SOCIAL ASPECT OF HUMAN BEING

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Listening to the Wind of Change: Social Forecasting through the Lens of a Transdisciplinary Approach

Purpose. This paper aims to explore social forecasting through the lens of a transdisciplinary approach with respect to holistic human nature. **Theoretical basis.** The complexity of social forecasting is that it deals with the multifaceted phenomenon of a human being, a human who is both the creator and the creation of the social spaces, for whom all economic, social, political, scientific, cultural achievements, problems and prospects acquire meaning only in the context of him/herself, his/her life, his/her destiny. Thus, the phenomenon of a human being is the key to understanding the dynamics of modern transformational processes and to creating promising models of the future development of the human society. Since in forecasting we try to anticipate the future that is not yet defined and may have different development trajectories, a transdisciplinary approach to forecasting that embraces what is within disciplines, at the intersection of disciplines, and beyond all disciplines can become the most fruitful approach. **Originality.** A human being brings a high degree of unpredictability and uncertainty into all social forecasts. Nowadays, the complex multifaceted nature of an individual as a biological, psychological, and social being needs a deeper understanding that requires joint efforts of representatives of various scientific fields. Through mutually enriching work within a transdisciplinary paradigm, representatives of different scientific fields and directions may create a kind of guidebook designed to form and explain a new reality, a new future. Within such an approach, not a competition between theories, methodologies, and protocol decisions, but a common goal, common dreams and aspirations for a better future of humanity should come to the fore. **Conclusions.** A transdisciplinary approach to social forecasting has a potential to consider all sciences in a humanitarian context, taking into account complex multifaceted human nature. It goes beyond traditional boundaries providing opportunities not only to synthesize and integrate solutions to a problem, but also to rise above it. Transdisciplinarity, recognizing the existence of different realities, provides a broader view of the world, a deeper understanding of phenomena and processes that contribute to the development of new projects for a better future of a human and humanity.

Keywords: human being; future; transdisciplinarity; forecasting; social world; uncertainty; reality; subject; object

Introduction

The paradigmatic shift from modern to postmodern has affected all spheres of human life and society. The world is facing turbulent times that require concerted efforts: it is engulfed in the flame of intercivilizational/intercultural/interreligious conflicts and wars, acts of international terrorism, the threat of climate change, rising poverty and widening inequality, and the aggravation of other global problems of humanity.

Drawing parallels with Tibetan Buddhism, one might say that humanity finds itself in a state of bardo – an intermediate, transitional state (Padmasambhava, 2023). Traditionally, it is the time between death and rebirth, however, it also refers to any time of transition. Bardo not only closes one page of our life, but also opens another. Thus, the problems of the future of both individuals

and cultural/civilizational communities and their fruitful dialogue are coming to the forefront: a new civilization is being born, and its essence has not yet manifested. This new civilization may choose any path, and the choice of this path depends largely on humanity. So, it is time to rethink our past, to rethink it in order to create new constructive projects for the future development of the world civilization. The past cannot be "erased", hence, Eco's idea on the ironic rethinking of our past in the context of postnonclassical discourse, which questions the main spheres of human activity, has a profound meaning. Our time has raised problems that cannot be solved within the framework of the existing paradigms.

Forecasting social phenomena and processes is a complex, ambiguous, and often thankless business. Different approaches within different disciplines create different, sometimes even opposite, visions of the future. It does not take long to get lost in a thick forest of concepts and end up preferring the one that sounds "more familiar" leaving behind those that represent opposing views. With this in mind, it seems appropriate to join efforts of the representatives of various scientific disciplines in order to create the best integrated projects of the future (Khmil, 2019; Wilson & Pirrie, 2000). This approach can become a potential basis for creating a new research paradigm.

Social forecasting requires joint efforts of futurologists, philosophers, psychologists, sociologists, historians, economists, political scientists, religious studies scholars, anthropologists, ethnographers, cultural scientists, etc. Their joint research should be aimed at reviewing the entire set of problems in order to find ways to address them. This requires deep theoretical knowledge and experimental skills, scientific intuition, as well as responsibility for the results of the professional activity.

