



P. V. SIMONOV

Ukhtomskii and the Nature of the Human Ego

A. Ukhtomskii is one of the Russian natural scientists of the 20th century (K. Tsiolkovskii, K. Timiriazev, I. Pavlov, V. Vernadskii) whose creative work was marked by a combination of an outstanding contribution to a particular, specialized domain of science and profound philosophical understanding. Moreover, it was their reliance on their own discoveries in an area of natural science that gives the philosophical ideas of these authors special originality and conviction. Thus, Ukhtomskii's ideas about the nature of the human personality are inseparably linked to the principal achievements of Ukhtomskii the neurophysiologist and his theory of a dominant.

According to Ukhtomskii, a dominant is a "functional organ," a reflex system that is temporarily dominant and is responsible for the integral nature of the functioning of nervous centers and determines the organism's reactions to influences from the environment. Some essential features of a dominant are hyperexcitability, stability, and a capacity for summation of stimuli and for continuation of reflex activity when the stimulus that has originally caused it is no longer present.

Whereas, under experimental conditions, a dominant focus can

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develop in very varied segments of the central nervous system, with the aid of special stimuli, e.g., polarization with a d.c. anode in V. Rusinov's procedure [10], or under the influence of a pathological process (tumor, injury, etc.), naturally occurring dominants (a vector of purposeful behavior) are nothing other than needs that dominate at a particular moment and that require satisfaction. The mechanism of a dominant gives behavior its active, seeking, and creative character and makes the brain a "kaleidoscopic succession of organs of preventive perception, anticipation, and planning of the environment" [16. P. 168]. The principle of a dominant is incompatible with the idea of mere, passive reflection of the environment. As Ukhtomskii writes, "The old idea that we passively receive the imprint of the real world as it is does not at all correspond to the actual state of things. Our dominants, our behavior, are between us and the world, between our ideas and reality" [17. P. 253].

The search nature of a dominant is most evident in the first stage of its formation since, according to Ukhtomskii, "All that is necessary and unnecessary, out of which later those things that enrich our experience are selected" belong to a dominant [16. P. 283]. Both animals and man exhibit a dominant type of response when some need is activated. Whereas in an environment devoid of external stimuli, the activeness of hungry rats increases by only 10%, under ordinary conditions it increases by 400% [20]. As hunger intensifies, a human being begins to perceive indeterminate stimuli as signs of food [23]. A state of hunger leads in humans to a lowering of the threshold of perception of both food and nonfood odors [4]. It is not difficult to see that the first stage in the formation of a dominant resembles, to an extraordinary degree, the stage of generalization of a conditional reflex, a question that has been especially studied by R. Pavlygina [6].

But behavior would lose its adaptive role if the phase of generalization did not give way to a stage of specialization, of discrimination of that which is "biologically interesting from that which is biologically indifferent for the given dominant," as Ukhtomskii noted on the margins of Pavlov's book [*Twenty*



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years of experience . . .]. It is the presence of a dominant and its elimination following the action of a certain signal (which may be the animal's own reaction) that is the condition for rapid (after one, or a maximum of two, combinations) formation of a conditional reflex [7]. Studies by Pavlygina and her colleagues provide experimental confirmation of Ukhtomskii's idea that a "dominant plays a key role in explaining the mechanism of 'temporary connections' that Pavlov discovered in the functioning of cortical reflexes" [16. P. 193]. Temporary connections formed through the cessation of a motivational dominant have a bilateral conductivity, which corresponds to the third and final phase of a dominant in Ukhtomskii's scheme. Whereas an animal's own reaction is a signal for cessation of a dominant, recurrence of a dominant state results in realization of this reaction, which may be regarded as a model of truly voluntary movement, i.e., a movement determined by the internal state of the animal, so that, in addition to classic and instrumental types of reflexes, we may also distinguish a special type of "endogenous conditional reflex" [8].

Thus, a dominant reveals itself twice in the functional structure of a conditional reflex: first in the stage of generalization, and later in the form of a specialized dominant, a reverse conditional connection. We find reference to this sequence of events in the writings of E. Asratian [1] on the dominant as a "phenomenon inherent in conditional reflexes" that, as the neurophysiological substrate of a conditional reflex, is preserved in the structure of a conditional connection.

