' skills in sustainability. Under the Green Education principle, all age groups must have a minimum degree of knowledge and environmental consciousness. Education is crucial in empowering individuals to act and desire to serve (European Commission, 2021a). Environmental education classes allow students to grasp the relevance of environmental concerns and show them how to live and work responsibly. Science topics, such as biology, geology, and chemistry, provide a more comprehensive view of the earth's natural resources and how they affect the ecosystem, whereas social sciences assist students to comprehend the social and economic aspects of sustainability (Hjeresen et al., 2000).

The European Union has provided its Member States with education, sustainability, and environmental awareness suggestions for 2021. These proposals include objectives such as incorporating sustainability into teaching

and learning, integrating environmental consciousness into the education system, and supporting the acquisition of awareness, comprehension, and action-based competencies (European Commission, 2021b).

For 2012-2024, the Hungarian government has devised a four-pillar policy titled the National Sustainable Development Framework Strategy, which promotes sustainable development across all sectors. The four pillars are human, economic, natural, and social resources (Fleischer, 2014). Through the four pillars, it is evident that a change in lifestyle, behaviour, and thinking, i.e. environmental education, is necessary (Bihariné, 2010). Thus, one of the key goals of education under this method is to cultivate in students an environmentally conscious attitude and set of values and to increase environmental-social knowledge through education (Dudok, 2021a; Thiengkamol, 2011). These can be formed, shaped, and developed in early infancy when education for sustainability and environmental consciousness is not yet a knowledge acquisition activity but an activity targeted at transforming everyday lifestyles in the lives of individuals (Dudok, 2021a; Sadik & Sari, 2010).

The connections between sustainability and innovation have long been established, but innovation in the education system has also become a priority in recent years. Innovation in education is essential to modernising the nation's educational system and preparing pupils for the future. The past decade has witnessed classroom innovation in various areas, such as the digitisation process that has been ongoing since the mid-1920s, which has seen the integration of technology into the daily educational process to enhance the learning experience for students and increase the efficiency of the education system. This involves the utilisation of digital textbooks, online learning platforms, and further educational technology resources. Hungary has historically placed a significant emphasis on science, technology, engineering, and mathematics (STEM) education: the education system encourages students to pursue careers in these fields, as these disciplines are essential to stimulate innovation and ensure Hungary's competitiveness in the global economy (Fehér, 2020; Xie et al., 2015).

The development of an inventive mentality is a crucial objective of education because it encourages creativity, problem-solving skills, and the capacity to adapt to rapid change. Participation in school provides students with access to fresh knowledge and technologies that can be utilised to create innovative solutions. Students are taught critical thinking skills that will enable them to participate in future breakthroughs through their education. Students are able to select their areas of interest and specialise in fields that can aid in the innovation process due

to the extensive educational opportunities available to them. In addition to fostering innovation, collaborative and interdisciplinary learning settings allow students to match their knowledge and ideas with those of others (Najatbekovna, 2021).

In general, there is a significant relationship between innovation and education, as education enables students to find innovative and practical solutions to various problems, including sustainability challenges. People of all ages should be able to shape their knowledge, skills, and attitudes towards a more sustainable life. Education and training are crucial in empowering individuals to become more environmentally conscious and empowered to act individually and collectively. As evidenced by the efforts of the European Commission, there is a growing demand for education and training on sustainability throughout Europe. Despite this desire, sustainability education and training are not yet a standard part of EU education policy and practice. The purpose of the European Council Recommendation on environmental education and learning for sustainability is to support Member States' efforts and encourage EU-wide cooperation in this area; to develop a new European sustainability competencies framework that identifies the knowledge, skills, and attitudes that learners of all ages will need for the green transition; and to develop a new European sustainability competences framework that identifies the knowledge, skills, and attitudes that learners of all ages will need for the green transition (European Commission, 2021a, 2021b).

Educating teachers about sustainability

Numerous nations have joined the worldwide effort for sustainability, sustainable development, and environmental consciousness (European Commission, 2021a; Heuting & Reijnders, 1998), however, there are still challenges and gaps in teacher education. The European Union's Charter of Fundamental Rights declares that the goals of sustainable development require equitable access to information for everyone (I.m.1.§) and that a sustainable society requires improvements in education, training, and skills (I.m.14.§) (EUR-Lex, 2020). In accordance with this, the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET) contains a training plan for trainers and teachers emphasising environmental sustainability. Part II.m.A aims to expand capacity, assist quality improvement, and boost performance (EUR-Lex, 2020).

Long before the official European Union efforts, the protection of the human environment in Hungary was defined by Act II of 1976 and the National

Environmental Protection Concept and Requirements System, which stipulated that everyone should develop environmentally responsible citizenship and, as a result, incorporate modern environmental knowledge into the curriculum (Takács et al., 2004). In 1980, the non-mandatory topic 'Human and Its Environment' was added to the primary school curriculum (Kárász, 2015). In the early 1990s, environmental education content was specified, and new pedagogical methods were created in ecological, environmental education (Bihariné, 2010).

To what degree can we educate students about sustainability through the curriculum, or is it more necessary to mould students' sensitivity through attitudes and approaches to problems? In the current Hungarian educational system, it is evident that sustainability may be taught through the curriculum. Sustainability issues encompass many fields, including environmental sciences, economics, social sciences, and natural sciences, allowing for incorporating numerous topics within the curriculum. Students can think critically about environmental challenges and contribute to sustainable development if sustainability is taught in schools. Teaching kids about sustainability can also educate them to contribute to sustainable workplace growth in the future. The importance of schools in conveying a sustainable attitude, however, extends beyond the curriculum. Teachers can assist students in learning about sustainability, for instance, by employing a sustainability strategy, implementing sustainable practices in schools, and organising sustainability projects (Dudok, 2021a; Major, 2012).

The National Core Curriculum (NCC/ Nemzeti alaptanterv - NAT) determines the essential structure and content of education in Hungary, which has resulted in considerable improvements to education and sustainability education. In 1995, the NCC established environmental education as a required task for all instructors, which was limited to cross-curricular assignments (Kosáros, 2007; NAT, 1995). In 2003, environmental and health education were designated key development areas (Kosáros, 2007; NAT, 2003), placing the field at the centre of education. The 2007 NCC provided modest modifications compared to prior years (Solt, 2012), however, the 2012 amendments permitted environmental education to be replaced by environmental education and established student expectations (NCC, 2012; Solt, 2012). The most recent National Assessment of Educational Progress (NCC) 2020 embraces the notion and idea of sustainability across all subject areas, but provides teachers with few alternatives to increase the subject scope (Dudok, 2021a; NCC, 2020).

Lower secondary school teachers in Hungary must hold a bachelor's degree, which can be earned in eight semesters at a college or university for teacher training. Methodology (subject pedagogy), general pedagogy, and psychology are taught to students. The minimum educational requirement for elementary school teachers is 4+1 years (8+2 semesters + 1 year of professional practise). These revisions have entailed changes to the curricula, which are aligned with the provisions of the Education Code. In addition, the principles outlined in the NCC are included into teacher education programmes and their significance is emphasised. However, there is variation in which teacher education programmes include which grid plans, as well as differences in the subjects and their descriptions, which may lead to a completely different emphasis in Hungarian teacher education programmes; the question of whether sustainability education is included in the grid plans remains (Dudok, 2021b; European Commission, 2020; Mullis et al., 2016).

Incorporating sustainability and environmental consciousness into teacher education programmes can help future teachers comprehend the significance of sustainability and implement it in their classrooms. This permits teachers to comprehend the significance of environmental challenges, as well as the concepts of sustainability and the significance of environmental consciousness. Teaching prospective teachers about sustainability and environmental consciousness contributes to the growth of environmental consciousness in education. In Hungary, the presence of sustainability and environmental consciousness in higher education, with an emphasis on teacher education, may vary. In some universities and institutions of higher education, sustainability and environmental education play a significant role, whilst in others, they play a lesser role.

In Hungary, there are several mechanisms to ensure that teachers participate in in-service training, with fines for noncompliance (Mullis et al., 2016). In Hungary, teachers must engage in at least 120 hours of in-service training every seven years. School principals can lessen the strain on teachers by participating in in-service training sessions. Experience from previous years suggests that subject examination preparation courses are the most prevalent form of professional development. These courses often cover instructional administration, pedagogy, and professional services, but sustainability and environmental education remain underrepresented (Dudok, 2021b; European Commission, 2020; Mullis et al., 2016).

The guidelines and definitions in the regulatory texts provide requirements for teachers, which they must also convey to their students regarding sustainability. Teachers have access to various training options and in-service training linked to sustainability. Examples of training opportunities relating to sustainability include: [1] Sustainability and environmental awareness conferences provide teachers with the opportunity to learn from professionals and share their own insights. [2] Similarly, workshops on sustainability enable educators to apply their learned knowledge and develop inventive solutions to environmental concerns. [3] University or college courses provide teachers with the opportunity to gain expert-level information concerning sustainability. [4] Professional associations provide teachers with the opportunity to network with individuals who share their interests and attend events where they can obtain training on sustainability-related themes.

To increase environmental awareness and teaching in schools, the European Union has established many principles and guidelines for the sustainability training of teachers. The EU encourages incorporating sustainability into all curriculum subjects, including science, technology, and social studies. The EU acknowledges the need to provide teachers with training and resources to successfully teach sustainability. This includes online classes, workshops, and other chances for professional growth. The EU emphasises the significance of involving students in the learning process and fostering active learning opportunities relating to sustainability. This includes activities such as field trips and community service. The EU encourages collaboration and partnerships between schools, businesses, and community organisations to promote sustainability education, and the EU recognises the importance of raising awareness of sustainability and communicating the importance of environmental protection to students, teachers, and the wider community (European Commission, 2021a,b).

These are the fundamental concepts and criteria followed by the European Union in training sustainability educators. The objective is to provide instructors with the information and assistance they need to educate pupils about the significance of sustainability and the environment.

In the European Union, numerous possibilities and training programmes for educators emphasise sustainability. The Erasmus+ programme, for instance, provides support for education and training projects, including those related to sustainability. Teachers can apply for funds to participate in training programmes, workshops, and other opportunities for professional development.

The European Schoolnet Academy, which offers online courses and training programmes for teachers on various topics, including sustainability, is an important project. The courses are aimed at assisting educators in incorporating sustainability into their curricula and fostering environmental consciousness among students (Hristova, 2015). The European Environment Agency provides teachers with various sustainability-related resources and training opportunities, including online courses, workshops, and training programmes. These are only a few of the numerous possibilities accessible to teachers in the European Union who wish to learn more about sustainability and incorporate it into their lessons.

Summary

Sustainability and innovation are becoming increasingly significant components of contemporary education since they prepare students for future challenges and opportunities. Climate change and other sustainability issues necessitate imaginative solutions. By teaching kids about sustainability and innovation, schools can aid in developing problem-solving and critical thinking skills applicable to various potential vocations. Sustainability and innovation are essential to many of the world's greatest challenges and opportunities of the present and future. By incorporating these concepts into their education, students will be better equipped to navigate a world undergoing rapid change and contribute to resolving particular challenges. Numerous sustainability and innovation efforts, such as renewable energy projects and sustainable agricultural programmes, offer experiential learning opportunities to students. This form of experiential learning can be beneficial, and aid students gain a deeper understanding of a subject. Many employment in the 21st century will require a comprehensive understanding of sustainability and innovation; kids who study these topics in school will be better prepared for these careers. This encompasses vocations such as renewable energy, sustainable agriculture, and green technology.

Sustainability and innovation are essential components of contemporary education because they help students prepare for the future, provide practical learning opportunities, prepare them for vocations, and raise environmental consciousness. Students that incorporate these ideas into their schooling will be better equipped to face future obstacles and capture opportunities. By teaching sustainability and innovation, schools may assist in developing environmental awareness and promote a more sustainable future. This can lead to developing ecologically friendly habits that last a lifetime.

References

Bihariné, K. I. (2010). Fenntarthatóságra nevelés – a jövő útja. *A Kisgyermek*, *4*(1). https://zoldovoda.hu/hu/szakirodalom/szakirodalmak/biharine-dr-kreko-ilona-fenntarthatosagra-neveles-a-jovo-utja

Dogan, M. (1996). The Hybridization of Social Science Knowledge – Navigating Among the Disciplines: The Library and Interdisciplinary Inquiry'. *Library Trends (Fall)*, *45*(2), 296–314.

Dudok, F. (2021b). A pedagógusok általános helyzete a kelet-közép-európai térség néhány országában. *Módszertani Közlemények*, *61*(3), 5–25.

Dudok, F. (2021a). Fenntarthatóságra nevelés a közoktatás szintjén. In. Zádori Iván (ed.) *Tiszta energia—Fenntartható környezet*. DePress Kiadó, Budapest. 75-91.

EUR-Lex (2020). *A Tanács ajánlása a fenntartható versenyképességet, a társadalmi méltányosságot és a rezilienciát célzó szakképzésről (2020/C 417/01)*.

European Commission (2021a). *European Education Area. Quality education and training for all.* https://education.ec.europa.eu/focus-topics/green/initiatives?fbclid=IwAR2hqYxg9rlP5zhA_tSLQwzXDpyTbmISogaGYg4GiWAok0oNsQS5lvySpYA

European Commission (2021b). *Learning for environmental sustainability.* https://education.ec.europa.eu/lt/svietimas-aplinkos-tvarumo-klausimais

European Enviroment Agency (2015). *Closing the loop—An EU action plan for the Circular Economy COM/2015/0614 final.* https://www.eea.europa.eu/policy-documents/com-2015-0614-final

Fehér, P. (2020). „Húsz év múlva"—A digitális oktatás helyzete, eszközei, trendjei világszerte. *Gyermeknevelés Tudományos Folyóirat*, *8*(2), 350–372.

Fleischer, T. (2014). A fenntarthatóság fogalmáról. In. Knoll Imre, Lakatos Péter *(eds.): Közszolgálat és fenntarthatóság* (9–24). Nemzeti Közszolgálati Egyetem.

Heuting, R. & Reijnders, L. (1998). Sustainability is an objective concept. *Ecological Economics*, *27*(2), 139–147.

Hjeresen, D. L., Boese, J. M., & Schutt, D. L. (2000). Green Chemistry and Education. *Journal of Chemical Education*, *77*(12). https://doi.org/10.1021/ed077p1543

Hristova, T. T. (2015). Innovative practices and technologies in educational projects of European Schoolnet and the project" Scientix. *Bulgarian Chemical Communications*, *47*, 505–508.

Kárász, I. (2015). A környezeti nevelés története, céljai és eszközei. In *Környezeti nevelés és tudatformálás* (o. 37–53). Eszterházy Károly Főiskola Líceum Kiadó.

Kosáros, A. (2007). *A fenntarthatóság szerepe a környezeti nevelésben*. Debreceni Egyetem. https://dea.lib.unideb.hu/dea/bitstream/handle/2437/78560/ertekezes_v.pdf

Kougias, I., Taylor, N., Kakoulaki, G., & Jäger-Waldau, A. (2021). The role of photovoltaics for the European Green Deal and the recovery plan. *Renewable and Sustainable Energy Reviews*, *144*. https://doi.org/10.1016/j.rser.2021.111017

Major, L. (2012). A környezeti nevelés szerepe a környezettudatos magatartás formálásában. *Iskolakultúra*, *22*(9), 67–79.

Mullis, I. V. S., Martin, M. O., Goh, S., & Cotter, K. (eds.). (2016). *TIMSS 2015 Encyclopedia: Education Policy and Curriculum in Mathematics and Science*. http://timssandpirls.bc.edu/timss2015/encyclopedia/

Najatbekovna, K. D. (2021). Develop Innovative Thinking Skills Based on a Creative Approach. *International Journal on Orange Technologies*, *3*(11), 30–32.

NAT (1995). *Nemzeti Alaptanterv*. Korona Kiadó, Budapest.

NAT (2003). *Nemzati Alaptanterv*. http://www.nefmi.gov.hu/letolt/kozokt/nat_070926.pdf

NAT (2012). *Nemzeti Alaptanterv*. https://ofi.oh.gov.hu/sites/default/files/attachments/mk_nat_20121.pdf

NAT (2020). Nemzeti Alaptanterv. *Magyar Közlöny*, *2020*(17).

O'Brien, P. (2020). *Innovation Deals*. https://yorkshireuniversities.ac.uk/2020/06/18/innovation-deals/

Oktatási Hivatal (2020). *Fenntarthatóságra nevelés*. https://www.oktatas.hu/kozneveles/pedagogiai_szakmai_szolgaltatasok/fenntarthatosagra_neveles/elmeleti_hatter

Sadik, F., & Sari, M. (2010). Student Teachers Attitudes Towards Environmental Problems And Their Level Of Environmental Knowledge. *Çukurova Üniversitesi Eğitim Fakültesi Dergisi*, *39*(3), 129–141.