Nowadays, there is a transition from the fragmentation of the process of knowledge acquisition to the creation of converged scientific knowledge that involves the cooperation of the representatives of various scientific fields. The complex disciplinary structure of modern science has contributed to a deep, detailed analysis of various aspects of both the physical and social worlds. Emphasizing that the whole is beyond the sum of its parts, Aristotle wrote that "you may have the parts and yet not have the whole, so that parts and whole cannot be the same" (Barnes, 1991, p. 346). This is the case for social forecasting, because in this process we deal with human beings and their multiple worlds, i.e., a complex system that goes beyond the sum of its elements.

Purpose

This paper aims to explore social forecasting through the lens of a transdisciplinary approach with respect to holistic human nature. Though the concepts of "forecasting" and "prediction" are not identical and may carry different meanings, given the focus of the paper, it was used interchangeably.

Statement of basic materials

In the context of forecasting/prediction, several problems are relevant, including ontological, epistemological, axiological, and ethical (Guillán Dopico, 2015). To a great extent, all of them are related to human beings, especially when it comes to forecasting in the social sciences. The agents of forecasting are people limited in their knowledge, and they, like all people, deal with their interpretations of reality, but not with reality per se. An interpretation itself depends on the subject of knowledge. In addition, the social sciences deal with the interaction of people, the vectors of human wills, which can often be opposite, and with a purely human characteristic such as creativity. Discussing the complexity of economic predictions, Gonzalez emphasizes that

> On the one hand, economic activity has specific characteristics as such;
>
> and, on the other hand, economics is a human activity that is related to
>
> other human activities (social, political, cultural, ecological, etc.),
>
> which makes prediction interwoven with several kinds of complexities.
>
> (Gonzalez, 2011, p. 320)

Since in forecasting/prediction we try to embrace the future that is not yet defined and may have different development trajectories, the factor of uncertainty comes into play affecting our environment and our perception of the world. Uncertainty is something that is difficult to tolerate. Human beings "seek to understand, predict and control – it helps us learn and it keeps us safe. Uncertainty can feel dangerous because we cannot predict with complete confidence what will happen" (Rosser, 2018). Uncertainty implies alternative visions of the future, which cannot be determined from one specific position. One-way forecasting entails mistakes that humanity repeats over and over again. If the alternatives are out of sight, the mind becomes inflexible: "alternative futures thinking reminds us that while we cannot predict a particular future always accurately, by focusing on a range of alternatives, we can better prepare for uncertainty, indeed, to some extent embrace uncertainty" (Inayatullah, 2008, p. 6). The social sciences are about the actions and choices of decision-makers in changeable historical, social, political settings, thus, there is an additional source of uncertainty caused not only by the future environment, but also by the actions of the actors themselves (Guillan, 2014).

Therefore, the phenomenon of a human being is the key to understanding the dynamics of modern transformational processes and to creating promising models of the future development of the human society. Humanity is interested in its destiny, since it is a human being who is an actor in the world historical process (Korkh & Khmil, 2024). For people, all economic, social, political, scientific, cultural achievements, problems and prospects gain meaning only in the context of themselves, their lives, their destinies. Individuals act as the central point of cultural-civilizational spaces, they are both its creators and creations (Danylova, 2016). The human world is always the someone's world, it is the world of the different races, nations, peoples, groups, classes, etc. It is created by a human and humanity, it is temporary and changeable. Modern political, economic, scientific, cultural theories are not lonely endeavors – they must be "embedded" in a wider context. Hence, a transdisciplinary approach to forecasting the future can become the most fruitful approach.

The collaboration between the representatives of different scientific disciplines within the framework of one project creates synergistic links of knowledge, which contributes to the development of new concepts, the solution of complex problems, and ultimately the creation of a new scientific product. This kind of cooperation tries to counteract the harmful effects of overspecialization, as overspecialization is often not only an epistemological but also a political problem, which is particularly dangerous in social forecasting. Today, there is no single definition of this kind of research projects, and different terms are used, such as multidisciplinarity, polydisciplinarity, pluridisciplinarity, interdisciplinarity, crossdisciplinarity, transdisciplinarity. However, in numerous studies, multidisciplinarity, interdisciplinarity and transdisciplinarity are most often distinguished.

