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Конференция посвящена обсуждению познавательных процессов, их биологической и социальной детерминированности, моделированию когнитивных функций в системах искусственного интеллекта, разработке философских и методологических аспектов когнитивной науки. Программа конференции включает серию специализированных воркшопов, посвященных таким актуальным темам, как возрастные особенности когнитивного развития, ментальные ресурсы разного уровня, движения глаз при чтении и мультимодальная коммуникация. Публикуемые материалы представляют собой тезисы пленарных лекций, устных и стендовых докладов, а также выступлений на воркшопах. В электронном виде эти материалы представлены на сайте конференции (cogconf.ru), а также на сайте Межрегиональной общественной организации «Ассоциация когнитивных исследований» (МАКИ, www.cogsci.ru).

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INDIVIDUAL EXPERIENCE, SOCIOCULTURAL ENVIRONMENT AND MORAL JUDGEMENT OF ACTIONS[1]

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From early stages of development and throughout life, individuals learn to adapt their behaviour to match social expectations and requirements. Social norms, in general, and particularly moral norms play an important part in shaping the structure of individual experience formed in the sociocultural environment. Some basic moral principles are thought to be universal and may be considered as part of human endowment (e.g., Dwyer, 1999). At the same time, how these principles unfold within different cultures often varies to some extent (e.g., Barrett et al., 2016). One aspect of such variation includes individual self-identification in relation to other people and social groups (the social self, see Brewer, 1991), which we consider as culturally dependent and dynamic throughout life. In this work we explore psychological and psychophysiological bases of moral judgement and how it may develop in the sociocultural environment during adult life.

One of the most important social rules children learn during their first years of life is that harming others is unacceptable. Intense negative emotions are associated with experiencing someone harming another person, and harmful actions become intuitively perceived as morally wrong. On the other hand, if harming someone saves lives of a number of people, it can be judged as permissible, because it results in a socially desirable outcome. Utilitarian moral judgement, for example, allowing sacrificing one person's life in order to save more people, can be viewed as a conflict between intuitive and rational components of the decision-making process or, in other terms, a conflict between emotion and reason (e.g. Greene et al., 2004). However, such conflict is less apparent when individuals deliver non-utilitarian judgements, reasoning that harming someone is not permissible and such actions are wrong even

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when they result in saving more lives. Our work (see Arutyunova et al., 2016) showed that older individuals tend to deliver less utilitarian moral judgements as compared to youth, and this result was shown in Russian culture as well as in a set of Western cultures, with some cross-cultural differences. Other studies demonstrated that emotional empathy, prosocial behaviour (see Sze et al., 2012) and altruistic moral decisions (Rosen et al., 2016) also increase with age. We explain these findings through considering adult life development as a process of formation and actualisation of individual experience in the sociocultural environment. During adult life individuals expand their experience in solving social (intrapersonal and interpersonal) problems (e.g., Blanchard-Fields et al., 2007), learn to think wisely and more considering towards other people (e.g., Grossmann, 2017), and gradually shift from prioritising individual goals and aspirations towards socioemotional aspects of life (Carstensen, 2006). Over the years adults may also learn to choose the most internally consistent decisions that cause the least psychological discomfort, and therefore, as mentioned above, prefer non-utilitarian moral judgements as well as more prosocial and altruistic actions.

From the system-evolutionary perspective (see Alexandrov et al., 2000; Alexandrov, Sams, 2005), intuitive processes are predominantly based on actualization of experience formed early in individual development, while rational cognitive processes also involve actualization of experience formed later in life. The physiological substrate of individual experience is represented by systems of neurons and other body cells, which co-operate to achieve adaptive results within interactions with the environment, including sociocultural environment. We hypothesised that a subjective feeling of psychological discomfort rooted in the conflict between the intuitive and rational components of the decision-making process during utilitarian moral judgement would be manifested in the dynamics of individuals' psychophysiological states. In order to test this hypothesis we recorded and analysed the dynamics of heart rate in 40 participants (20 female) aged between 21 and 52 years old ($M = 28$; $SD = 5.9$) while they were evaluating moral permissibility of harmful actions towards one person resulting in saving five other people (including the traditional runaway trolley and footbridge dilemmas). In line with the hypothesis, the results showed that heart rate was significantly higher when individuals chose utilitarian decisions as compared to non-utilitarian alternatives (Mann-Whitney, $U = 6356.5$, $Z = 15.22$, $p < 0.001$). Thus, the conflict between intuition and reason is also reflected at the level of physiological states.

In conclusion, the decrease of utilitarian moral judgements during adult life may reflect the development of an adaptive strategy in making decisions that

would cause the least psychological discomfort and help maintain effective relationships with the sociocultural environment.

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