Siddi, M. (2020). The European Green Deal: Asseasing its current state and future implementation. *Iris, Catalogo Ricerca Università di Cagliari*, *2*.

Solt, D. (2012). *Környezeti nevelés. Fenntarthatóság a Nemzeti alaptantervben és a gyakorlatban*. Budapesti Corvinus Egyetem. http://publikaciok.lib.uni-corvinus.hu/publikus/szd/Solt_David.pdf

Szilágyi, T. (2021). A felelősség társadalma. *Kultúratudományi Szemle*, *3*(4), 38–45.

Takács, I., Ábrahám, K., Keczer, T., Kanczler, Gy., Vizy, I., Domokos, S., & Szerényi, G. (1987). *Környezetvédelem a közoktatásban „Környezetvédelem a közoktatásban" címmel rendezett országos pedagógiai tanácskozás dokumentumai*. Országos Környezet- és Természetvédelmi Hivatal, Budapest.

Tataridas, A., Kanatas, P., Chatzigeorgiou, A., Zannopoulos, S., & Travlos, I. (2022). Sustainable Crop and Weed Management in the Era of the EU Green Deal: A Survival Guide. *Agronomy*, *12*(3). https://doi.org/10.3390/agronomy12030589

Thiengkamol, N. (2011). Development of Model of Environmental Education and Inspiration of Public Consciousness Influencing to Global Warming Alleviation. *European Journal of Social Sciences*, *25*(4), 506–514.

UNESCO (2019). *Framework for the implementation of Education for Sustainable Development (ESD) beyond 2019*.

UNESCO (2021). *Education for Sustainable Development*. https://en.unesco.org/themes/education-sustainable-development

Xie, Y., Fang, M., & Shauman, K. (2015). STEM education. *Annual Review of Sociology*, *41*, 331–357.

Alternative Hedonism and the Critique of Consumption in the Philosophical Thought of Kate Soper

Zsolt Péter, Függ[1]

[1] 'Environmental Philosophy, Bioethics and Green Philosophy' Research Group, University of Pécs Faculty of Cultural Sciences, Education and Regional Development, Pécs, Hungary, Email: fuggzs@gmail.com

Abstract

The focus of this paper is on the philosopher Kate Soper, author of at least a dozen books on feminism and continental philosophy. She has been involved in numerous environmental and peace movements in the UK and elsewhere in Europe, and her work on ecological issues is partly influenced by this. She has published numerous articles in Radical Philosophy, New Left Review and Capitalism Nature Socialism. This paper attempts to summarise her theory of 'alternative hedonism'.

British philosopher and author Kate Soper has made substantial contributions to the fields of philosophy, and cultural studies. Her work spans a wide range of topics, including critical theory, feminist philosophy, musical aesthetics, and contemporary cultural politics. She has written extensively about the concept of responsibility in both ethical and political contexts. In her works, she critiques the traditional liberal view of responsibility, which emphasises individual autonomy and freedom, and argues for a more nuanced understanding of the responsibility that takes into account the social and cultural forces that shape our actions.

In the 2000s, Kate Soper published several papers (Soper, 2006) on the significance of new thinking regarding pleasure and the good life in promoting sustainable consumption. Her thoughts serve as the basis for a research project inside the ESRC/AHRC Cultures of Consumption research programme.

According to Soper, sustainable development requires the emergence of new ways of thinking, which may include new concepts of pleasure and self-

actualisation. Only this can make it possible to strengthen a more ecologically sustainable and efficient use of resources, eliminate social and environmental exploitation, and curb Euro-American consumerism. This concept must be promoted primarily among the wealthy global elites. Thus, alternative hedonism would be a concept that could have an impact on the perceptions of affluent consumers, redefining self-interest, and this could lead to a transformation of emotional responses that could help solve the ecological problems of the coming decades (Soper & Lyn, 2006).

Transformation of self-interest emphasises the importance of education and cultural change in achieving this transformation. Soper argues that individuals must be educated about the social and ecological impacts of their actions and that cultural norms and values must be transformed in order to encourage more sustainable and just forms of self-interest. In essence, therefore, it is not a matter of denying the pursuit of self-interest, which is the basis of the existing consumer culture and which, at the same time, is at odds with ecological problems, but of reinterpreting and extending the concept of self-interest and reordering our needs, desires, norms, and interests in terms of the broader concept thus understood.

Therefore, anti-consumerist ethics and politics must not only focus on eliminating altruism, appealing to compassion and concern for the environment, but essentially on reconciling self-interest and consumer society with sensitivity to ecological problems. In sum, Soper argues that attitudes need to be changed based on existing structures of feelings and values. Certain variations of human desires can provide the basis for politics that works against the consumerism that has been customary up to now but is also democratic (Benke et al., 2017).

She "questions the liberating nature of the modern market economy, this time in terms of consumption. According to Soper, consumerism is responsible for the environmental crisis, the bleakness of society, and the impossibility of several lifestyles. According to the thesis of alternative hedonism, sustainable consumption is not primarily a self-absorbed responsibility for the planet but a new way of unleashing our creativity and pursuit of happiness." (Scheiring & Jávor, 2009:20)

Soper, in his book What is nature? (Soper, 1995), addresses the question of the cultural representations of nature and how this affects debates about environmental protection. While it is true that instrumental rationality can have devastating consequences, ecologically minded critics of nature often make the mistake of failing to clarify their conceptual context. The concept of nature is often

associated with explicitly positive feelings and thus becomes a romantic metaphor saturated with nostalgia.

It becomes problematic to distinguish between the reality of nature and its cultural representation. Meanwhile, there is an ontological difference between our ideas about nature and what we create them about. In social discourse, nature is a kind of candidate, but the ozone hole is not in language (Feldmayer, 2019).

Soper is also concerned with cultural issues because she believes that our consumer choices and related behaviour are not merely phenomena that pass through financial calculations, but "consumption is a political and cultural act embedded in power relations" (Zilahi & Szabó, 2019). The philosopher argues that a less growth-driven way of thinking about development could open up new possibilities in representations such as the relationship between past and present, tradition, and modernity. Without this, a more ecologically sensitive way of human life forms cannot emerge.

It is interesting that Soper places a strong emphasis on cultural policy and sees the arts as having a significant role to play in future changes. These tend to be less critical aspects of environmental ethics or environmental discourse in general. This is because no other area can be expected to support a change in attitudes since everything is part of consumer culture. Art and education can be the starting point for changing one's view of nature and ethical attitudes in the future.

The link between culture and consumption is already very problematic in defining basic human needs. Soper (2020) philosophically explores what is included in the basic human need, and whether it can mean more than access to food, drink, and shelter. The most difficult question is to what extent needs can be objective or socially constructed. According to Soper, the latter is very much the case, which is why the culture of consumption needs to be redefined, to which the theory of alternative hedonism can provide an answer.

The idea of alternative hedonism claims that people's attitudes will change if their ideas about the "good life" change. Currently, these ideas are dominated by tendencies that idealise American and European consumption patterns. This shift requires individuals to recognise their role in exploiting the dangers of modern society. However, he changes his habits not only because he is altruistic and able to live in abstinence but also because he finds pleasure in living differently. Switching from a car to a bicycle may not just be an external constraint because people can derive pleasure from cycling (Gulyás, 2008).

According to an article in 2020 (Soper, 2020a), the tension between capitalism's priorities and ecological obligations can no longer be ignored. The Janus-faced attitude of governments is unacceptable, asking people to save energy and live healthier lives while promoting economic policies encouraging consumption expansion.

Therefore, any individual or mass movement that increases the pressure on governments and encourages them to commit to change and transformation finally are welcome. It is changing in affluent societies that can be most effective and of most global significance, as the disproportionate consumption of the rich is linked to the deprivation of the world's poor.

Citizenship should mean more than just holding a passport and enjoying rights. It must include obligations and responsibilities (Szilágyi, 2021) to the wider community, including future generations. Alternative hedonism puts the individual at the centre, in contrast to current modes of consumption. The plans and ideas of international organisations and institutions to avoid ecological catastrophe or at least reduce its intensity will not have a more substantial impact on governments until their electorates take them seriously.

The self-realisation of the alternative hedonistic individual leads to the right person being placed in the most important decision-making positions. Changing the perception of affluent consumers can bring about a more sustainable and just world order (Soper, 2020a). So the alternative hedonistic individual is reflexive and autonomous, whose self-interested needs include collective goods. In a recent article, he pointed out that despite its many difficulties, the epidemic situation also creates a new opportunity to rethink what the 'good life' means for us (Soper, 2020b).

One potential critique of Soper's work is that it is difficult to reconcile her vision of alternative hedonism with the realities of contemporary capitalism. Many critics argue that the global economic system is built on the constant expansion of consumer culture and that it is difficult to imagine a future in which individuals can find pleasure and fulfilment outside of this system. Soper has responded to this critique by arguing that change is possible and that individuals can challenge the dominant ideology of consumption through small, everyday practices such as recycling, reducing waste, and buying sustainable products.

Another potential critique of Soper's work is that it focuses on individual actions and behaviour rather than structural factors that shape consumption patterns. Critics argue that systemic change is necessary to truly address the negative

impacts of consumer culture and that Soper's focus on individual actions may not be sufficient to bring about significant change. Soper has responded to this critique by acknowledging the importance of systemic change and the need for collective action, while also emphasizing the role of individual agency in shaping societal norms and practices.

References

Benke, A., Borbély, A., Dobrai, Zs. L., Gegő, V. , Hart, E., Kész, O., Pap, Zs., Székely, Ö., & Ugron, N. (2017). *Öko-fogalomtár.* https://aszem.info/2017/05/oko-fogalomtar/

Federmayer, É. (2019). Ökofeminizmus: női kalauz az ökológiai-társadalmi összeomlás elkerüléséhez. *Imágó, 2019*(4), 58-75.

Gulyás, E. (2008). Az etikus fogyasztás értelmezései. *Szociológiai Szemle, 2008*(1), 106-127.

Scheiring, G., & Jávor, B. (2009). *OIKOSZ ÉS POLISZ - Zöld politikai filozófiai szöveggyűjtemény*. L'Harmattan, Budapest. 450-475.

Soper, K.e (1995). *What is Nature: Culture, Politics and the Non-Human*. Oxford, Blackwell.

Soper, K. (2001). Realism, humanism and the politics of nature. *Theoria, 48*(98), 55-71.

Soper, K. (2006). Conceptualizing needs in the context of consumer politics. *J Consum Policy, 29*, 355-372.

Soper, K., & Lyn, T. (2006). *Alternative Hedonism: a theory and politics of consumption.* http://www.consume.bbk.ac.uk/researchfindings/althedonism.pdf

Soper, K. (2020). *The Trouble with Consumption*. https://placesjournal.org/article/alternative-hedonism-and-the-trouble-with-consumption/#ref_28 (Retrieved: 2022.03.05.)

Soper, K. (2020). *The pandemic is an opportunity to reconsider what makes a good life.* https://www.theguardian.com/commentisfree/2020/sep/08/pandemic-covid-19-work-society,

Szilágyi, T. (2021). A felelősség társadalma. *Kultúratudományi Szemle, 3*(4), 38-45.

Zilahi, A., & Szabó, J. (2019) *Klímaválság: egyéni és társadalmi változás kell.* https://merce.hu/2019/09/19/klimavalsag-egyeni-es-tarsadalmi-valtozas-kell/

Implementation of Energy Awareness and Environmental Education Programs in Hungarian Higher Education: Evaluation of a Pilot Program

Gábor Kozma[1]; Zsolt Nemeskéri[2]; Attila Pongrácz[3]; Iván Zádori[4]

[1]Péter Pázmány Catholic University, Faculty of Humanities and Social Sciences e-mail: kozma.gabor@btk.ppke.hu

[2]Gál Ferenc University, University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, e-mail: nemeskeri.zsolt@pte.hu

[3]Széchenyi István University Apáczai Csere János Faculty of Humanities, Education and Social Sciences email: pongracz.attila@sze.hu

[4]University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, e-mail: zadori.ivan@pte.hu

Abstract

Our study aims to evaluate the pilot training conducted in the framework of the project "Environmental education and sustainability - implementation of energy awareness and environmental education programs in Hungarian higher education" with the support of the Hungarian Energy and Public Utilities Regulatory Office. Our study includes the presentation of the four higher education institutions participating in the pilot program, the methodology of the research and the summary of the results obtained. An important result of the research is that among the students and teachers of the higher education institutions participating in the pilot project, interest in and commitment to environmental education and sustainability can be traced. The results highlight that current and future teachers are trying to do as much as possible in their respective fields so that the next generation will be prepared to deal with the currently visible and expected sustainability challenges.

Keywords: sustainability, energy awareness, education

Introduction

Our study aims to evaluate the pilot training courses conducted within the framework of the project "Environmental Education and Sustainability -

Implementation of Energy Awareness and Environmental Education Programmes in Hungarian Higher Education", supported by the Hungarian Energy and Public Utility Regulatory Office (MEKH). The background to the programme is that the University of Pécs - also with the support of MEKH - developed the sustainability module, its curricular themes and teaching materials for the kindergarten, teaching and curative education bachelor's degree courses and the master's degree course in education during the 2020/2021 academic year.

This was followed by a national consortium in the 2022 call for proposals, based on the curriculum elements developed. In addition to the University of Pécs Faculty of Cultural Sciences, Education and Rural Development, the Széchenyi István University Apáczai Csere János Faculty of Humanities, Education and Social Sciences, the St. John Paul Pope Research Centre for Christian Pedagogy and Psychology of the Faculty of Pedagogy, Humanities and Social Sciences of the Péter Pázmány Catholic University, in collaboration with the Vitéz János Teacher Training Centre of the Faculty of Humanities and Social Sciences of University of Pázmány Péter University and the Gál Ferenc University. The main elements of the project were:

- to provide trainers from the partner institutions in the consortium with the necessary skills to set up the pilot training courses (training of trainers),
- publishing the teaching materials in book form for students and trainers participating in the pilot training,
- start training based on the teaching materials, pilot training in the partner institutions of the consortium,
- evaluation and analysis of the pilot training courses in the form of a summary study,
- publishing the results of the pilot training courses in the journals Kultúratudományi Szemle and Acta Cultura et Paedagogie in Hungarian and English languages,
- exploring, based on experience, the possibilities for further development of the environmental education curriculum based on gamification through foundational and exploratory research,
- international dissemination of experiences in the Greenway School II. programme framework, with partner institutions abroad and consortium members.

Our study includes a presentation of the four higher education institutions involved in the analysis and the pilot programme, a summary of the research methodology and a summary analysis of the results.

Presentation of the higher education institutions participating in the pilot programme

The partner institutions participating in the pilot training courses have specific backgrounds and roots in environmental education and sustainability. These are briefly summarised below.

University of Pécs Faculty of Cultural Sciences, Education and Rural Development

The University of Pécs is one of Hungary's largest higher education institutions, with 22,000 students, 1,400 teachers, researchers and ten faculties. With its roots dating back to 1367, it was the first university in Hungary, and in 2017 it celebrated the 650th anniversary of the founding of the first Hungarian university. In 2022, the university was ranked for the seventh time in the UI GreenMetric World University Rankings. The University of Pécs was ranked 21st out of 1,050 universities in the world's green universities, and for the third time out of eleven Hungarian universities in the ranking, it was the best, earning the title of the greenest Hungarian university in 2022 (UnivPécs, 2022).

The Faculty of Cultural Sciences, Education and Rural Development (KPVK), which is involved in the pilot programme, is unique because it has a centre in Szekszárd and operates at training sites in Szekszárd and Pécs. Therefore, it is of particular importance that the PTE Green University programme and the university's sustainability programmes should impact Szekszárd and Tolna County in addition to Baranya County and Pécs.

For the faculty, sustainability can be understood in two dimensions:
-   on the one hand, how can the institution operate sustainably, reducing as much as possible the organisation's ecological footprint,
-   on the other hand, what kind of educational content and attitude-shaping activities will appear at the Faculty, as the generations of infant carers, nursery teachers, teachers, special education teachers, vocational teachers, nature educators, social workers, rural development agricultural engineers, viticulturists and wine-growers currently involved in the educational process will be the generations who will be confronted with the ever-increasing challenges more intensively in their later lives.