A multidisciplinary approach is based on the involvement of several disciplines or professional specializations. Gossman (1979) defines multidisciplinary research as group research in which representatives of different disciplines work together on a common problem, but with limited interactions. Multidisciplinary research relies on knowledge from different disciplines, but each of participants remains within the boundaries of his/her discipline; in the process of this research, various disciplines are combined, but their representatives do not always act in a comprehensive and coordinated manner (Choi & Pak, 2006; NSERC, 2012). As Flinterman et al. wrote,

> When a variety of disciplines collaborate in one research program without integration of concepts, epistemologies, or methodologies, we speak of multidisciplinarity. In multidisciplinary research, the degree of integration between disciplines is restricted to the linking of research results.
>
> (Flinterman et al., 2001, p. 257)

In multidisciplinary research, scientists in different fields of knowledge work independently on different aspects of the same problem and have individual research goals within their specialties. Adhering to disciplinary boundaries, they use their own methodologies. The main emphasis is placed on the comparison of the obtained results, and the joint result of the study looks like the sum of individual parts (NSERC, 2012; Wilson & Pirrie, 2000). Hence, in this research, disciplinary perspectives are not changed, but only contrasted. Researchers work as independent specialists, not as members of an interactive group (Choi & Pak, 2006).

Interdisciplinary research is collaborative, coordinated, and continuously integrated research conducted by experts in different disciplines. They work together on reports, documents, recommendations, plans; and their interactions are so closely and thoroughly related that a personal contribution of each researcher "disappears" against the background of a jointly developed product (Gossman, 1979; Specht & Crowston, 2022). Interdisciplinary research is conducted at the intersection of disciplines and can range from the exchange of ideas to the full integration of concepts, methodologies, procedures, theories, terminology, data, organization, etc. (NSERC, 2012). Sharing common goals, research participants may relinquish specific aspects of their own disciplinary role, but retain a discipline-specific base. Interdisciplinary research contributes to the harmonization of connections between disciplines by bringing together different concepts. An interdisciplinary team strives for a deeper level of cooperation; and due to the integration of new concepts, epistemologies, methodologies mutual enrichment occurs (Flinterman et al., 2001; Hu et al., 2024; Okamura, 2019; Smye & Frangi, 2021). As a result of blurring the disciplinary boundaries, integration and synthesis of disciplines takes place. In accordance with the Aristotle's statement, the result of this research is greater than the sum of its individual parts (Klein, 1996; Wilson & Pirrie, 2000). Therefore, interdisciplinarity is a synthesis of several disciplines, which creates a new level of discourse and integration of knowledge, and as a result of such a synthesis, new scientific disciplines/fields of study emerge (Baaden et al., 2024; Frodeman et al., 2017; Wright Morton et al., 2015).

A transdisciplinary approach promotes a new type of cooperation between the representatives of different disciplines and the development of new knowledge based on a new vision of reality.

Transdisciplinarity reveals commonalities between disciplines, as well as a new, unexplored field that is beyond them (Nicolescu, 2002). This leads to the integration of various types of knowledge and perspectives. As Cummings et al. put it,

> The concepts of knowledge integration and knowledge co-creation fit within the tradition of transdisciplinary research which is distinct from mono-, multi- and interdisciplinary research in that transdisciplinary research transgresses the boundaries of scientific disciplines by including experiential knowledge of societal actors in the research and problem solving process. Transdisciplinary research approaches are, however, often not recognised as such because they go by a different name and are embedded in local scientific, cultural and political practices that differ by country. Examples of transdisciplinary research approaches are: integrated research studies, constructive technology assessment, interactive learning and action, and participatory action research. These approaches all share some essential features, including focus on real world problems, involvement of multiple stakeholders, integration of different forms of knowledge, and crossing boundaries between disciplines and between science and society. (Cummings et al., 2013, p. 11)

Representatives of different fields of knowledge not only collaborate closely on a common problem over a long period of time, but they also create a common conceptual model that unites and transcends each of the disciplinary perspectives (Cummings et al., 2013; Flinterman et al., 2001).

When the very nature of the problem is disputed, transdisciplinarity can help identify the most relevant research questions (Funtowicz & Ravetz, 1993). Transdisciplinarity requires a deep understanding of a problem and the ability to look at it from different perspectives, the connection between theory and practice, and the promotion of the common good (Hadorn et al., 2008).