The active search function of a dominant, which is clearly expressed in the stage of generalization of conditional reflexes, invalidates Popper's proposal to replace the theory of conditional reflexes with a theory of active presentation of hypotheses and their refutation as a special variety of natural selection [24]. The role that variability, natural selection, and inheritance of the results of natural selection play in the process of evolution belongs to a dominant, to the conditional reflex, and to memory in the case of individual behavior, including in the form of signal (not genetic or cultural) inheritance. It is synthesis of the mechanisms



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of Ukhtomskii's dominant with the mechanisms of formation of a conditional reflex that produces the two factors necessary and sufficient for purposeful behavior: its active, creative, and search character (through a dominant) and its precise correspondence to objective reality (a reinforced, finely specialized, conditioned reflex). Clearly, it is difficult today to find a conception that could serve as a theoretical basis for further analysis of the laws of mechanisms of the organization of behavior with more thoroughness, scientific soundness, and heuristic power than the mutually complementary views of the two coryphaei of Soviet science, Pavlov and Ukhtomskii.

Ukhtomskii's theory of a dominant is equally important for contemporary notions of the nature of the personality. The uniqueness and value of the human personality were the constant foundation of Ukhtomskii's ethical views. He vowed "never to allow himself to speak or even think of the people as a 'mass' or a 'stratum,' i.e., as a potential multitude . . . The people are first and foremost a multitude of human individuals: anyone who permits himself even for a moment to think of the people as a 'mass' or a 'stratum' loses his own 'face' in it . . . Such is the logic of things!" (quoted in [14. P. 6]).

As we know, the Marxist view of human purposeful behavior consists in the acceptance of human needs as the prime source and driving force of man's activity, the prime cause of man's actions. As G. Plekhanov, the outstanding Russian Marxist, writes, "Interests and needs are great and unique teachers of the human race . . . Without needs, man would have no incentive to act . . . A need is an accurate measure of the tension in the human soul" [9. Pp. 103–104]. In acknowledging needs as the foundations and driving force of behavior, we define the personality as an individually unrepeatable constellation and internal hierarchy of vital, social, and ideal needs of a particular person, which include the varieties of preservation and development "for itself" and "for others." The most important characteristic of the individual personality depends on which of these needs occupy a dominant position in the hierarchy of coexisting motives, for how



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long, and in response to which needs the mechanism of creative intuition (in K. Stanislavskii's terminology, supraconsciousness) "works" [15. Vol. 1, p. 298]. A governing need, i.e., a need that dominates more frequently and longer than others, the "metatask in the life" of a particular person [15. Vol. 2, p. 263], is the true nucleus of the personality, its most essential feature [12].

Just as human needs are, on the whole, a product of universal history, the particular selection and collateral subordination of the needs of each individual are a product of the history of his life, the conditions of his upbringing, and his ontogenetic development. The importance of natural instincts and capacities notwithstanding, the decisive influence in the formation of the personality is the particular social environment. Moreover, man achieves his own human essence only in social contact with other people. In the words of Karl Marx, he "at first sees himself in another person as in a mirror. The person Peter begins to relate to himself as a human being only through relating to the human being Paul as to a creature like himself. And even Paul per se, despite the fact of having Paul's body, becomes for Peter a particular manifestation of the human species" [5. Vol. 23, p. 62].

As if developing this idea of a "mirror," Ukhtomskii added the critical point that organically emanates from his theory of a dominant.

The old idea that we passively receive the imprint of reality as it is on ourselves does not at all correspond to the actual state of affairs. Our dominants, our behavior, stand between our ideas and reality . . . We can perceive only those things and those people for which and for whom our dominants, i.e., our behavior, prepare us. Priceless things and priceless domains of real existence pass by our ears and our eyes if our ears are not prepared to listen and our eyes are not prepared to see, i.e., our activity and behavior are oriented in different directions. [17. Pp. 253–54]

And, as a conclusion with regard to the problem of understanding ourselves through another: ". . . The face of another person reveals itself as I have deserved by the whole of my past and by what I am now" (quoted in [2. P. 4]).



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If the face of another is only a screen for the projection of my own vital and social needs, another person becomes for me a Double, and communication with him ceases to be a source of new knowledge either about other people or about myself: indeed, I find in the other only what already is in myself, what I already know about myself. Communication with a Double strengthens the domination of social needs “for oneself” in the hierarchy of a person’s motives and reinforces the tendency to divide people into “intelligent people, with whom one must struggle, and simpletons, whom one can only use” [16. P. 310]. This duality is engendered by egocentrism, and inevitably strengthens egocentrism since “Man has the preconception that he is surrounded by fools, egoists, and scoundrels, and so would successfully find a confirmation of this conviction even if he were to meet Socrates himself or Spinoza” (quoted in [14. P. 13]).

The situation is different if communication with other people is motivated by the ideal need for knowledge and by the social need “for others.” “Every new person,” writes Ukhtomskii, is a “new discovery. A new content of a revealed truth . . . The more it contradicts you, the better, for this means that it will summon itself from your limited and balanced, established abstraction to something that is new and not yet evaluated” [quoted in [14. P. 11]). Ukhtomskii was well aware how difficult and complicated it is to comprehend another person. “What one person is for another is the greatest secret of all; nonetheless, without an attempt to understand this secret and to acknowledge the other person before one, the meaning of human behavior and human existence is lost” [14. P. 15]. One is necessarily reminded of Dostoevsky’s famous words about the “riddle of man” that requires a whole lifetime to unravel!