Programmes and activities of the KPVK and the Illyés Gyula Primary School, Primary Art School and Practical Kindergarten of the University of Pécs related to sustainability awareness raising:
-   Participation in the "Pass it back, Bro" mobile phone collection campaign (March-November 2022)

- Participation in the "TeSzedd! - Volunteering for a Clean Hungary" programme
- "European Mobility Week on Car Free Day" (September 2022). The KPVK Practical School has been participating in the cycling challenge organised by the Green Companion Foundation and the Szekszárd Climate Club for several years and has won the inter-school challenge every year.
- The KPVK is involved in Planet Budapest 2021. the programme, so it would like to continue the cooperation in its continuation or the Planet Pécs 2022 programme

In addition to the awareness-raising programmes, the faculty's academic events also focus on sustainability. The KPVK Institute for Rural Development was a professional partner of the "II. International Conference on Rural Heritage", which took place in Orfù from 26-27 May 2022.

At the conference, the Institute for Rural Development chaired the session "From Value Creation to Sustainability". Traditional or innovative local products, artisanal products, terroir products and Hungarians are built on the values of a rich rural heritage. However, these products are not only about preserving values and their economic exploitation, but als about the added value of intellectual capital, community cohesion, environmental awareness, social responsibility or even education for sustainability. Today, there is a growing emphasis on value-creation solutions based on environmental awareness (e.g. eco-, bio-farms) and sustainability. The session also highlighted the diversity of value creation, local initiatives, good practices and specific market access solutions, challenges, opportunities for conscious consumer education, and economic actors' role in sustainability education.

The faculty organised the international conference "Rural Development Dimensions of the European Green Deal Programme". The international conference focused on the challenges and challenges related to the rural development dimensions of the European Green Deal Programme and the presentation of national and international good practices. Climate change and the increasingly visible sustainability challenges of the 21st century pose severe challenges for Hungary, Europe and the world. In addition to presenting possible steps to address these challenges, the conference also focused on new growth strategies that can transform the EU economy into a modern, resource-efficient and competitive economy capable of effectively addressing climate change challenges.

The introduction tot he study mentioned that the Greenway School was organised in September 2022, with the support of the MEKH, in the framework of the project "Environmental Education and Sustainability", and was a great success in December 2021. In addition to the Hungarian participants, students and teachers from Croatian, Serbian, Bulgarian and Romanian partner universities joined the one-week programme.

In addition to MEKH, the faculty has also partnered strategically with the Herman Ottó Institute. The cooperation between the two institutions will enable teachers to expand their up-to-date professional knowledge, thus enabling them to pass on to future generations the latest innovations and environmentally friendly solutions of the profession, which will also form the basis for higher education and the development of an adult education programme on environmentally friendly technologies in agriculture. In cooperation with the Herman Ottó Institute, the JRC is involved in the editorial board of the scientific journal "The Village".

Finally, it is essential to mention that the Research Group on Environmental Philosophy, Bioethics and Green Philosophy, which has been set up in the faculty, investigates theoretical and practical sustainability issues.

St. John Paul Pope Research Centre for Christian Pedagogy and Psychology of the Faculty of Pedagogy, Humanities and Social Sciences of the Pázmány Péter Catholic University

Pázmány Péter Catholic University is a Hungarian higher education institution founded in 1635 and has had continuous operation since then. Péter Pázmány, Archbishop of Esztergom, founded the university in 1635, during the most tragic years of the country's history, during the Turkish occupation, which was of epochal importance in the history of Hungarian education and church culture. He was convinced that academic education was the guarantee of the nation's survival and morality. The university he founded took on his name to acknowledge his intellectual heritage.

The university was moved from Nagyszombat to Buda by Maria Theresia in 1777. In the spirit of the reforms of 1848, the University of Pest became a modern, autonomous educational centre. After a temporary period of restriction, it regained its old rights in 1860, and at the beginning of the 20th century, it became one of the world's most prestigious universities. In 1921, it took the name of Peter Pázmány, the founder of the Royal Hungarian University of Budapest, which it bore until 1950.

The present Eötvös Loránd University was created after the separation of the Faculty of Medicine and the Faculty of Theology due to the communist government. The Faculty of Theology carried on Pázmány's legacy. Although the state recognised the diplomas awarded here, thus seemingly preserving its tolerance of religious education, theological education was almost completely erased from public consciousness.

However, with the change of regime, an old-new institution was born with the expansion of the Academy of Theology. On 30 January 1992, the Hungarian Catholic Bishops' Conference, with the permission of the Holy See, founded the Pázmány Péter Catholic University with the establishment of the Faculty of Humanities. In 1993 the Hungarian Parliament recognised the Faculty of Humanities and at the same time registered Pázmány Péter Catholic University among the state-recognised universities. Today, the University has five faculties, the Faculty of Theology, the Faculty of Humanities and Social Sciences, the Faculty of Law and Political Sciences, the Faculty of Information Technology, and the Postgraduate Institute of Canon Law, which has faculty status.

The Faculty of Humanities started its operation in 1992 in Budapest, in the convent of the Sisters of Mercy of the Ménesi Road convent. In September 1994, it moved to Piliscsaba-Klotildliget, near the capital, on the site of the former Perczel Mór, then Soviet barracks. During the construction works, the old buildings were partly reconstructed and renovated, and somewhat new ones were built based on plans by Imre Makovecz and the architects of the Makona Association led by him.

Starting from the 2012/2013 academic year, it started its training courses in 3 locations in Budapest, Piliscsaba and Esztergom. Some courses and departments have moved to the former Piarist building in the Palotanegyed and the IBS building on Tárogató street in the capital. In 2019, PPKE signed a lease contract with the Budapest University of Technology and Economics, so the courses on Tárogató street continued in the Z building on the Danube bank from the 2019/2020 academic year. At the end of 2020, the Faculty moved out of the Piliscsaba campus, so the Faculty currently operates training locations in Budapest at two sites: the Sophianum (Mikszáth square 1), the Danubianum (Bertalan Lajos street 2) and Esztergom (Majer István street 1-3).

The Faculty's Vitéz János Teacher Training Centre offers basic teacher training courses in Esztergom (full-time and part-time, with optional specialisations in German and Slovak language) and coordinates the teacher training courses in cooperation with other institutes of the Faculty. Specialised further education courses are prominent, including drama pedagogy and child protection. The

psychology department of the BTK is essential, and its links with the education courses are also relevant to the exploitation of the results of this programme. In response to the economic, social and environmental challenges of the 21st century, BTK's courses have already focused on sustainability and environmental education in several areas.

In this pilot project, supported by MEKH, the Christian Pedagogy and Psychology Research Group involved the teachers and students of the Vitéz János Teacher Training Centre of the Faculty of Education. Gábor Kozma, currently leading the PPKE Research Group, has been involved in the preparation and implementation of the research project initiated towards MEKH and awarded the grant from 2019 onwards,[1] which is mentioned in the section of this paper dealing with GFE. The current pilot project, which will be implemented in 2022-2023 with the participation of the PPKE, will build on the results published in the 2020 research programme and will take them further in the field of energy awareness and environmental education programmes, involving not only pre-school teachers and teachers but also teachers of all subjects.

For the Research Group of Christian Pedagogy and it is essential that the results of the present programme also contribute to the protection and preservation of the environment entrusted to us in our created world and to the prudent supply of the immeasurably increased energy needs of our technical civilisation (Kozma, 2021a: 7-11). Given the growing ecological dangers, the protection of creation must also be given a greater role, as the balance of nature is threatened by the exploitative management of industrial societies, and risk societies are emerging. Environmental protection is now a pressing challenge for everyone (Puskás, 2006, 305), to which pedagogy, education and training must provide direct responses and tools (Kozma, 2021b).

Science is therefore empowering when it calls attention to the role of knowledge, specifically the science of increasing man's knowledge of the world as given to him by his Creator. That the fundamental role of knowledge is to shape the future in the most total sense. The protection of creation in its fullest sense - and precisely in the sense of education - is also an essential task for man to find the existential meaning of his life, not only for survival but also for the sake of a meaningful life (Puskás, 2006: 310). The correct use of technology, which also protects creation, is man's moral duty, otherwise, technology can grow into a force that destroys man,

---

[1] The 2020 project "The environment of education - a pedagogical culture of energetics" was a pedagogical research programme aimed at establishing the practice of pedagogy of environmental awareness from kindergarten and school to the future teacher.

culture and nature (Puskás, 2006: 312). The pedagogical programmes of the PPKE must consider that, as a consequence of the individual-centredness of postmodernism, individual values are overtaking institutional and transcendental values (G. Németh, For PPKE, this is a significant task and a great opportunity in the field of environmental education, which focuses on sustainability, respect, love and protection of nature, and the responsibility of man, and prepares knowledge materials, tools and programmes for teacher training, public education and families. The impact of environmental education is directed at the individual as a community member and is therefore not achieved through individual development but through community programmes. Intense interpersonal relationships in communities force individuals to accept and adapt to social norms and expectations, thus helping their socialisation processes (Kozma, Petróczi & Nagyné, 2020: 34-35).

Széchenyi István University Apáczai Csere János Faculty of Humanities, Education and Social Sciences

The Széchenyi István University Apáczai Csere János Faculty of Humanities, Education and Social Sciences is a historically and culturally well-established institution in the city and region of Győr. The tradition of teacher training in Győr dates back to 1778.

At the same time, by the beginning of the 21st century, the faculty had a dynamically developing curriculum, which was opening up beyond the field of teacher education, primarily towards the social sciences and humanities. In 1978, on the 200th anniversary of the teacher training in Győr, the college took the name of the scholar and school organiser János Apáczai Csere János, which it later kept as a charter.

In response to the economic, social and environmental challenges of the 21st century, the faculty's pedagogical bachelor's and master's programmes (primarily the bachelor's programmes in Special Education, Community Organisation and Teaching, and the master's programmes in Community and Civic Studies and Human Resource Counselling) and its specialised further education programmes (Project-based Environmental Education and the Teaching programme in the additional field of Natural Science) have already focused on knowledge and knowledge elements related to sustainability and environmental education in several areas. In 2017, the faculty played a pioneering role in "greening" the operation of Hungarian universities by organising the Learning and Teaching Methodology - Knowledge Technology Section of the National Scientific Student

Conference in line with the requirements of sustainable event organisation (Halbritter & Lőrinc 2017). The faculty has also prioritised sustainability in developing its infrastructure: a forest school exercise area, a solar panel system, and the re-launch of its historic school garden (Halbritter et al., 2019). In the autumn of 2019, Széchenyi István University initiated a survey among first-year students to measure their knowledge and attitudes towards sustainability and their environmental behaviour (Kövecsesné et al., 2020).

Practising teachers and trainee teachers are key players in the process of educating for sustainability. This is also confirmed by the fact that in the section on the professional attitudes and behaviour of teachers in the teacher training and qualification requirements (KKK), it is expected that graduating teachers should have an environmentally aware attitude and a sense of responsibility (Szilágyi, 2021) for sustainable development To meet this expectation, the Apáczai Faculty of Széchenyi University aims to educate students in environmental education by transferring culture and shaping attitudes so that generations of teachers committed to environmental education and the pedagogy of sustainability will emerge from their training. Teachers who take responsibility for their environment and are aware of the methodological principles, tools and methods of environmental education (Kövecsesné & Lampert, 2018).

Shaping students into environmentally aware individuals is achieved at several levels. The university has recently implemented several curricular reforms. Table 1 illustrates the possibilities for involving student teachers in environmental education in the context of the courses and programmes of the Department of Educational Science and Psychology and the Department of Methodology (Kövecsesné & Lampert, 2018)

One of the most popular forms of environmental education based on experiential pedagogy is forest schooling, in which the faculty has been actively involved since 1996 with the Forest Pedagogy project (Kövecsesné et al., 2020)

Table 1: *The potential of environmental pedagogy in teacher education*
(*A: Compulsory subject, B: Compulsory optional, V: Optional, T: Theory, P: Practice)

Intracurricular/extracurricular activities	Type *	Theory/ Practice	Related fieldwork/practical work
Applied pedagogy	A	T/P	Researchers' Night interactive exhibition Győr, SZ AK
Education for sustainability, health education	A	T/P	Field exercise

Sustainability pedagogical block: (I.II. III.)			
I.Environmental and sustainability education	B	T/P	Researchers' Night interactive exhibition Győr, SZ AK
II. The forest school theory and practice of organisation of learning	B	T/P	Ravazdi Forest School, Green Days at the Faculty
III. School garden	B	T/P	Apáczai Faculty School Garden, Öveges Kálmán Practical School Garden
Educational opportunities in national parks	B	P	Field exercise
Environmental Health	V	T	Field exercise
Forest pedagogy (project week)	V	T/P	In Ravazd at the Training Centre
Herbal therapy	V	T/P	School gardens
School Garden	V	T/P	School gardens
Opportunities to shape the external environment	V	P	Field exercise
Birds Day, Trees Day	-	P	Ravazd/Art Garden Bácsa
Forests Week	-	P	Győr/Ravazd
World Environment Day	-	P	Ravazd, Győr
Advent activities	-	P	Győr Árkád
Summer camp in Ravazd	-	P	Ravazd
Forest school camps, excursions year during the year	-	P	Ravazd
Bird-friendly school programme	-	P	Győr, SZ AK
Conferences, events (Apáczai Methodological Afternoons)	-	T/P	Győr, SZ AK

A significant milestone in these professional and scientific activities is the Environmental Education and Sustainability project, which has made available online and printed teaching materials and trained colleagues involved in the project to transfer knowledge on environmental and sustainability challenges through the training provided by the faculty.

Gál Ferenc University

The Gál Ferenc University is located in the heart of the Diocese of Szeged-Csanád, in the Dóm Square of Szeged, and welcomes young people and graduates who are committed to theological studies, the ecclesiastical vocations, the teaching profession, the sciences and the service of communities. Bishop Gyula Glattfelder

founded the predecessor of the University in Szeged, in the centre of the diocese, after the Trianon borders were drawn and the first academic year started in 1930.

The Jesuits ran the seminary and college until 1950 when the monastic orders were forcibly suspended. In the early 1970s, theological education for the laity was first introduced in the country in Szeged, in secret, and in 1983 it became possible to admit correspondence students. The training of full-time secular students (theologians and religious teachers) started with the regime change.

In 2008, the institution took over the name of Ferenc Gál, former professor of dogmatics, who was the first rector of Pázmány Péter Catholic University, and whose exceptional personality still influences education, priestly formation and the Hungarian Catholic Church. The University's research groups, its Gerhardus Publishing House, thematic publications, scientific journals, conferences, developing international relations and cultural events serve the social mission of the institution and the diocese.

In keeping with the Catholic ecclesiastical nature of the University, the Grand Chancellor is the Bishop of the diocese that runs it, many of the lecturers are clergy, and the students include seminarians preparing for their vocations at the diocesan St Gellert's Seminary.

The university has four faculties: the Faculty of Theology in Szeged, the Faculty of Pedagogy in Sarva, the Faculty of Health and Social Sciences in Gyula, and the Faculty of Economics in Békéscsaba. The Institute of Agriculture and Rural Development in Mezőtúr and the Institute of Health Education and Sports in Szeged are also instituted alongside the faculties. As part of its mission, the latter investigates and applies the role of sport in health education , lifestyle, nd the general personality development components of sport, in its pedagogical and sports science training. The Bolberitz Pál Institute in Kecskemét offers training in mental health, social work and child protection.

The University maintains one public education and two vocational training institutions: the Gál Ferenc University Nursery School and Primary School in Szarvas; the Gál Ferenc University Technical, Vocational, Secondary and Secondary School in Békés; the Benedek Göndöcs Catholic Technical School in Gyula. There is also an adult education centre based in Békés, with activities covering the Diocese. The university courses also provide training for staff working in the large institutional systems of the Diocese. In addition to the training of priests and religious teachers, lay and ecclesiastical staff, the training of nursery school teachers, teachers and ethics teachers is also essential because

the Diocese maintains a significant public education system, with more than eighty nurseries, primary and secondary schools.

The University's educational and scientific links with the University of Szeged, one of the leading universities in Hungary with a high international reputation, are essential. Many students also study at the University of Szeged, and the courses and electives offered by the University of Szeged are also open to students. There is also close cooperation in developing higher education in the South-Eastern Hungarian region under the new model and in teacher training (Dudok, 2021a). The University has also signed cooperation agreements with several Hungarian higher education institutions. University of Gál Ferenc students can travel to foreign universities within the framework of the Erasmus Programme and the Church-related programme. Within the Faculty of Theology, there are several areas of study: in addition to theology, the University offers courses in ethics, pastoral counselling and organisational development, and the history of the Catholic Church and culture.

The University of Gál Ferenc is ready to offer the experience of spiritual enrichment to all its students, in addition to the enrichment of knowledge, the expansion and the deepening of professional skills. Christian values, which are integral to the University's mission, are present in its teaching, academic administration and student services, and it offers everyone the opportunity to be personally involved in the community's efforts to help one another.