Unfortunately, our world is not "on the track" to reach the 17 Sustainable Development Goals, and in order to overcome all hardships, "we must write a new social contract for science" (UNESCO, 2024), which can restore public trust in science. The elaboration of a collaborative conceptual framework based on a transdisciplinary approach to problem-solving will promote

the development of a holistic integrative perspective, unification and harmony of disciplines, views, and approaches. This involves the process of mutual enrichment of science and society, which embodies the mission of "doing" science together with society (Seidl et al., 2013). The modern problems have no analogues in the past either in depth or in scale: they are global in nature and may push the world to the edge of survival. That is why all countries and societies must mobilize the academic and non-academic stakeholders to search for ways out of the crisis ("UNESCO Science Report", 2023). The global challenges of our time make humanity aware of the need for transformative, transdisciplinary research focused on finding appropriate solutions. Accordingly, it is necessary to listen to different voices, search for different approaches to the problems and the ways to solve them, which are largely determined by the maps of meaning and existential experience that can enrich and expand the scientific field and, as a result, can offer unexpected, but most effective ways to solve the problem. As Robinson points out,

> Engaging stakeholders is often critical for addressing problems because
>
> we can't understand or solve societal challenges without their knowledge
>
> and action. It is also more likely that research ideas are adopted by stake-
>
> holders when we engage with them directly and build trust over time.
>
> ("What is transdisciplinary", n.d.)

Transdisciplinarity attempts to embrace what is simultaneously within disciplines, at the intersection of disciplines, and beyond all disciplines. Its purpose is to understand the modern world, one of the imperatives of which is the unity of knowledge. Nicolescu defines transdisciplinarity by means of three methodological axioms:

> 1. The ontological axiom: There are, in Nature and society and in our
>
> knowledge of Nature and society, different levels of Reality of the Object
>
> and, correspondingly, different levels of Reality of the Subject.
>
> 2. The logical axiom: The passage from one level of Reality to another is
>
> ensured by the logic of the included middle.
>
> 3. The complexity axiom: The structure of the totality of levels of Reality
>
> or perception is a complex structure: every level is what it is because all
>
> the levels exist at the same time. (Nicolescu, 2010, p. 22)

Reality is multidimensional, that is why the "space" between and beyond disciplines is filled with information. According to Nicolescu (1997), if disciplinary research concerns at most one and

the same level of Reality, then transdisciplinary research is aimed at studying the dynamics generated by the action of several levels of Reality at the same time, "transdisciplinarity is nourished by disciplinary research; in turn, disciplinary research is clarified by transdisciplinary knowledge in a new, fertile way. In this sense, disciplinary and transdisciplinary research are not antagonistic but complementary". While complementary to disciplinary research, transdisciplinary research radically differs in its goal of a holistic understanding of the contemporary world (Nicolescu, 1997).

Originality

Researchers anticipate future changes through the lens of their filters: values, attitudes, preferences, let alone theories and methodologies. Besides, science does not automatically make them impartial observers, since they as humans for whom forecasts are elaborated are subjects of scientific research and at the same time objects. Rachel E. Menzies and Ross G. Menzies (2018) rightly state that psychologists and psychotherapists who deal with the fear of death are not free from this fear themselves, thus they may fail to address this fear. Likewise, forecasters are not free from their mental maps and ideas, even the specificity of the language used, thereby bringing into play different interpretations of social reality, which can lead to distortions and logical errors. Moreover, if the events being considered happen rarely in history and/or are encountered in this form for the first time, it is very problematic to foresee the chaotic, unpredictable dynamics of the process. Our concepts, values and beliefs are determined by our own time, which means it is difficult to know what lies beyond any historical change.