According to Ukhtomskii, it is interest in another person, recognition of his uniqueness, that transforms the Double into a Worthy Interlocutor. In contrast to a Double, an Interlocutor is valued for the formation of the personality for at least three reasons. First, he is the source of new knowledge about people. By discovering in others what is not part of myself, I peer into my-



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self and ponder over how to acquire, develop, and strengthen those features of the other that attract me. Second, it is the Other as Interlocutor, not the Other as Double, who creates the possibility of dialogue with oneself, the possibility for critical analysis of ones thoughts, motivations, and deeds. As Feuerbach wrote, “I have no special, criminal set of statutes in my conscience defining me as a person belonging to this community, as a member of this clan, this people, or this era . . . I reproach myself only for what I am reproached by another” [19. P. 630]. And, third, and finally, it is only through respect for my Interlocutor and recognition of his right to be different from me that tolerance is cultivated and the unification of all human beings thus promoted. As G. Simenon wrote in our own era, “I think that it is possible to achieve much more for the brotherhood of all human beings by trying to teach them how to understand one another than by offering them abstract truths” [11. P. 260].

However, in developing his conception of the Interlocutor, Ukhtomskii does not limit himself to the need for knowledge, but insists on acknowledgment of the value of the Other, which excels the value of oneself, i.e., he insists on the dominance of the altruistic social need “for others.” “If the Other does not become for me higher and more important than myself,” answers Ukhtomskii to a note handed to him during a lecture, “or does not become for me at least equal in value to my own person, then I obviously will never go beyond the limits of my own individualism and solipsism . . . How does a human being become able to break through his own limits? It is necessary to establish the right social system, in which one would be of value for all, and all would be more valuable for each individual” [18. P. 181]. Ukhtomskii thus certainly has something in common with the famous requirement for the kind of social system in which “the free development of each is the condition for the free development of all” [5. Vol. 4, p. 447].

Tolstoy regarded the conjunction of the need for knowledge with the need “for others” as the ideal of man’s spiritual qualities since the best human being, in Tolstoy’s view, lives through his



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own thoughts and the feelings of others. As for the comparative value of all versus every, the dialectic of these ethical categories was formulated elegantly by Ukhtomskii's contemporary and compatriot the writer M. Privshin: "The ultimate morality is the sacrifice of one's self for the sake of the collective. The ultimate immorality is when the collective sacrifices the individual for the sake of itself" (quoted in [13. P. 3]).

The contradictory relationship between the individual and the collective, the limitedness of purely social motivations not inspired by the ideal motives of knowledge and creativity, were studied extensively by Erich Fromm. Because solitude cannot be borne, people endeavor to become members of a group, and this often becomes domination or submission. Fromm regards neither the one nor the other as productive. Only a love of others in which active engagement and creativity are not overshadowed by relations of domination and submission is productive [21]. "Productive love," continues Fromm, "is incompatible with passivity, with the mere contemplation of the life of the beloved; it includes activity, concern, and responsibility for the latter's development" [22. Pp. 100–101]. An active love, in contrast to a contemplative love, about which Dostoevsky repeatedly wrote ironically, is alien to an oppressive feeling of sacrifice. Moreover, it is activity for others that realizes a person's strength and capacity to a maximum degree; a good for others becomes, dialectically, a good for oneself. "Why do people not understand," wrote Ukhtomskii on the margins of Gershenson's book [*Letter to a brother*], "that they love out of happiness, not for happiness. You begin to love another out of a surfeit of your own happiness? This is a need to share a happiness that is brimming over!"

Ukhtomskii's conceptions of a Double and an Interlocutor, so striking in the profundity of their psychological analysis, give the following, seemingly paradoxical, statement by Hegel a new, clearer, and concretized content: "The true essence of love is to renounce consciousness of oneself, to forget oneself in another self, yet in this disappearance and oblivion to acquire oneself and possess oneself for the first time" [3. P. 107].



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In light of the foregoing, one may reasonably argue that Ukhtomskii was not only an outstanding neurophysiologist but also an original humanist thinker, whose views are organically in line with the intellectual quests of the cultural giants Dostoevsky and Tolstoy. Ukhtomskii was ahead of his time and in many respects anticipated the discoveries of the humanist psychology of the sixties, as represented particularly by the writings of Erich Fromm. Ukhtomskii's philosophical and psychological legacy merits being appropriated and further developed to no less degree than his achievements in the physiology of the brain. We owe it to Russian and world psychology to creatively develop Ukhtomskii's theory.

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