The institution's mission statement also includes elements of regional higher education: from theology and other faith-based courses, through teacher training, social and health education, to agricultural and technical training, and from helping the spiritual and spiritual renewal of the Hungarian countryside to strengthening communities along Christian values. The University regularly organises national and international conferences and scientific, professional and cultural events.

Gál Ferenc University launched a research programme on the practice of environmental pedagogy in 2021. Gerhardus Publishing House published a volume of studies summarising and presenting the research programme under the title 'Education and its Environment - the Pedagogical Culture of Energy'.

The Department of Social Pedagogy, under the direction of Dr. Gábor Kozma, former rector and head of the department, coordinated by GFE Marczell Mihály Special Pedagogical Research Group and in cooperation with the GFE Szarvas Practical Primary School and Practical Kindergarten and the GFE Faculty of

Pedagogy, in 2021, in the framework of a comprehensive research project, besides the topics of man and his environment, natural values and sustainability, the possibilities of energy development and its implementation in pedagogical practice were highlighted. The research aimed to provide recommendations, good practices and tools for developing pedagogical practice in public education, family education and teacher training.

Recent efforts in environmental education have pointed towards the practice of sustainability education. Gál Ferenc University, with its four faculties and its public education and vocational training institutions, is an active and recognised national participant in the development of environmental pedagogical practice, providing models for its practice in its institutions and in the continuous development of teacher training by coordinating pedagogical programmes and actions in the University's faculties, and by including in its toolbox unique pedagogy for all children and young people, regardless of their circumstances and circumstances.

The Primary School and Practical Kindergarten in Szarvas gives space to the Educational Methodology Centre of the 'Children's Garden', bringing together professional efforts to support the development of environmental awareness and sensitivity to the natural environment in the practice of public education, teacher training and further education.

The University's training institution is a Base Institution of the Ministry of Agriculture; it also provides professional coordination of the Green Kindergartens of Békés County, The institution, which has the title of Perpetual Green Kindergarten and Perpetual Eco-School, considers the support of professional-methodological research in environmental education and the networking of pedagogical practice in environmental education as a horizontal knowledge-sharing centre as its priority tasks.

Gál Ferenc University considers it a priority to provide academic support in this area to ensure that the pedagogical education of students (in the Bachelor's degree programmes in Kindergarten Teacher, Teacher and Infant and Early Childhood Education with optional specialisations in Roma / Slovak / Romanian / German languages) can be effectively implemented and further disseminated after their university studies.

As an ecclesiastical institution of higher education, the University of Gál Ferenc sees as an important part of its mission the scientific research of the contents and contemporary challenges of individual and communal responsibility towards the

created world and the development of educational practices, with particular regard to the energetic culture of modern society, and its application to the daily activities of individuals and communities, also in the form of essential services.

Methodology of the pilot evaluation questionnaire survey

Sustainability can be measured (Dudok, 2021b) in the framework of the project "Environmental Education and Sustainability - Implementation of Energy Awareness and Environmental Education Programmes in Hungarian Higher Education" a questionnaire survey was carried out to evaluate the pilot training courses. The questions focused on the already implemented and ongoing training programmes in environmental education and sustainability, as well as on the prior knowledge and experiences gained during the training.

The questionnaire contained a near-equal weighting of open and closed questions to get a more nuanced picture of the views, knowledge and expectations of the teachers, researchers and students involved in the project on environmental education and sustainability.

In addition to providing primary demographic data, the first main set of questions aimed to explore the interpretative framework of sustainability and sustainable development (questions 3-5). In addition to asking respondents to define their understanding of sustainability and sustainable development, the questions also asked how the teachers and students involved in the research perceived the link between educational processes and activities and sustainability. It is worth noting that environmental education, and later sustainability education, has been an issue of concern to researchers since the 1970s, and despite the many successful programmes and initiatives that have been reported worldwide in recent decades, it does not seem that this activity is changing the negative economic, social and environmental trends that humanity is facing with increasing intensity worldwide.

The second main set of questions (6-7) focused on Sustainable Development Goals. On 25 September 2015, the 193 Member States of the United Nations adopted 17 Sustainable Development Goals (SDGs) for the period up to 2030. In this context, the questionnaire included a question on the extent to which the global challenges and critical areas identified under the 17 SDGs are considered challenges in Hungary today and a scale allowing respondents to indicate the extent to which environmental education contributes to achieving and addressing the 17 SDGs.

Subsequent questions also asked respondents at which levels of education they considered environmental education to be the most important and how sustainability is presented at their university.

The questions follow the logic of the OVHR model developed by experts at the University of Pécs and Corvinus University of Budapest and first published in 2016. Of course, this is no coincidence, as the model developed by the experts is suitable for identifying the key areas that lead to the sustainable (better) operation of organisations and institutions in the longer term.

Even though the basic model examined the basic patterns of sustainability in the case of public service institutions, subsequent research also shows that the categories identified by the authors can be used for other types of organisations and institutions, which, taking into account the original model, are.
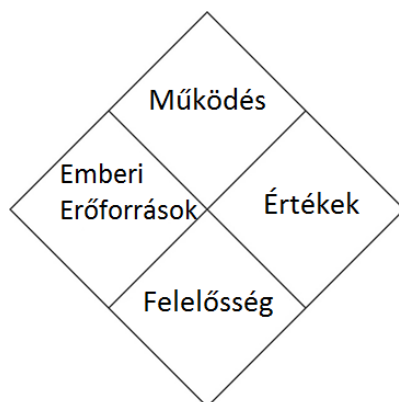

Figure 1. *Működés (Operations), Értékek (Values), Emberi Erőforrások (Human Resources), Felelősség (Responsibility) - a new model of sustainability*

1. **Operations:** public service institutions must manage their financial and human resources based on sustainable principles, developing operations capable of providing an adequate level of public services while maintaining sustainable activities.

2. **Values:** public service institutions should, in addition to providing good quality public services, communicate values through their daily operations that contribute to the development and widespread dissemination of good practices, sustainable use of resources and individual responsible choices, and the shaping of consumer attitudes towards sustainability.

3. **Human Resources:** public service institutions need to have a workforce with the right competencies, with employees who have specific knowledge, a high degree of flexibility and good adaptability (Rákosi, 2020, 2021), who can provide high-quality services and who can help achieve organisational and individual goals in the longer term.

4. **Responsibility:** in addition to the services provided by the public sector, there is a strong emphasis on the social responsibility of individual organisations and activities that, in addition to being sensitive to and helping to address social challenges, can contribute to shaping employees' attitudes towards sustainability.

The applicability of the model to higher education institutions is questionable. These institutions, which have moved somewhat away from the state and local government sector as a result of recent changes in the foundation and reorganisation process, cannot be considered as market or even purely non-profit organisations, and thus the public service character of their funding and provision of services is still present.

The last main set of questions in the questionnaire was directly related to project evaluation. On the one hand, the questions asked were related to the pilot training courses, and the curricula (Environmental Education and Sustainability) conducted or in progress at the universities involved in the practical implementation of the project, and on the other hand, the survey also included questions that sought to identify any shortcomings in the curricula that had been developed and shared with the trainers and students, so that the content of future training courses could be modified based on this feedback, comments and suggestions.

Analysis of the research questionnaires

The pilot training courses were evaluated in December 2022 for the four higher education institutions involved in the project. In Chapter 2, we saw that all the partner universities had made significant steps in the past to integrate environmental education and sustainability knowledge into their teaching and academic work.

In recent years, the focus on these subjects has been visible in the curricula of faculties with a profile primarily in teacher education and lower secondary teacher education in response to the increasing economic, social and environmental challenges. In addition to their educational programmes, these

institutions can be seen as crucial national think tanks on environmental education and sustainability.

The staff of the PTE KPVK coordinated the process of sharing the essential methodological foundations of the printed and electronic teaching material on environmental education and sustainability with the partner universities cooperating in the project and training the teaching staff of the institutions for the effective implementation of the educational activities related to the topic.

At PPKE BTK, the trained lecturers then met the students involved in the project in a special lecture series, while in the case of the other institutions, the colleagues involved in the development of the curriculum incorporated the content elements and topicalities related to the subject area in their courses on environmental education and sustainability in the autumn semester of the academic year 2022/2023.

The activities in the participating higher education institutions were evaluated through an online questionnaire praising the joint work of colleagues from the departments involved in the project. 79 people completed the questionnaire at PTE and 73 at Pázmány Péter Catholic University. The Széchenyi István University received 72 evaluable questionnaires, while the Gál Ferenc University received 75. In total, 299 questionnaire responses were analysed to formulate the research results.

Across all responses from the four institutions, more than half (64%) of respondents were women, and 36% were men. Looking separately at the universities included in the analysis, there is only a minimal difference of a few percentage points from the overall proportion: 69% of respondents at the PPKE BTK were female, compared to 71% at the PTE, two-thirds of respondents at the SZE and almost half at the GFE.

Regarding age, the vast majority of respondents (61%) were in the 25-45 age group, but there were also respondents younger and older than this for all universities. When looking at the university data separately, as with the gender ratio, no significant difference is observed.

The conceptual framework of sustainability and sustainable development

Following the questions on demographic information, the questionnaire asked about the understanding of sustainability and sustainable development. The majority of respondents were familiar with the meaning of sustainable development, with the most common definitions appearing to accurately or

partially reflect the relatively widely used definition published in the 1987 Brundtland Commission report, but also including Herman Daly's definition. It is worth noting, however, that there are also slightly different definitions from those given above: answers such as a better life, a pledge of the future, and 'development that does not affect our future', although not at all accurate, also refer to elements of content that are present in the classic definitions.

It is clear from the responses that a significant proportion of respondents in all the universities surveyed are aware of the meaning of the term, but at the same time, although a relatively small number of respondents understand sustainable development in terms of other elements than the original definition, and some responses also express critical views.

The differences between environmental education and education for sustainability are more heterogeneous. A significant proportion of respondents (around 70%) correctly consider that environmental education focuses primarily on the processes of learning and teaching the most essential knowledge about nature and the environment, while in the case of education for sustainability, in addition to environmental knowledge, there are also economic and social processes, without knowledge of which it is quite difficult to look objectively at the damage and problems in nature caused primarily by humanity.

There is also a relatively high proportion of responses (around 20%) that consider education for sustainability as a much broader and more useful interpretative framework because while environmental education primarily examines the problems and possible responses from the perspective of the natural environment, sustainability and sustainable development also include the human, social and economic dimensions in addition to the environmental elements. In addition, education for sustainability does not simply mean integrating knowledge of the other two areas into the educational and training processes, but also that the knowledge transfer activities must include an essential role in understanding the links and causal relationships between the natural/environmental, economic and social subsystems.

However, about 10% of respondents consider there is no substantive difference between environmental education and sustainability education, as they are the same educational process.

Also interesting are the answers to the question of the effectiveness of environmental education and education for sustainability. A proportion of respondents (around 40%) consider the process to be successful. The responses to

the open question also show that a significant proportion of teachers and students involved in the subject are convinced that environmental education in teacher education, especially in lower teacher education, is fully capable of moving the children in training towards the positive development of their awareness, commitment and responsibility towards environmental issues.

However, around a third of respondents are more critical. The responses show that not everyone is thoroughly convinced that environmental education and sustainability education, which is generally considered to be successful, will, in the longer term, lead to changes that will increase awareness and responsible attitudes towards the environment, and not everyone is sure that this form of learning and information transfer can change the negative trends caused by humanity.

For question 6 (*To what extent do you think that environmental education and education for sustainability contribute to sustainability*?), almost 90% of respondents from institutions consider that this contribution is significant, and several responses suggest that this process should start as early as possible in life. The other leading group of responses is also interesting: the central message of these responses is that this educational process contributes only moderately to later environmental awarenss, and that, in addition to socialisation in childhood, the opportunities, resources and life situation of the individual in adulthood lead to a more or less responsible relationship with the environment in adulthood. Moreover, that these educational processes will fundamentally change man-made problems globally and worldwide is far from certain.

This kind of dichotomy in terms of effectiveness can also be seen in other research results and studies, not to mention the fact that environmental education programmes, and the programmes that have been gaining considerable momentum since the second half of the 1980s, have been running successfully for more than 50 years, but it cannot be said that the negative trends that gave rise to these subject areas have changed significantly in recent decades. For these reasons, it is impossible to make a clear and objective assessment of the usefulness and added value of these activities, nor do we know where we would be without these programmes and educational activities.

Assessing the SDGs

The second main set of questions in the questionnaire dealt with priorities related to the SDGs. An essential finding of the research is that there is no significant difference in patterns when looking at the universities surveyed together or by

the institution. In the case of question 6 (*17 Sustainable Development Goals (SDGs) for the period up to 2030 adopted by the 193 Member States of the United Nations on 25 September 2015. To what extent are the global challenges and critical areas identified by these 17 goals considered a challenge in Hungary today?*) quality education is the most important priority, followed by climate change. Similar but lower importance is attached by respondents to the other goals, with the least important goal being the appropriate use of marine resources.

The responses reflect the current economic, social and environmental challenges, as the negative developments of recent years, the pandemic, the subsequent economic downturn and the economic and social impact of the Russian-Ukrainian conflict have significantly redefined the priorities, so it is not surprising that the importance of each target area varies mainly from the middle to the most important category (4-7).

Question 7 (*To what extent do you think that environmental education contributes to the achievement of 17 sustainable development goals and the management of these challenges?*) also reveals an interesting result. For all institutions, it is clear to respondents that environmental education is essential for healthy living, well-being and prosperity, responsible production and consumption, and the achievement of a peaceful and inclusive society (the highest absolute scores are observed in these categories when the total number of responses is aggregated), but there are also several elements where respondents believe that the goals can be achieved without environmental education. Examples include the re-emergence of hunger, global partnership, industrial development, and innovation.

The data thus show that respondents do not (realistically) consider environmental education as a universal tool sufficient to effectively address sustainability challenges, while its foundational nature is (also) undisputed based on the current results. It is a sad but realistic finding that respondents consider that environmental education contributes the least to poverty eradication.

Perception of environmental education

The next question in the questionnaire explores the level of training and education where environmental education is most needed. None of the respondents thinks that there is no need for environmental education in education, and two-thirds consider that there is a need for this form of education at all levels. The aggregate figures show that 42% of respondents think environmental education is needed

in nursery schools, 20% in primary schools and 19-19% in secondary and higher education.

Of course, there are differences between institutions: in the case of PTE, pre-primary and primary education is considered to be more prominent with all levels responding, while in the case of Pázmány Péter Catholic University, the pre-primary level is considered to be less prominent, but the important message is that respondents consider environmental education to be an important priority. For GFE, the importance of the kindergarten level is 44%, while for SZE, it is 38%, or higher education is more important for SZE (22%), compared to 16% for GFE.

Despite the differences in priorities between institutions, it can be concluded that for all universities, the pre-primary level is the most important, while the subsequent levels of education are of roughly similar importance, based on the responses, which reflects the foundational nature already mentioned in the sustainability goals: if environmental and sustainability values are considered with care and attention in the foundation of educational processes, these appropriate foundations need only to be strengthened and enriched with age-appropriate knowledge elements at later levels.

The responses also show that respondents do not expect success in the short term and that they see the value of measuring effectiveness not in individual performance but at the level of a given region or country, which of course can be strongly influenced by several other economic and social processes.

However, the measurement of the effectiveness and efficiency of environmental education is less clear to respondents. Some of the respondents consider the effectiveness of education and training processes to be assessed using various relatively widely known indices (the most frequently used index in the questionnaires is the HDI index developed by the New Economics Foundation in London - Happy Planet Index), but some respondents also consider the results of various ecological footprint measurements to be suitable for assessing effectiveness in the longer term.

At the same time, the responses also show that respondents are not entirely sure whether these results give a realistic picture of the extent to which children, pupils and students leaving education and training can apply the knowledge they have acquired in their adult lives.

Some responses, however, point out that an accurate picture of efficiency and effectiveness can only be obtained, precisely because of the above, if a selected sample is followed continuously, even for decades, but it is also obvious that as

time goes by, more and more economical, social and environmental impacts will influence the activities and actions of the sample, where, in addition, knowledge and knowledge elements acquired even several decades earlier will inevitably be eroded.

Examining some of the factors of the OVHR model

The next part of the questionnaire asked about the sustainability practices of the respondents' parent institutions. According to half of the respondents, sustainability is reflected in the organisational culture of the universities surveyed (this proportion is higher in the case of PTE, more than 60%, presumably due to the Green University programme, which has been running successfully for several years), another 40% believe that sustainability is partly reflected in the organisational culture of higher education institutions and only about 10% believe that the organisational culture does not include elements related to sustainability and sustainable development.

