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VERONIKA RYBANSKA:

The Impact of Ritual on Child Cognition

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Veronika Rybanska is a social and cognitive anthropologist whose work focuses on the anthropology of children. The author graduated in social anthropology at Comenius University in Bratislava and subsequently completed her PhD at the Institute of Cognitive and Evolutionary Anthropology, University of Oxford, UK.

Her book *The Impact of Ritual on Child Cognition* explores the link between ritualized activities, executive functions, and delayed gratification. It relies on a longitudinal cross-cultural experimental design comparing groups of children in Slovakia and Vanuatu. The book is intended for the professional reader, but due to the detailed explanation of the theories and research underlying her own research, it may also be of interest to students. On a theoretical level, Rybanska's work links the fields of cognitive science of religion and developmental studies, while on a methodological level it combines anthropological research with experimental design.

The book is divided into six chapters. After an introductory chapter, the following chapters are devoted to key variables: ritual (2), executive function (4), and delayed gratification (5). Chapter two introduces the two ethnographic sites. The last chapter summarizes the results. The text presents a detailed review of research from anthropology, psychology, and neuroscience on ritual and the development of children's psychological capacities, followed by the author's own empirical data which it contextualizes within the presented paradigms.

The author has set herself a rather ambitious plan: to bring together the hitherto largely unconnected study of ritual with the study of executive functions and the delay of gratification. This intention was complemented by another – to compare two different cultural contexts.

After explaining the basic idea of the book, Rybanska presents various conceptions of ritual (which she defines as “conventional, causally opaque and goal demoted behavior”, p. 20). She explains in detail the difference between rituals and routines, the role of imitation in the performance of rituals, etc. Since a ritual is a causally opaque activity, children “choose” a so-called *ritual stance* when learning it, i.e., they tend to copy the observed behavior without significant innovations (Herrmann et al., 2013; Legare, Wen, Herrmann, Whitehouse, 2015; in: Rybanska, 2020). This occurs because they cannot evaluate what exactly in the observed activity produces the desired effect (pp. 32–33). Children approach ritual as a normative activity and consider all parts of it obligatory. Since in the case of rituals (especially when they are performed for the first time) people do not know what follows, i.e., what the sequence of actions is, they try to do everything that others do (or imitate too much, i.e., even actions that do not make sense to us). Rybanska argues that participation in rituals positively affects executive functions because ritual is demanding on “attention, working memory, and inhibitory control” (Chapter 3, p. 46), competencies that also play a key role in the ability to delay gratification. She also argues that although these cognitive abilities are mainly supported by “specific neurophysiological structures” (ibid), they depend on the socio-biological environment in which the child primarily lives as well. She then formulates a hypothesis (p. 48) and predicts that in Ni-Vanuatuans there will be a greater improvement in executive function because of ritual participation than in the Slovak sample of children. This expectation is anchored in cultural context: Ni-Vanuatuans live a traditional way of life in which social hierarchy, customs and norms play an important role, but also high-arousal imagistic rituals, and an education system that emphasizes local identity and supports traditional ways of life.

The author then goes on to describe the setting in which the research was conducted. The culture and history of Vanuatu is briefly introduced, as well as the school system and some important cultural factors. The Slovak environment was chosen as being fundamentally different from that of Vanuatu. Here, however, a certain tendentiousness is noticeable. Although undoubtedly part of ‘Western culture’, Slovakia (and the school system) is not as homogeneous as it may appear from the interpretation. Individual areas differ, especially in the eastern part of the country, where there are many excluded communities. Although the normative system follows the rules as described by the author (compulsory school attendance, curricula that cannot be changed arbitrarily), practice is often different. The research was done before the pandemic period, but pandemic has shown quite clearly the differences between schools (even between state schools in different cities or regions). Surveys during the pandemic, for example, showed that about a third of teachers in Slovakia believed in various conspiracy theories. Although one can agree with the claim that people in Slovakia do not show their national identity so much by, for example, displaying a flag, the nationalist mindset is quite deep-rooted here (in 2016 a far-right party, the nationalist Kotleba –People’s Party Our Slovakia (ĽSNS), entered parliament for the first time). A more precise clarification of the situation in Slovakia would in no way undermine the author’s argument, which is why it is surprising that the data on Slovakia are so simplistically presented. Slovakia is considerably less uniform than the text might make it appear, whether in terms of political attitudes, education, or socio-economic status. Thus, I find it problematic that the author continually refers to Vanuatu (which has a population of approximately 320,000) and Slovakia (which has a population of approximately 5 million) in such general terms throughout the text. For example, she refers to a “school in