For the universities surveyed, energy efficiency programmes, measures to reduce paper-based bureaucracy and environmentally conscious behaviour were the most frequently cited elements of sustainability culture. Interestingly, selective waste management and using renewable energy are less important, and social responsibility (directly) is not present in any of the universities. The latter is presumably due to the scarcity of available financial resources, but at the same time, evident from the answers to subsequent questions, there are several initiatives at institutions that focus on environmental education and sustainability.

In the case of question 12 (*Are sustainability values, information, and knowledge elements in the training programmes of your university*?), respondents mentioned mainly teacher training (85%), which is, of course not a coincidence since the respondents were primarily students and teachers involved in teacher training.

Responsible, conscious behaviour (consumer and citizen), commitment to the environment, knowledge and respect for nature and environmental awareness are the most important sustainability values communicated by universities. The responses - somewhat in line with research on the topic (Vehrer 2016a, 2016b) - show that more conscious and responsible behaviour is essential for substantive change in sustainability in our country and globally. Another question is: to what extent do current economic and social processes facilitate these changes?

However, it is also worth noting that in the universities surveyed, it is far from being the case that sustainability values are only present in teacher training: it is

also clear from the responses that, in addition to these courses, other departments and training programmes at universities are increasingly incorporating knowledge and skills that contribute to the development of a more aware, environmentally engaged and responsible generation.

Other elements include the principles of the UN Sustainable Development Goals (SDGs), which have already been examined through the previous questions, knowledge of the links between global challenges and local actions, social and intercultural competencies, communication, digital literacy, civic competencies and responsibility, loyalty, modesty, humility, appreciation of the values of others, forward-thinking, a sense of purpose, attitudes related to environmental awareness, selective waste collection, openness, willingness and knowledge to learn, critical thinking, knowledge of the living world, and knowledge of ecosystems.

The answers to question 15 (*Does your university support external programmes and initiatives related to environmental education and sustainability?*) show that respondents' institutions support several "external" programmes, mainly professional and awareness-raising programmes, often based on the knowledge base and human resources of universities. Implementing these joint projects, mutual agreements, and joint programmes can strengthen the link between universities and their environment, but the responses also mention, in several cases, the link of their institution to regional and national initiatives.

Evaluation of pilot training and curricula

The last major group of questions in the questionnaire concerned the evaluation of the pilot programme. The results showed that the programme was well received by all the organisations involved in the pilot training. A significant proportion of respondents were satisfied with the quality and coverage of the training material.

Both students and trainers involved in the project were positive about the pilot training, the printed and electronic course material produced and the trainers' skills. Respondents considered the teaching material to be complete (92%), practice-oriented (85%), of sufficient quality and scope (87%), and well structured, with pictures and examples to facilitate the learning process (90%).

The methodological development of the curriculum (learnability - teachability) was considered by the respondents to be outstanding; the quality and content of the images, the topicality of the literature used, and the structure of the curriculum were also considered to be very good. However, the practical

exercises (research, reading, etc.) which complement the textual parts of the curriculum are not entirely positive, with the overall score, in this case, being slightly lower than in the other categories (74%).

This information may be necessary for authors and editors when designing further learning materials and books in the future, but it is worth pointing out that the data suggest that this type of approach is less critical among younger respondents. When evaluating the subject areas covered in the curriculum, unsurprisingly, the sections of the chapters relating to the preschool and primary school age groups are considered particularly important.

Overall, the pilot project has produced well-developed, well-structured and up-to-date material, which can be a good starting point for further training courses similar to the project's objectives.

However, two things should be pointed out based on the results: the economic and social processes and changes of recent years (the COVID pandemic mentioned by the respondents, or the current war situation and its economic, social and environmental impacts) receive relatively little attention in the material, so in the future, to provide up-to-date information and knowledge transfer, it may be worth updating the chapters and adding additional chapters or parts of chapters.

Another important criticism is that, in addition to the positive assessment of the presentation of practices in the nursery and primary schools, there is a lack of information on environmental education in secondary and higher education. In the future, therefore, if the authors wish to present all levels of education in total, it is essential to present the specific features, and good practices of environmental education at these levels, for which the Green University programme mentioned earlier can provide a basis in the case of the University of Pécs.

Instead of a summary: the importance of environmental education and sustainability in lower secondary teacher education

The role and importance of environmental education in teacher education and initial teacher education in the 21st century are unquestionable. Students in education today will be the ones who will be dealing with future generations in the various educational arenas, and these generations are likely to face sustainability challenges to a much greater extent in their lifetimes. The role that today's educational institutions can play is therefore important in helping to equip young people with the skills, knowledge and competencies that can make them more resilient, aware, sensitive and adaptable in the period ahead.

Higher education institutions can make a real contribution to sustainable development in three main areas. Firstly, they can integrate sustainability-related knowledge elements into their educational programmes, even if the programme is not directly related to the environmental dimension. On the other hand, institutions can, base on the OVHR model already highlighted, implement and strive for operations with a reduced environmental impact and ecological footprint. Thirdly, universities can support projects and knowledge-sharing processes that can lead to real sustainability outcomes and the sharing of good practices and experiences by redistributing their available resources.

An important result of the research is that the interest and commitment to environmental education and sustainability can be traced among the students and teachers of the higher education institutions participating in the pilot project. The results show that current and future educators are doing their utmost to ensure that the next generation of educators is prepared to meet the sustainability challenges that are already visible and those that are likely to arise.

Of course, education and training alone will not be enough to make all people change their use of resources, transform their consumption and sustainably organise their lives overnight. Without education and training, however, the chances of making these changes are likely to be significantly lower, so it is important to take a proactive approach to transfer the tools, knowledge elements, methods and good practices that we consider good and sustainable.

The most important finding of the empirical research is that, despite significant differences between the faculties in the sample, there are no significant differences in the perception of environmental education and sustainability. Across the four collaborating institutions, the project was well received, as was the high proportion of respondents who prioritised environmental education in pre-primary and lower-secondary teacher education.

These foundations can significantly influence subsequent patterns of behaviour, and, even though longer research results are not available or are only partially available, they certainly contribute to responsible citizenship behaviour committed to their environment.

Several good practices were observed in the training sites involved in the project. At the Apáczai Faculty of Széchenyi István University, which has been involved in teacher training for 245 years, a special effort was made to introduce students to the latest pedagogical trends, such as experiential education, reality-based learning, outdoor learning, and to introduce students to educational

opportunities in natural environments. By breaking out of the digital framework, students can also be introduced to developmental opportunities in the school garden, schoolyard, and the work of the related research group of the Department of Methodology of the Faculty of Social Sciences.

Finally, it is also worth pointing out that the application of the OVHR model presented in the study in teacher education could be another important research direction for the partner universities cooperating in the pilot project to address and that the extension of the curriculum, which has been evaluated favourably in principle, to a systematic, comprehensive study of all levels of education could be a meaningful direction.

References

Bihariné, Krekó I., & Kanczler, Gy. (2019). Az óvodai környezeti nevelés módszertana, ELTE, Budapest.

Bihariné, Krekó I., & Kanczler, Gy. (2019). *Természetvédelem és környezetvédelem*. ELTE, Budapest.

Dudok, F. (2021a). A pedagógusok általános helyzete a kelet-közép-európai térség néhány országában. *Módszertani Közlemények, 61*(3), 5-25.

Dudok, F. (2021b). Fenntarthatóságra nevelés a közoktatás szintjén. In. Zádori, I. (ed.). *Tiszta energia - fenntartható környezet*. DePress Kiadó, Budapest. 75-91.

Halbritter, A. A, & Lőrincz, I. (2017). A XXXIII. OTDK Tanulás- és Tanításmódszertani – Tudástechnológiai Szekciójának rendezési tapasztalatai. In. Pongrácz, A. (ed.). *Útkeresés és újratervezés*. XXI. Apáczai-napok Konferencia Tanulmánykötet. Széchenyi István Egyetem Apáczai Csere János Kar, Győr. 357-363.

Halbritter, A. A., Czimondor, K. K., Csenger, L., & Ruppertné, H. K. (2019). Iskolakert a győri tanítóképzésben – régen és ma. In. Baranyiné, K. J., & Fehér, Á. (eds.). *240 éves a győri tanítóképzés. Az Apáczai Csere János Kar emlékkönyve*. UNIVERSITAS-GYŐR, Győr.-62.

Halbritter, A., Reider, J., Pápai, B., & Petz, T. (2020). A szabadban tanulás lehetőségei néhány tantárgy oktatásában In. Makkos, A., Fehér, Á., & Pongrácz, A. (eds.) *Okos lét, innováció és digitalizáció – irányok, trendek és következmények*. A XXIII. Apáczai-napok Tudományos Konferencia tanulmánykötete. Széchenyi István Egyetem Apáczai Csere János Kar, Győr. 257-264.

Kozma, G. (2021a). A nevelés és környezete – az energetika pedagógiai kultúrája. In. Bíró Gy. (ed.). *A nevelés és környezete: az energetika pedagógiai kultúrája*. Gerhardus Kiadó, Budapest. 7-11.

Kozma, G. (2021b). *Erőt adó tudomány*. Előadás a Világnak szóló tudomány c. online konferencián a IV. Gyulai Felsőoktatás Napján, 2021.02.05.

Kozma, G., Petróczi, E., & Nagyné, H. A. (2020). Resztoratív szemléletű keresztény közösségszervezés és vezetés. In. Petróczi, E. (ed.). *A resztoratív eljárások speciális pedagógiai lehetőségei*. Gerhardus Kiadó, Szeged. 33-49.

Kövecsesné, G. V., & Lampert, B. (2018). A környezetpedagógia gyakorlata a tanítóképzésben. *Journal of Applied Technical And Educational Sciences / Alkalmazott Műszaki és Pedagógiai Tudományos Folyóirat, 8*(2), 36-54.

Kövecsesné, G. V., Lampert, B., Petz, T., & Csenger, L. (2020). Investigation of the attitudes of first-year students towards sustainability and environmental awareness at Széchenyi István University. *Journal of Applied Technical And Educational Sciences / Alkalmazott Műszaki és Pedagógiai Tudományos Folyóirat, 10*(3), 24-44.

Meadows, D., Meadows, De., & Randers, J. (2005). *A növekedés határai –harminc év múltán*. Kossuth Kiadó, Budapest.

Meadows, D., Meadows, De., Randres, J., & Behrens, W. W. (1972). *The Limits to Growth*. A Potomac Ass. Book, London and Sydney.

Molnár, B. (2020). A környezeti válság és az iskola: John Dewey nevelésfilozófiájának aktualitásáról. In. Szécsi, G., & Tóth, I. J. (eds.). *Természet és felelősség. A környezeti etikai és nevelés filozófiai alapjai.* Gondolat, Budapest. 197-216.

Mónus, F. (2020). *A fenntarthatóságra nevelés trendjei, lehetőségei és gyakorlata a közép- és felsőoktatásban*. Oktatáskutatók Könyvtára 9. CHERD, Debrecen http://mek.oszk.hu/21700/21797/21797.pdf

Németh, G. (2018). *Bioetikai vázlatok. Bioetika és más életerkölcsi kérdések*. Szent István Társulat, Budapest.

Pongrácz, A. (2021). A pályaorientáció megalapozásának lehetőségei 1-4. évfolyamon művészeti nevelés és játékpedagógiai módszertanok segítségével. In. Gróz, A., Kövecsesné, G. V., & Várszeginé, G. E. (eds.). *Gyermek-Kultúra-Nevelés*. Magyarország: Széchenyi István Egyetem Apáczai Csere János Kar, Győr. 29-34.

Rákosi, Sz. (2020). Science centerek lehetőségei a visegrádi országok járműipari körzeteinek gazdaságfejlesztésében. *Polgári Szemle, 16*(1-3).

Rákosi, Sz. (2021). A STEM pályaorientáció helyzete Európában és Magyarországon. In. Makkos, A., Kecskés, P., & Kövecsesné, G. V. (eds.). *„Kizökkent világ" – Szokatlan és különleges élethelyzetek: a nem-konvencionális, nem „normális", nem kiszámítható jelenségek korszaka?* XXIV. Apáczai-napok Tudományos Konferencia tanulmánykötete. Széchenyi István Egyetem Apáczai Csere János Kar, Győr.

Puskás, A. (2006). *A teremtés teológiája*. Szent István Társulat, Budapest.

Szilágyi, T. (2021). A felelősség társadalma. *Kultúratudományi Szemle, 3*(4), 38–45.

UNESCO (2017). *Fenntartható fejlődési célok oktatása – Tanulási célok*. Eszterházy Károly Egyetem Oktatáskutató és Fejlesztő Intézet (EKE-OFI), Budapest. http://ofi.hu/sites/default/files/attachments/fenntarthato_fejlodesi_celok_oktatas a_unesco_2017.pdf

Varga, A. (2020). *A fenntarthatóságra nevelés elméleti alapjai és egész intézményes megközelítés*e. Habilitációs dolgozat – Tanulmánykötet. ELTE Ember–Környezet Tranzakció Intézet, Budapest

Vehrer, A. (2016a). Environmental consciousness and intergenerational learning. *Modern Science / Moderni Veda, 1*(1), 82-97.

Vehrer, A. (2016b): The place and role of the environmental responsibility in the generation management. In. Fodorné, T. K. (ed.) *Felsőoktatási kihívások. Alkalmazkodás stratégiai partnerségben*. Pécs. 152-166.

Zádori, I., & Nemeskéri, Zs. (2018). Globális nevelés és munkaerőpiac. In.: Tibold, A. (ed.) *Munka és egészség: Tanulmányok a munkatudományok és a foglalkozásegészségügy határterületeiről*. Magyarország: Edge 2000 Kiadó, Budapest. 204-211.

Zádori, I., Sebők, M., & Nemeskéri, Zs. (2016). Sustainability, HRM and Public Services. *Pro Publico Bono: Magyar Közigazgatás. a Nemzeti Közszolgálati Egyetem közigazgatás-tudományi szakmai folyóirata, 2016*(2), 42-57.

Zádori, I. (2017). Fenntartható fejlődési célok és az OVHR - modell a felsőoktatásban. In. Fodorné, T. K. (ed.). *Felsőoktatás, életen át tartó tanulás és az ENSZ fenntartható fejlesztési célok megvalósítása: Higher Education, Lifelong Learning and Implementation of UN Sustainable Development Goals*. MELLearN Egyesület. 80-93.

Zádori, I. (2022, szerk.). *Környezeti nevelés és fenntarthatóság.* Pécsi Tudományegyetem, Pécs.

Relationships between the development of numerical abilities and phonological awareness in young age

Enikő Györkő[1]; István László Gyimes[2]

[1] University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, e-mail: gyorko.eniko@pte.hu

[2] University of Essex, e-mail: ig16036@essex.ac.uk

Abstract

Background: Previous neuropsychological studies pointed out that amongst the various cognitive skills leading towards the development numeracy; language skills may have an important, while mostly overlooked role. Out of the numerous language skills, phonetic awareness seems to aid the development of arithmetic skills.

Aims: This research aims to explore the relationship between phonetic awareness and the development of numerical skills in young children.

Methods: In this research, children aged 5-6-7-year-old (who were still in kindergarten) were included. We measured their numerical skills using Number Sense Screener and their phonemic awareness using in study.

Results: Regression analysis showed a linear relationship between phonemic awareness and arithmetic skills in children at 6 and 7 years old.

Conclusion: Our results indicate a link between the development of phonemic and arithmetic skills. Furthermore, there is evidence to suggest that the development of these aforementioned skills can predict success in later educational performance.

Keywords: neurophysiology, phonological awareness, numerical skills

Introduction

Development of numerical abilities

The comprehension of numbers, values and amounts is a basic necessity for us. Understanding and solving mathematical problems are part of our everyday life. As such, investigating the development of numerical skills is important in

understanding how to help children learn mathematics. Although there is little information on the frequency of dyscalculia, the number of children with learning disabilities tends to increase every year (KSH, 2022). It is unavoidable that we investigate atypical developments and look for ways to mitigate the issues arising from learning disabilities. Exploring developments during kindergarten years is paramount for a better view of how learning disabilities appear in children.

Numerical ability is a multi-component cognitive system. According to the Triple Code Model (TCM, Dehaene, 1992; Dehaene & Cohen, 1995), this cognitive system consists of three closely interconnected mental representations mediated by different brain networks (Figure 1). These three codes are the verbal code (i.e. the word 'four'), the visual representation (i.e. the Arabic number '4') and an analogue representation of magnitude (i.e. the specific or approximate amount). The verbal code is assumed to be involved in exact counting, and the Arabic code is in written algorithms. The third representation, which supports numerical skills, occurs in numerical activities such as comparisons or approximate arithmetic.
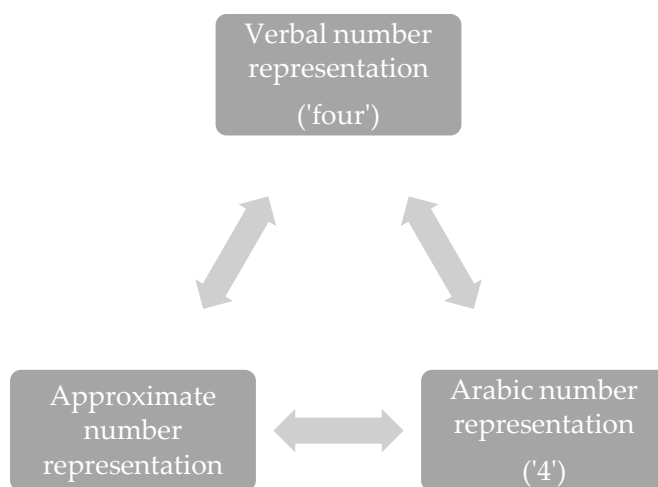

Figure 1. *The Triple Code Model (TCM). The three types of coding of numerical values are verbal (top), visual (bottom right) and abstract (bottom left). These types of coding interact with each other and are involved in different aspects of arithmetic.*

Although the development of early numerical ability is well-known (see discussed in Wynn, 1992), little is known about the development of the overall

profile (Passolunghi et al., 2015). Number skills are multi-componen,t and the development of these facets takes years (Dehaene, 1992). For the current topic, it is particularly important that the development of mathematical abilities is influenced by several cognitive factors such as language abilities, both verbal and non-verbal (McCrink & Wynn, 2004; Starr, Libertus & Brannon, 2013; Lourenco et al., 2012). Counting and exact arithmetic rely on language-based representations, whereas the comparison of numbers and estimation of amounts involve approximate quantity-based representations that are already available early in years, before the first stages of language acquisition (Nys, Content & Leybaert 2013).

While the TCM model already assumes the involvement of language skills in the development of numerical abilities (i.e. the verbal expression of numbers) (Dehaene, 1992; Dehaene & Cohen, 1995), the identification of the exact language functions involved is yet to be uncovered. Fortunately, some verbal abilities involved with the development of numerical skills are already identified. For example, the verbal representation of numbers is used for the mental manipulation of numbers (Van Rinsveld et al., 2022), arithmetic facts are stored in verbal memory (Otero, Salgado & Moscoso, 2022), and the availability of phonological coding can be.

The relationship between phonological awareness and numerical success

Mathematical and reading skills are correlated, and language skills play a significant role (Korpipää et al., 2017). These results lead to the next hypothetical question if these same language abilities can regulate the numerical success. Previous studies pointed out a potential link between phonetic awareness and mathematical skills (Mazzocco & Myers, 2003, Cowan et al., 2005), but there is a serious lack of research aiming to answer when and how these language skills are linked to the development of numeracy and literacy abilities of young children.

Phonological awareness is an important component of phonological processing (Wagner & Torgesen, 1987) and at least two models showed significant involvement in numerical processes, too. According to the TCM, the verbal code of a number relies on phonological processing when working with numbers (Dehaene et al., 2003). LeFevre et al. (2010) found three cognitive precursors in the early development of numeracy, namely the development of quantitative, linguistic, and spatial attention.

Research questions

1. Could the currently understood developmental progress of number sense to be shown in Hungarian kindergarten-age children?

Previous studies established clearly divided levels of the development of number sense from age five upward (Jordan et al., 2010). However, these levels have not yet been investigated in a Hungarian sample. Furthermore, our understanding of number comparison skill development, which is the best indicator of the atypical development of number sense, is still lacking (Györkő, 2015; Györkő et al., 2020).

2. Is there a difference between phonological awareness of children within very narrow age groups?

The development of phonological awareness is influenced significantly by the process of learning to read. It is well-established that certain phonological abilities are developing during kindergarten, such as vocabulary (Jordanidisz, 2011; Oluette & Haley, 2013). However, it is still unclear if there are significant differences within a narrower age range (i.e. 1 year, resulting in age groups of 5, 6 and 7 years old children).

3. Is there a link between phonological consciousness and numerical sense developments?

Phonological awareness is important for successful language comprehension. It can be assumed that there is also a link between phonological and mathematical abilities, as correlations have been shown between numerical magnitude processing and phonological processing in the Chinese sample (Liu et al., 2022).

Methods and materials

Participants

Data from 367 children were analysed in this study. The children were assigned into three age groups: 5, 6 and 7 years olds (Table 1). Thus, we have covered the sensitive period of the development of phonological awareness (Mayo-Turk; 2005, Nittrouer & Lovewenstein, 2010).

Table 1. *Age patterns of the examined sample*

	N	Age average/year	Minimum age/year	Maximum age/year	Std
5 years old	90	5,4	5,1	5,9	,30547
6 years old	237	6,3	5,11	6,9	,32192
7 years old	40	7,1	7	7,9	,19474

Questionnaire

In order to investigate the numerical skills of the children, the Numerical Comparisons and Number combinations subscales of the Number Sense Screener (NSS) were used. The Number Comparisons section assesses understanding of number magnitude when presented in a symbolic form. Numerals corresponding to the numbers in the tasks are presented in the NSS stimulus book, but no physical or pictorial model of the quantities. The Number Combinations items in the story problems subarea assess the child's ability to pull the mathematical data out of a story and perform either an addition or a subtraction problem (Jordan, Glutting & Dyson, 2012).

Phonological awareness was measured by the children's ability to accurately identify the position of specific sounds in a word. During the task, children had to answer if they heard a specific sound at the beginning, middle or the end of the word. The words were given to the children in the forms of pictures.

Results

Comparing number sense and phonological abilities of age groups

Our tests revealed significant differences between the age groups in several tasks (Table 2). The children were significantly different in their results of arithmetic tasks (Figure 2); however, in number comparison there was only a significant difference between 6- and 7-years old children (Table 3). It can be argued that a potential developmental leap is present between 6 and 7 years of age.

Table 2. *Results of analysis of variance on numerical performance and phonetic awareness by age group*

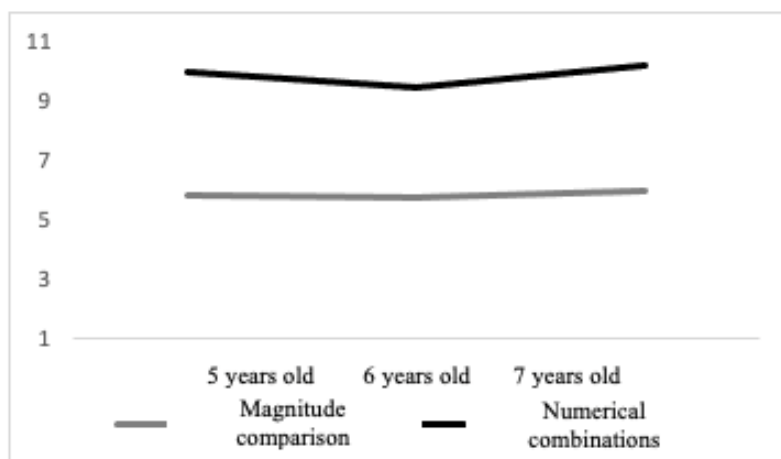|		MEAN	STD	F	P
MAGNITUDE	5 years old	5,833	1,056		
COMPARISON	6 years old	5,743	1,355	,983	,375
	7 years old	5,966	1,530		
NUMERICAL	5 years old	4,111	1,166		
COMBINATIONS	6 years old	3,682	1,461	6,430	<,002
	7 years old	4,203	1,090		
PHONOLOGICAL	5 years old	4,194	2,936		
AWARENESS	6 years old	4,747	2,763	6,527	<,002
	7 years old	5,712	2,579		

Figure 2. *Results of the judgment of numerical magnitude and the performance of numerical operations by age group*

We used a one-way analysis of variance (ANOVA) to investigate the phonological awareness scores. There was a significant main effect of age group. Post hoc tests revealed significant differences between 5 and 6 and 6- and 7-years old children's results, but there was no difference between 5- and 6-years old children's scores (Figure 3).

Table 3. *Comparing the performance of age groups in numerical magnitude comparison, numerical combinations, and phonological awareness tasks*

|		MEAN DIFFERENCE	STD. ERROR	P
MAGNITUDE COMPARISON	Between 5-6 years old	,09034	,25013	,931
	Between 5-7 years old	-,13277	,26438	,870
	Between 6-7 years old	-,22311	,15921	,341
NUMERICAL COMBINATIONS	Between 5-6 years old	,42887	,23874	,172
	Between 5-7 years old	-,09228	,25233	,929
	Between 6-7 years old	-,52115*	,15196	<,002
PHONOLOGICAL AWARENESS	Between 5-6 years old	-,55322	,49051	,498
	Between 5-7 years old	-1,51742*	,51845	<,010
	Between 6-7 years old	-,96420*	,31222	<,006
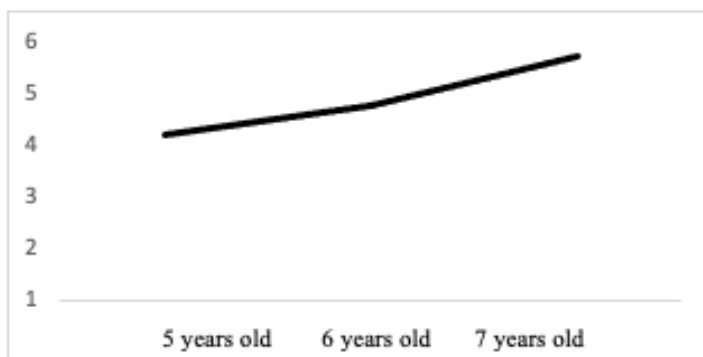
Figure 3. *Changes in the performance of phonetic awareness according to the comparison of age groups*

Investigating the link between phonological and numerical abilities

Linear regression analysis showed a clear link between phonological awareness and number comparison skill, as well as between phonological awareness and arithmetic skills. However, the link is non-significant for 5 years old children and strongly significant for 7 years old children (Table 4). It can be reasoned that 7 years old children rely a lot more on their phonological abilities to solve cognitive problems.

Table 4. *Distribution of the relationship between phonetic awareness and numerical success by age group*

				Phonological awareness	
		R	F	t	p
Magnitude comparison	5 years old	,304	3,163	1,778	,085
	6 years old	,191	9,530	3,087	<,002
	7 years old	,549*	33,996	13,246	<,001
Numerical combinations	5 years old	,242	1,926	1,388	,175
	6 years old	,317	28,114	5,302	<,001
	7 years old	,317	8,847	2,974	<,004

Conclusions

Here, we investigated the relationship between two cognitive abilities' development. Within number sense, we focused on number comparison and

combination skills, while within phonological skills, we investigated phonological awareness. Additionally, we have investigated the relationships between the aforementioned cognitive abilities in three narrow age groups (5, 6 and 7 years old).

We have identified significant developmental leaps from 6 to 7 years old children (which is the age just before or at starting elementary school in Hungary), which is in line with previous findings (Jordan et al., 2012). This was expected, as previous studies already pointed out significant developments in number sense (e.g. arithmetic skills, and number comparisons skills) at this age range (Györkő, 2015; Györkő et al., 2020). Numerical comparison skills are described as having a predictive effect on number sense (Schneider et al., 2017; Schwenk et al., 2017), as well as success in elementary school (Jordan et al., 2007; Jordan et al., 2009). Based on our previous findings, it can be argued that older children (7 years old) are more successful as they accumulate more and more experience (Yilmaz, 2017).

Several novel paradigms stepped over the evaluation of developmental patterns and priorities tasks aimed at developing cognitive abilities. For instance, the view on the development of arithmetic and mathematical skills of children shifted significantly (see discussed in Baroody, Lai, Mix, 2006; Kermani, 2017, Aragón-Mendizábal et al., 2017; Thomas, et al., 2021). It is more widespread to investigate typical and atypical developmental patterns, as well as give suggestions on modernising our way of teaching mathematics. For example, Baroody, Eiland and Thompson (2009) reported significant development of mathematical knowledge in high-risk kindergarten-aged children following a 9 months long training.

It is important to stress our findings about the strong link between phonological awareness and number sense for children at the end of their kindergarten years. We suggest a supporting role of language skills for accurate mathematical problem-solving as well as text comprehension (De Smedt, 2018). This link has been found in young atypical children as well: There was a strong link between phonological awareness and number sense in young children with dyscalculia (Peters, De Beeck & De Smedt, 2020). However, other studies suggest that this correlation between phonological and numerical skills is present in older children as well. Hecht et al. (2001) investigated nearly 200 8 years old children's phonological memory, awareness and access to phonological codes up until they turned 11 years old. All three abilities (phonological memory, awareness and access to phonological codes) correlated with their mathematical computation skills throughout the study. Furthermore, they showed that phonological processing skill predicts the level of numerical abilities.

In sum, our findings, together with the results reported in the literature, suggest that there are sensitive periods of numerical skill development. These sensitive periods are strongly linked with phonological abilities, such as phonological awareness. We can also link our findings to the previously suggested link between phonological representation and cognitive development (Simmons & Singleton, 2008).

Limitations and future plans

Our study had limitations and gave us insight for future research ideas. First, we worked with an unbalanced sample (90, 237 and 40 for age groups 5, 6 and 7 respectively), making it difficult to account for individual variability. Second, we only studied phonological awareness. We suggest including the measurements of verbal memory, as well as other linguistic aspects, such as syntactic comprehension in future investigations. By adding these aspects, we can paint a more accurate picture of cognitive development, thus better explaining early signs of atypical development in children.

References

Aragón-Mendizábal, E., Aguilar-Villagrán, M., Navarro-Guzmán, J. I., & Howell, R. (2017). Improving number sense in kindergarten children with low achievement in mathematics. *Anales de Psicología/Annals of Psychology, 33*(2), 311-318.

Baroody, A. J., Eiland, M., & Thompson, B. (2009). Fostering At-Risk Preschoolers' Number Sense. *Early Education and Development, 20*(1), 80-128.

Baroody, A. J., Lai, M.-L., & Mix, K. S. (2006). The Development of Young Children's Early Number and Operation Sense and its Implications for Early Childhood Education. In. B. Spodek, O. N. Saracho *Handbook of research on the education of young children*. Lawrence Erlbaum Associates Publishers. 187–221.

Cowan, R., Donlan, C., Newton, E. J., & Llyod, D. (2005). Number skills and knowledge in children with specific language impairment. *Journal of Educational Psychology*, 97(4), 732.

De Smedt, B. (2018). Language and arithmetic: The potential role of phonological processing. In. Henik, A., & Fias, W. *Heterogeneity of function in numerical cognition*. Academic Press. 51-74.

Dehaene, S. (1992). Varieties of numerical abilities. *Cognition, 44*(1-2), 1-42.

Dehaene, S., & Cohen, L. (1995). Towards an anatomical and functional model of number processing. *Mathematical Cognition*, 1, 83–120.

Dehaene, S., Piazza, M., Pinel, P., & Cohen, L. (2003). Three parietal circuits for number processing. *Cognitive Neuropsychology*, 20(3-6), 487-506.

Györkő, E. (2015). *Numerikus képességek tipikus és atipikus fejlődése óvodáskorban*. PTE Doktori értekezés.

Györkő, E., Lábadi, B., Szeszák, Sz., & Beke, A. (2020). A munkamemória és a numerikus képesség összefüggése koraszülött gyermekek vizsgálatában. *Gyógypedagógiai Szemle*, *8*(1-2), 43-62.

Hecht, S. A., Torgesen, J. K., Wagner, R. K., & Rashotte, C. A. (2001). The relations between phonological processing abilities and emerging individual differences in mathematical computation skills: A longitudinal study from second to fifth grades. *Journal of Experimental Child Psychology*, 79, 192–227.

Jordan, N. C., Glutting, J. J., & Dyson, N. (2012). *Number sense screener™(NSS™) User's guide, k–1,* Research Edition.

Jordan, N. C., Glutting, J., Dyson, N., Hassinger-Das, B., & Irwin, C. (2012). Building kindergartners' number sense: A randomized controlled study. *Journal of educational psychology, 104*(3), 647.

Jordan, N. C., Glutting, J., Ramineni, C., & Watkins, M. W. (2010). Validating a number sense screening tool for use in kindergarten and first grade: Prediction of mathematics proficiency in third grade. *School Psychology Review*, *39*(2), 181-195.

Jordan, N. C., Kaplan, D., Locuniak, M. N., & Ramineni, C. (2007). Predicting first-grade math achievement from developmental number sense trajectories. *Learning Disabilities Research & Practice, 22*(1), 36–46.