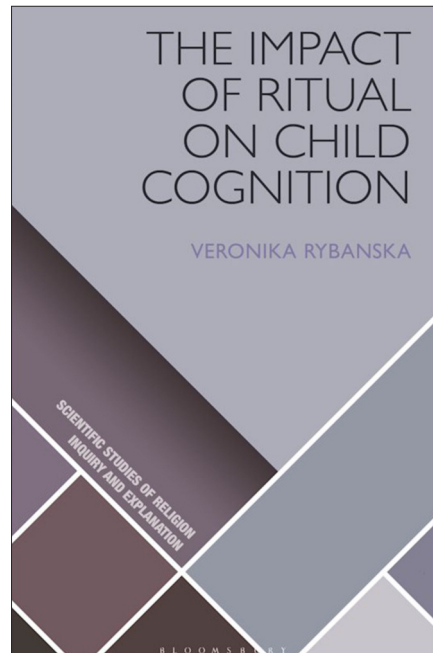
Slovakia” without specifying whether it was a school in a city or a town, or a rural school. While the study characterizes children from Vanuatu according to socio-economic status, at least in general terms, we have almost no data on children from Slovakia.

On p. 67 the author lists potential cultural factors that may influence the delay of gratification. For Vanuatu, such factors are the presence of rituals in daily life, while in the Slovak Republic they are education, literacy, income, nutrition, health, and medical condition. Negative impacts can be caused by the presence of disasters (Vanuatu), or exposure to information and advertisements (Slovakia) and conflicts within families (Vanuatu). Even though the author illustrates the individual variables and their influences with examples, we again see a certain simplification, similar to the examples above. Especially when it comes to Slovakia, normative acts and attitudes are considered, but not their actual implementation in practice, which is often far from the norms (for example, in the case of family conflict resolution).

After introducing the ethnographic context, the author moves on to further, extensive theoretical explanations of ritual in general, and in children, and its connection to executive functions. It is not until p. 103 that the reader is introduced to the research design in detail. As stated above, the key expectation was that ritual influences working memory, attention and inhibitory control, and therefore participation in rituals would have an impact on improving executive function. The improvement in executive function was subsequently expected to be reflected in performance of the delay-of-gratification task. The author also expected the effect to be more pronounced in Vanuatu children as they are more exposed to rituals and thus these “children [should] be more attentive to ritual cues”(p. 108). However, we might ask here whether the increased presence of rituals in everyday life might have just the opposite effect? Any ritual that is regularly repeated can become drab, or rather become an automatically performed activity. Thus, the effect achieved by the performance of unfamiliar rituals might be gradually lost by regular repetition of those same rituals.

To test the author’s hypothesis, approximately 100 children in each of the two sites were recruited and randomly assigned to a ritual, instrumental, or control group (pp. 106–107). Children participated twice a week in a “circle-time game” that had six rounds at each session. The games became progressively more complicated. To induce the “ritual stance”, children were verbally primed (they were told “this is how the game has always been played” to emphasize the normativity of the act), while in the instrumental condition they were told that they would be learning a skill. The control group did not do any of the acts.

Analysis of the data showed a significant effect of ritual condition: the author argues that ritual stance enhances executive functions which consequently “improves children’s ability to delay gratification” (p.146). This is undoubtedly an important finding that opens the door for further research. Would individual rituals have had a similar effect? Or is it collective



rituals that have such an effect? What is the role of coordinated movements in this process? (e.g. Alesi et al., 2016; Budde et al., 2008). The author has chosen two different cultural contexts, but the resulting analysis only partially takes cultural differences into account. Apart from presenting the ethnographic context of the two sites, the resulting analysis is barely contextualized with respect to the ethnographic context (the author resorts to rather vague comments relating to the general environment of Vanuatu or Slovakia, which in itself seems problematic).

The aims of the thesis and the argument can be found in various places in the thesis (e.g. pp. 31, 32, 46, 48, 86, 94, etc.) This is partly explained by the author's attempt to link the various concepts to her own aims. Often, this comprises a sentence or two representing a partial goal, but the essential information remains "lost" in the flood of interpreted theories. On the other hand, although a great deal of space is devoted to the findings to date regarding key variables (see above), in some cases (valid) criticisms of some research are omitted. The author repeatedly returns to the original Marshmallow experiment (Mischel, 1974; Shoda, Mischel, Peake, 1990), but only partly reflects on criticisms of that study, particularly as concerns the far-reaching conclusions that the authors drew from it (for a discussion, see Watts, Duncan, Quan, 2018).

However, Veronika Rybanska's book brings interesting and important findings that should be studied further and possibly be applied within various intervention practices.

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