Jordan, N. C., Kaplan, D., Ramineni, C., & Locuniak, M. N. (2009). Early math matters: Kindergarten number competence and later mathematics outcomes. *Developmental Psychology*, *45*(3), 850–867.

Jordanidisz, Á. (2011). A kétnyelvű gyermek olvasástanulásának és fonológiai tudatosságának kapcsolata. *Gyógypedagógiai Szemle, 39* (3–4), 205-212.

Kermani, H. (2017). Computer Mathematics Games and Conditions for Enhancing Young Children's Learning of Number Sense. *Malaysian Journal of Learning and Instruction*, *14*(2), 23-57.

Korpipää, H., Koponen, T., Aro, M., Tolvanen, A., Aunola, K., Poikkeus, A. M., & Nurmi, J. E. (2017). Covariation between reading and arithmetic skills from Grade 1 to Grade 7. *Contemporary Educational Psychology*, 51, 131-140.

KSH (2022). *Sajátos nevelési igényű gyermekek, tanulók száma fogyatékosság-típus szerint.*: https://www.ksh.hu/stadat_files/okt/hu/okt0006.html

LeFevre, J. A., Fast, L., Skwarchuk, S. L., Smith-Chant, B. L., Bisanz, J., Kamawar, D., & Penner-Wilger, M. (2010). Pathways to mathematics: Longitudinal predictors of performance. *Child Development, 81*(6), 1753-1767.

Liu, S., Cheng, C., Wu, P., Zhang, L., Wang, Z., Wei, W., & Zhao, J. (2022). Phonological Processing, Visuospatial Skills, and Pattern Understanding in Chinese Developmental Dyscalculia. *Journal of Learning Disabilities*, *55*(6), 499-512.

Lourenco, S. F., Bonny, J. W., Fernandez, E. P., & Rao, S. (2012). Nonsymbolic number and cumulative area representations contribute shared and unique variance to symbolic math competence. *Proceedings of the National Academy of Sciences*, *109*(46), 18737-18742.

Mayo, C., & Turk, A. (2005). The influence of spectral distinctiveness on acoustic cue weighting in children's and adults' speech perception. *Journal of the Acoustical Society of America,* 118. 1730–1741.

Mazzocco, M. M., & Myers, G. F. (2003). Complexities in identifying and defining mathematics learning disability in the primary school-age years. *Annals of Dyslexia, 53*(1), 218-253.

McCrink, K., & Wynn, K. (2004). Large-number addition and subtraction by 9-month-old infants. *Psychological Science, 15*(11), 776-781.

Nittrouer, S., & Lowenstein, J. H. (2010). Learning to perceptually organize speech signals in native fashion. *Journal of the Acoustical Society of America*, *127*(3), 1624–1635.

Nys, J., Content, A., & Leybaert, J. (2013). Impact of language abilities on exact and approximate number skills development: evidence from children with specific language impairment. *Journal of Speech, Language, and Hearing Research*, 56, 956–970.

Otero, I., Salgado, J. F., & Moscoso, S. (2022). Cognitive reflection, cognitive intelligence, and cognitive abilities: A meta-analysis. *Intelligence*, *90*, 101614.

Oulette, G. P., & Haley, A. (2013). One complicated extended family: the influence of alphabetic knowledge and vocabulary on phonemic awareness. *Journal of Research in Reading, 36*(1), 29–41.

Passolunghi, M. C., Lanfranchi, S., Altoè, G., & Sollazzo, N. (2015): Early numerical abilities and cognitive skills in kindergarten children. *Journal of Experimental Child Psychology*, 135, 25-42.

Peters, L., De Beeck, H. O., & De Smedt, B. (2020). Cognitive correlates of dyslexia, dyscalculia and comorbid dyslexia/dyscalculia: Effects of numerical magnitude processing and phonological processing. *Research in Developmental Disabilities*, 107, 103806.

Schneider, M., Beeres, K., Coban, L., Merz, S., Susan Schmidt, S., Stricker, J., & De Smedt, B. (2017). Associations of non-symbolic and symbolic numerical magnitude processing with mathematical competence: A meta-analysis. *Developmental Science*, *20*(3), e12372.

Schwenk, C., Sasanguie, D., Kuhn, J. T., Kempe, S., Doebler, P., & Holling, H. (2017). (Non-)symbolic magnitude processing in children with mathematical difficulties: A meta-analysis. *Research in Developmental Disabilities, 64*, 152-167.

Simmons, F. R., & Singleton, C. (2008). Do weak phonological representations impact on arithmetic development? A review of research into arithmetic and dyslexia. *Dyslexia, 14*(2), 77-94.

Starr, A., Libertus, M. E., & Brannon, E. M. (2013). Number sense in infancy predicts mathematical abilities in childhood. *Psychological and Cognitive Sciences*, *110(*45), 18116-18120.

Thomas, A., Tazouti, Y., Hoareau, L., Luxembourger, C., Hubert, B., & Jarlégan, A. (2021). Early Numeracy Assessment. French preschool: structural analysis and links with children's characteristics. *International Journal of Early Years Education*, 1-18.

Van Rinsveld, A., Schiltz, C., Majerus, S., & Fayol, M. (2020). When one-two-three beats two-one-three: Tracking the acquisition of the verbal number sequence. *Psychonomic bulletin & review*, 27(1), 122-129.

Wagner, R. K., & Torgesen, J. K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychological Bulletin*, 101(2), 192.

Wynn, K. (1992). Addition and subtraction by human infants. *Nature,* 358, 749 – 750.

Yang, X., Dulay, K. M., McBride, C., & Cheung, S. K. (2021). How do phonological awareness, rapid automatized naming, and vocabulary contribute to early numeracy and print knowledge of Filipino children? *Journal of Experimental Child Psychology*, 209, 105179.

Yilmaz, Z. (2017). Young children's number sense development: Age related complexity across cases of three children. International Electronic *Journal of Elementary Education*, 9(4), 891-902.

Settlement event satisfaction survey in the shade of the COVID epidemic

Zsuzsanna Slezák-Bartos[1]

[1]University of Pécs, Faculty of Cultural Sciences, Education and Regional Development; E-mail: slezak-bartos.zsuzsanna@pte.hu

Abstract

The settlement can be successful if the income in the settlement is constantly growing, new companies are settling down, giving jobs to the residents, as well as through cultural, entertainment opportunities and programs, the city management can provide meaningful pastimes for the local residents. The provision of cultural activities has a multifaceted impact on the development of the local economy. By developing or expanding the cultural capabilities, not only the quality of life of the local population can be improved, but also significant economic benefits can be achieved with proper organizational work. Although the crisis caused by the coronavirus epidemic poses a challenge to the economy, the tourism sector, city management and local cooperation need to continue the work started, services such as entertainment, sports, leisure recreation and cultural opportunities in the line with local preferences need to be expanded. The aim of the study is to find out the satisfaction of the people living in the Tolna county seat about the events and organized events. Moreover also looking for an answer how the popularity of Szekszárd wine region events among local residents changed as a result of the crisis caused by the coronavirus. Empirical research – by the opinions of local residents of Szekszárd, students and workers in the city - is based on online questionnaires, in-depth interviews and personal experiences.

Keywords: wine tourism, local development, event analisys

Introduction

Among the tourist attractions in the capital of Tolna County, we can mention the historical wine region directly affecting Szekszárd, but the proximity of forests (the Gemenc) and folk art are also well-understood attractions on which the marketing of the city can build. The individual activity of local winemakers is outstanding in the region. In addition to their own wineries and cellars, the winemakers also offer catering and accommodation. The most successful of the

wine-related events is the Szekszárd Harvest Days, held every third weekend in September. The organisation and running of the event is a good example of the cooperation between entrepreneurs and winemakers, who help to set up the Wine Court, finance bands and ensembles, build pavilions, etc. Cultural activities are varied, with cultural events linked to Mihály Babits, the native of Szekszárd, the commemorative day and conference for Miklós Mészöly, and events for Ferenc Liszt. By increasing the frequency of events, perhaps as a 'city of festivals', or by adding 'city of arts' to the image of cultural events and art exhibitions, city leaders could add more substance to the message. (Máté & Nagy, 2015) The COVID period also had a marked impact on the main event of the city, the Szekszárd Harvest Days, as the event was not held in 2020 and was held in 2021 in a different form with a narrower offering, under the name Autumn Festival. Due to the protection regulations and obligations, the number of visitors to the event was also greatly reduced, which also affected the satisfaction of the city's residents with the events and cultural offers.

Theoretical background and methodology

Events and activities organised in the settlement play a prominent role. The marketing strategy used should help to develop the urban economy, improve the image of the town and increase consumption, as the same area means different things to a very diverse target market. The urban product is more complex than consumer goods, as the product is identified with the territory itself, the region, and the settlement (Gordos, 2000; Kozma, 2002). Wine is currently more successful as a tourist attraction than as a commercial product (Angler, 2017). Positioning and branding is a key tasks of territorial marketing. (Molnár et al., 2015) The development of wine tourism, the creation of wine routes, clusters, new events also helps to strengthen community wine marketing (Gonda & Raffay, 2015; Gonda, 2017; Máté et al., 2015b; Máté 2007). Tourists arriving in Szekszárd associate Szekszárd with wine, the wine region, winemakers, wine roads and the harvest festival, meaning that the success of local winemakers is widely known and has become a prominent element of the positive image of the city. It can be stated that in the last decade, the number of wineries producing internationally competitive wines a significant increase was reached, the establishment of architecturally outstanding wineries, accommodation facilities and processing plants (Slezák-Bartos et al., 2016). The strengthening of wine tourism improves the tourism situation in Szekszárd, but excessive single-leg tourism makes it vulnerable in the market. The local society demands the revival and preservation of traditions, in which traditional groups have a major role to play. The Szekszárd

Harvest Days have the merit of keeping these traditions alive, as they have been organised every year since 1970. The fact that the event was able to be renewed in 2005 has its huge importance, both in terms of content and form, so in terms of programmes, venues, wine pavilions, name and logo, which was an essential condition for current successes. At the same time, the wines and wineries of Szekszárd have also undergone a huge development over the last twenty years, which has laid the foundations for the quality wine services offered by the festival. The civil organisations of winemakers have been strengthened, through which they have expressed their expectations of the event and even become co-organisers through the Szekszárd Wine Region Nonprofit Ltd. (Angler, 2016). Thanks to the qualitative change in the festival and wine pavilions, many more winemakers participate in the Wine Court than in the years before 2005. The current wine pavilions not only provide a more cultured venue for wine tasting but also foster cooperation between winemakers, as two wineries usually present themselves in one pavilion (Máté et al.,2015 a; Slezák-Bartos & Horváth, 2017). In Szekszárd, tourists coming to the festival are given a special focus on getting to know the wine region and wineries, even the possibility of meeting the winemakers in person; it can be assumed that they will be keen to participate in wine festivals, wine tastings, wine dinners and gastro festivals on other occasions as well (Gonda, 2017). At the same time, what is seen, heard and read in the media, what is experienced in person, and what is said by relatives and acquaintances all feed the developed image of a given locality (Michalkó, 2014). The active role of local authorities is a prerequisite for the development of tourism, as they are responsible, among other things, for the environment of the settlements, the protection of the architectural heritage, the maintenance of streets and squares, and the drawing up of local development plans (Spiegler, 2009).

In the study, which was carried out by means of a questionnaire survey among people living in Szekszárd, the interviews were random, voluntary and anonymous. The survey was conducted online and offline using simple random sampling. The online questionnaire was published on social media platforms. Offline, the questionnaires were completed by people in the older age group, the results of which were later recorded on the online interface. For the open-ended questions, respondents were given the opportunity to comment freely. For statistical processing, the majority of the question types were closed questions (with predefined answers) and questions with answers on a rating scale (1 to 5 numbers). During the processing, summary charts showing ratios and averages were produced from the Excel database. In the current study, the questionnaire

survey was used to investigate the perception of events in Szekszárd County during the Covid and the Closures periods.

Research results

According to KSH data, 34,296 people were living in Szekszárd in 2011, which is 1933 fewer than ten years earlier. According to the 2011 data, 46.34% of Szekszárd's population is male and 53.66% female. The most populous age group in the settlement was the 55-59 age group, so by 2014, the group of those people in immediate retirement became most likely to be the widest, and considering the age groups before that, a virtually continuous increase could be expected. (KSH, 2011) The last estimated population of Szekszárd in 2019 was 32 488, which was 0.33% of the population of Hungary at that time, and 14.81% of Tolna County. If the population would change at the same rate as in 2018 and 2019 (-1.47%/year), the population of Szekszárd would be 32 009 in 2020 and 31 073 in 2022 (nepesseg.com, 2022). The resident population is defined as the combined number of persons residing in a given area and not residing elsewhere and the number of persons residing in the same area (www.teir.hu).

104 respondents living/working in Szekszárd participated in the questionnaire survey. A minority of the respondents were male (29.8%), and a larger proportion were female (70.2%). All age groups are represented in the sample, 13.5% were in the young age group (18-29 years), 23.1% were in the 30-39 years age group, 41.3% were in the 40-49 years age group, 50-59 years olds accounted for 13.5% and 60-69 years olds 6.7%, and over 70 years olds 1.9%.

73.1% of the respondents have a tertiary education, 66.3% described their financial circumstances as average and 76% live in a household of 2-4 persons. The low response rate can be explained by the high proportion of respondents with higher education, while those with lower education are unlikely to consider it relevant to participate in the survey and express their views. 88.6% of respondents work or study in Szekszárd.

Only events organised from February 2020 to 2021 were included in the survey. For several events, I examined the years 2020 and 2021 separately, as the relevant legislation, the mood, attitude and possibilities of the city residents, as well as the possibilities and obligations of the event organisers and the municipality and city administration were different in the two years (Figure 1).
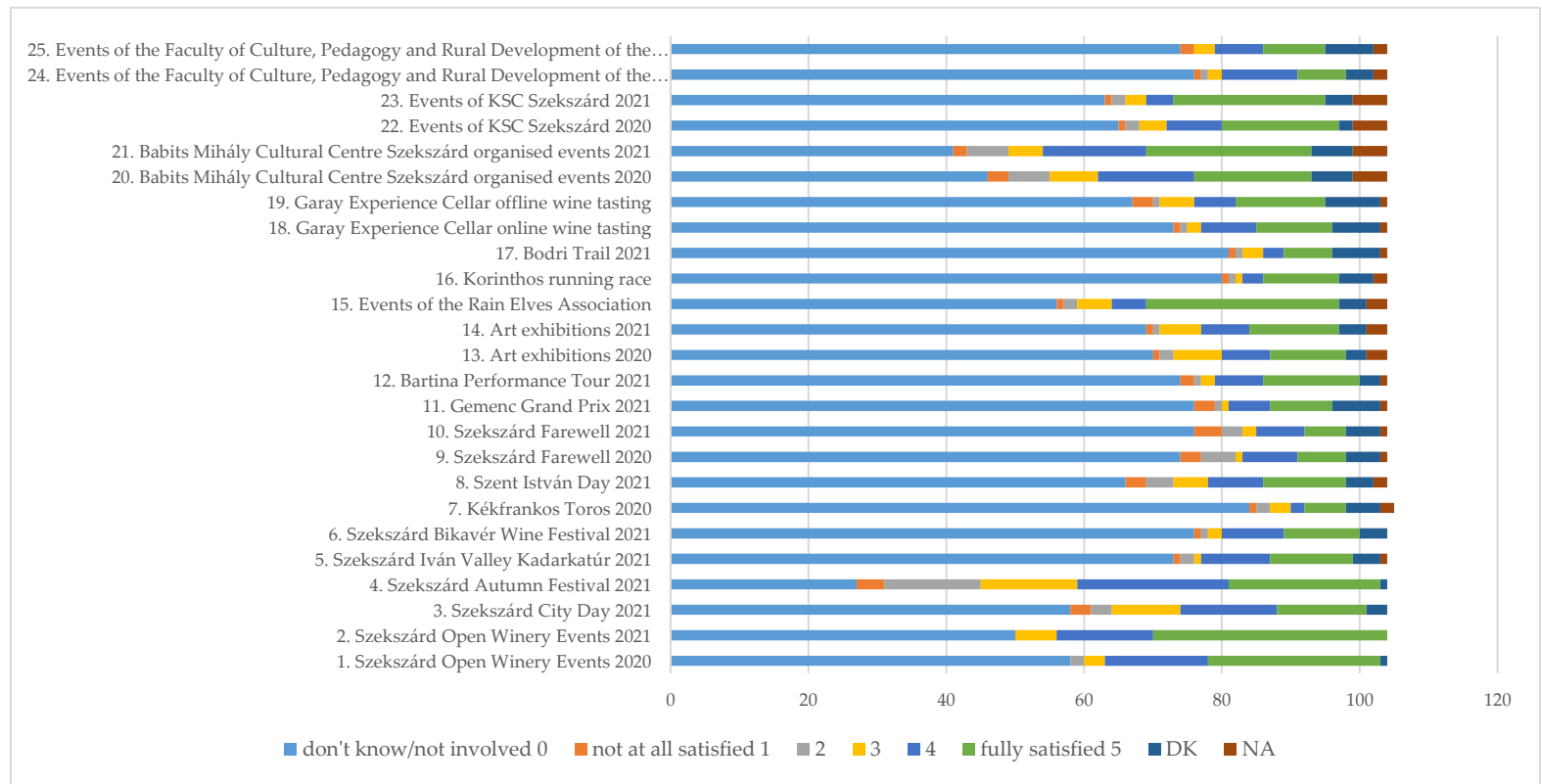
Figure 1. *Participation and satisfaction in events from February 2020 to the end of 2021 (Rating from 0 to 5; 0 means "don't know/not involved", 1 means "not at all satisfied", 5 means "fully satisfied", DK/NA means "don't know/no answer".) Source: Own compilation based on questionnaire survey, 2022*

When looking at events, it can be seen that in 2021, organisers were more bold in organising events in greater numbers, assessing demand-side needs. In 2020, there was still a high level of uncertainty, both on the demand and supply side, during the full closures and the post-summer period. Also in 2021, events that met the legal framework and the strict immunity requirements were the most likely to be organised. Looking at the satisfaction results, it is clear that for almost all events, a larger, more pronounced proportion of respondents did not participate/did not know about the existence of the event; they did not rate it. From the satisfaction data, I would like to highlight the events organised and run by the Babits Mihály Cultural Centre in 2021, of which 37.5% of respondents rated between 4 and 5. The Szekszárd Autumn Festival, organised by the city administration during the Szekszárd Harvest Days, should be mentioned. The reception of the event, the satisfaction survey in this case was double - almost a third of the respondents (30.8%) rated the event with a 3 or less, while more than a fifth of the respondents (21.2%) were completely satisfied with the organisation of the event.

Considering Szekszárd's characteristics, it is not surprising that among the services relevant to the events, respondents highlighted wine-tasting opportunities and offerings (Figure 2).
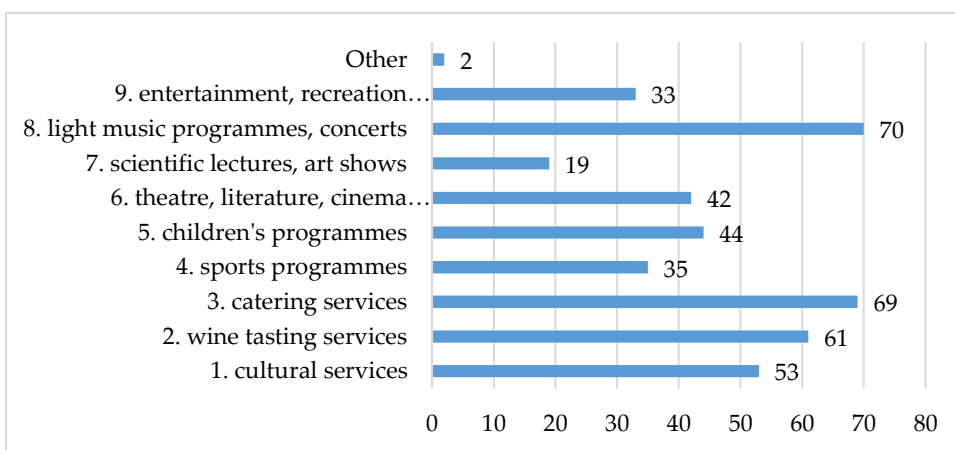

Figure 2. *Services used and frequency of participation in events (Several answers were possible) Source: Own compilation based on a questionnaire survey, 2022*

According to the results of Figure 3, respondents informed themselves extensively before visiting events; they mentioned several aspects and sources of information, the most frequently mentioned by respondents were family,

relatives and friends, acquaintances, in order to follow up on current information (Figure 3). According to the research, Radio Antritt plays an important role in the news gathering of the residents in Szekszárd.
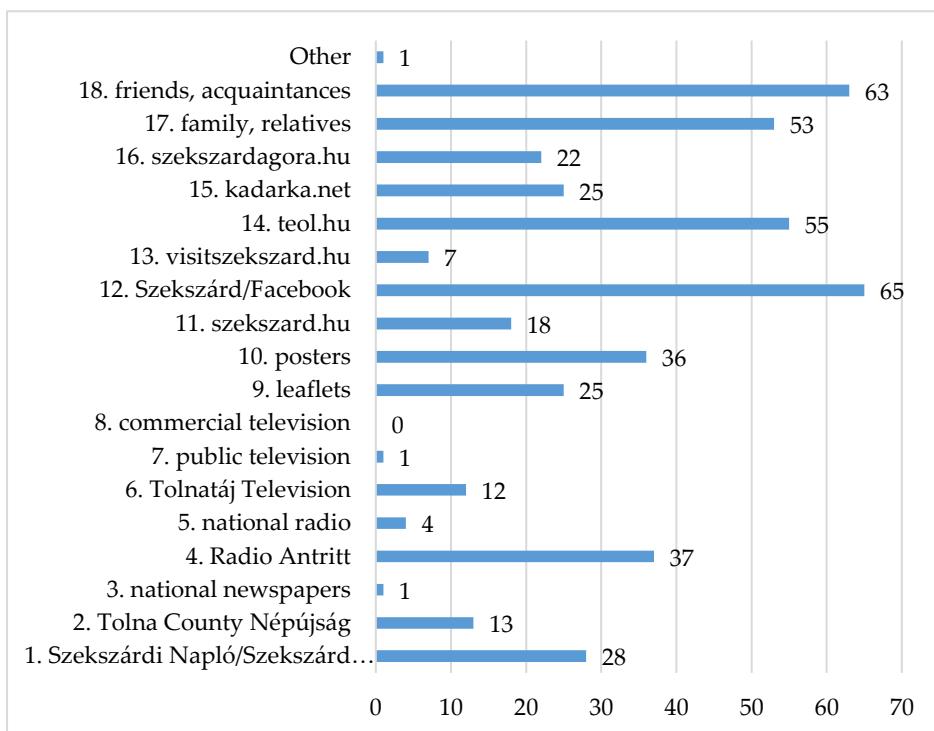

Figure 3. *Information gathering on events in Szekszárd (Several answers were possible)*
Source: Own compilation based on questionnaire survey, 2022

Attitudes can be shaped by personal experience and changing needs, selective perception. Based on this, we interpret reality according to our individual abilities, attitudes about products and brands are determined, and the personality of the buyer and his/her group relations strongly influence the experience. Attitudes are not directly observable, but can only be inferred from the communication and actions of individuals (Dörnyei & Pethő, 2019).
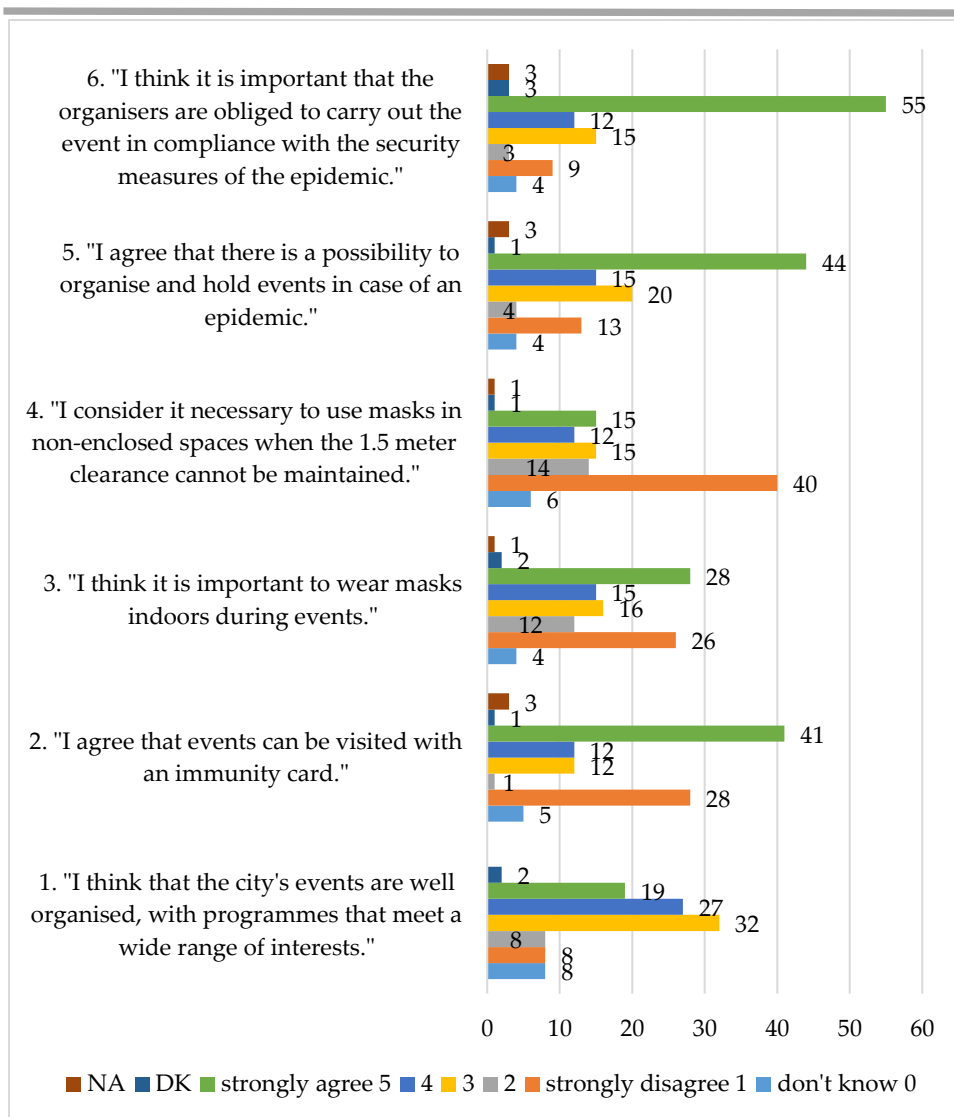
Figure 4. *Attitudes towards organised events in Szekszárd (The statements refer only to events organised after February 2020. Please rate from 0 to 5! 0 means "don't know", 1 means "strongly disagree", 5 means "strongly agree", NT/NV means "don't know/no answer".) Source: Own compilation based on a questionnaire survey, 2022*

Hungarian customer types have been defined along several grouping variables, such as gender, generational affiliation or trend affinity (Törőcsik, 2017). However, attitudes can also be influenced by different mentalities, habitus and circumstances (Földi, 2012). In Figure 4, I summarised the results of the attitudinal

attitudes towards the events in Szekszárd. The aim was to explore agreement on the organisational obligations period - immunity card checks, strict security regulations at events, mask-wearing - and resistance to the rules on the part of the residents during the emergency caused by the coronavirus. More than half of the respondents (55.9%) agree that it is important for organisers to organise events in the light of security measures in the event of an epidemic; 42.3% agree that it is possible to organise and hold events in the event of an epidemic. The requirement to wear a mask in a closed area and the requirement to have an immunity card for visiting events already showed a double picture. 26.9% of respondents consider the use of masks in enclosed spaces during events to be of full importance, while 25% of respondents answered completely negatively. 39.4% of the respondents fully agree that events can be visited with an immunity card, while 26.9% are completely against its use.

Conclusion and discussion

The pandemic has caused uncertainty in the organisation and delivery of events, both on the supply and demand side. The supply of events has changed, a greater number of events were organised outside than in enclosed spaces. In addition to sport and cultural events, wine and the wine region have become a central theme. Events that attracted large crowds are almost disappeared or attracted a narrower range of consumers and were organised in a controlled way, within a legal framework. The results of the research show that city dwellers were primarily looking for leisure and gastronomic experiences. In 2021, there was a greater and bolder interest in events than in 2020. Event attendees marked light music, concerts, dining, and wine tasting as their primary goals of attending events. The research shows that the organisation of events is also considered important by residents during an epidemic, but participants also consider it necessary to ensure that safety measures are fully respected.

References

Angler, K. (2016). *Successful practices of formal and informal cooperation for wine tourism in Szekszárd*. In. NATIONAL INSTITUTIONS. 51-63.

Angler, K. (2017). *Wine tasting through the eyes of the restaurateur I.: Wine tasting as a gastronomic event*. In Máté A. (ed.), Modern University - Utilizable Knowledge. 3-36.

Dörnyei, O., & Pethő, B. (2019). In. Veres, Z., Sasné, G. A., & Liska, F, (eds.) *Do we know the buyer? The psychology of buying : Proceedings of the XXV National Conference of the Association for Marketing Education and Research*. Pannon University, 615-635.

Földi, K. (2012). "*Consumer choice decisions in food-oriented retailing*", PhD thesis, University of Pécs, Faculty of Economics, Doctoral School of Regional Politics and Economics.

Gonda, T. (2014). Regional experiences of tourism cluster development in South Transdanubia. *Modern Geography 9*(3) 1-16.

Gonda, T. (2017). PTE KPVK, Szekszárd p. 226.

Gonda, T., & Raffay, Z. (2015). Egyedül nem megy – fogyatékkal élők utazási szokásainak vizsgálata egy nemzetközi felmérés eredményeinek tükrében *The Village, 30*(1), 49-58.

Gordos, T. (2000). A városmarketing néhány kérdése. *Tér és Társadalom, 14*(2-3).

Kozma, G. (2002). *Area and settlement marketing*. Kossuth University Publishing House.

KSH (2011). *2011. ÉVI NÉPSZÁMLÁLÁS Tolna megye* http://www.ksh.hu/docs/hun/ftp/idoszaki/nepsz2011/nepsz_03_17_2011.pdf

Máté A., & Nagy E. (2015). A turizmusfejlesztés szerepe és hatása a versenyképességre, a település imázsra és az arculatra. *Településföldrajzi Tanulmányok, 4*(2), 94-107.

Máté, A. (2007). Comparative evaluation of the wine routes of the "Pannonian wine region". *Modern Geography, 2*(4), 16-31.

Máté, A., Slezák-Bartos, Zs. & Vas Gáborné, G. Zs. (2015). A fesztiválturizmus fejlődése és korlátai Szekszárdon. In Darabos, F., & Ivancsóné, H. Zs. (eds.), *Turizmus határok nélkül: VII. Nemzetközi Turizmus Konferencia 2015: Tanulmányok*. Nyugat-magyarországi Egyetem Kiadó, Sopron. 266-282.

Máté, A., Spiegler, P., Angler, K., & Krizl, E. (2015). A bormarketing innovatív trendjei. In Horváth, B. (ed.), *Tolna megye egyik húzóágazatának a jövője: Szőlészeti – Borászati Trendkutatás*. (88-128). PTE, Pécs. 88-128.

Michalkó, G. (2014). Városimázs és versenyképesség: a turizmusorientált településmarketing néhány aspektusa. In Tózsa, I. (ed.), *Turizmus és településmarketing: Tanulmánykötet*. BCE Gazdaságföldrajz és Jövőkutatás Tanszék, Budapest. 37-46.

Nepesseg.com (2022). *Szekszárd népessége*. http://nepesseg.com/tolna/szekszard

Slezák-Bartos, Zs., & Horváth, Z. (2017). Marketing kommunikáció hagyományos eszközei a turizmusban - elméleti alapok. In Máté, A. (ed.), *Modern egyetem - hasznosítható tudás*. PTE Kultúratudományi, Pedagógusképző és Vidékfejlesztési Kar, Szekszárd. 104-118)

Slezák-Bartos, Zs., Vas-Guld, Zs., Angler, K., & Krizl, E. (2016) "Creative development - creative city" based on a good practice. In Gonda, T. (ed.) *Current issues of tourism and rural development in the Carpathian Basi*n. Faculty of Culture, Pedagogy and Rural Development, Szekszárd, PTE. 68-86.

Spiegler, P. (2009). A turisztikai imázs és a területi identitás jelentősége a térségi marketingben. *Területfejlesztés és innováció, 3*(1), 16-23.

Sulyok, J. (2006). A turisztikai imázs. *Turizmus Bulletin, 10*(4), 55–62.

TEIR.hu (n.d.). *Helyzet-tér-kép*. https://www.teir.hu/helyzet-ter-kep/kivalasztott-mutatok.html Letöltés dátuma: 2022.10.11.

Törőcsik, M. (2017). Consumer behaviour - Insight, trends, buyers. Akadémiai Kiadó.