The modern challenges arise from existing conditions, and they can only be addressed by changing these conditions. Recently, the study of the future has moved from predicting the future to reflecting an alternative future and to shaping the desired future, both at the collective and personal levels (UNDP, 2022). Through joint and mutually enriching work within a transdisciplinary paradigm, representatives of different scientific fields and directions may create a kind of guidebook designed to form and explain a new reality, a new future. Within such an approach, not a competition between theories, methodologies, and protocol decisions, but a common goal, common dreams and aspirations for a better future of humanity should come to the fore. For instance, given that the actors of the social processes are human beings, it is crucial to explain their conscious and unconscious behavior; this is what the science of psychology deals with. However, as Leary et al. (2018) stressed, the greatest difficulty of psychology is that it deals with processes that are in constant change, thus, psychologists facing with this challenge prefer to specialize in narrow areas. At the same time, to create alternative futures and to develop effective, inclusive, long-term policies, it is necessary to go beyond "the superficiality of conventional social science research and forecasting methods insofar as these methods are often unable to unpack discourses – worldviews and ideologies – not to mention archetypes, myths, and metaphors" (Inayatullah, 2004, p. 8). A deep multifaceted social reality requires new research methodologies, as well as the ability to interpret all the facts in their diversity, since the objects of research in this case are both immediate experience and conscious/unconscious processes through the lens of cultural reality, worldviews, and myths as the core of any culture. An appeal to human experience and recognition of the processes for which there are no corresponding names yet lead to the need to integrate Western and non-Western theories, methodologies, approaches to a human being into a common research paradigm thereby harmonizing multiple perspectives.

Postnonclassical ontology deals with open dynamic systems that cannot be described within the framework of concepts based on the model of binary oppositions. It is necessary to turn to

the chaotic, illogical essence of the world, which can be known only as a result of empathic connection with the multifaceted world of peoples and cultures (Kalmykova et al., 2021). The key concept that captures the transition from the possible to the impossible is transgression, i.e., overcoming the boundary that is thought to be inviolable due to a taboo in a certain tradition and that separates the external from the internal, the essence from the phenomenon. Transgression disrupts the linearity of processes and provides opportunities to comprehend the transition of being into a dramatically different and unpredictable state. It symbolizes the desire to identify new possibilities in the relationship between being and thinking, subject and object (Danylova, 2014). Within a transdisciplinary approach, a new understanding of the relationship between the subject and the object occurs – they are united by the included middle with its infinite activity. The interaction of the Subject and the Object becomes the basis of transdisciplinarity (Nicolescu, 2010).

At the heart of the complexity of social forecasting is the human phenomenon, which cannot be defined from the standpoint of one discipline without falling into a trap of the habitual framework of imprinting and conditioning. In addition, a human being brings a high degree of unpredictability and uncertainty into all social forecasts. Nowadays, the complex multifaceted nature of an individual as a biological, psychological, and social being needs a deeper understanding that requires joint efforts of the representatives of various scientific fields:

> The need for a new approach to a human is fully realized, but this approach is not implemented. This is largely due to the specific object of the study – the object that is the subject at the same time. The mere recognition of biological, psychological, and social/cultural dimensions of a human nature that interact in linear or hierarchical way is insufficient. A new philosophical paradigm should reflect a specific holistic nature of humans, their involvement into the natural and social worlds and their aspiration to move beyond their own limits. (Danylova, 2017, p. 136)

A new paradigm can be elaborated on the basis of transdisciplinarity, which emphasizes that each and every individual as an inhabitant of the planet Earth is a transnational being whose dignity has both planetary and cosmic dimensions (Nicolescu, 2002).

Conclusions

A transdisciplinary approach to social forecasting considers natural, social, and medical sciences in a humanitarian context (Soskolne, 2000) and, thus, goes beyond traditional boundaries providing opportunities not only to synthesize and integrate solutions to a problem, but also to rise above it. Addressing a problem from one standpoint is only one link in a long chain, which does not make it possible to acquire a deep knowledge and develop a new perspective. In fact, the human world is a huge mountain range; and each of its peaks brings harmony to the overall

SOCIAL ASPECT OF HUMAN BEING

picture, but does not make it complete. The absolutization of one-sided standpoints, one option for research and solution to the problem will not give long-term results. Transdisciplinarity, recognizing the existence of different levels of reality governed by different types of logic, provides a broader view of the world, a deeper understanding of phenomena and processes that contribute to the development of new projects for a better future of a human and humanity:

> The unified theory of levels of Reality is crucial in building sustainable development and sustainable futures… Sustainable futures, so necessary for our survival, can only be based on a unified theory of levels of Reality. We are part of the ordered movement of Reality. Our freedom consists in entering into the movement or perturbing it. Reality depends on us… Our responsibility is to build sustainable futures in agreement with the overall movement of Reality. (Nicolescu, 2010, p. 30)

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SOCIAL ASPECT OF HUMAN BEING

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Прислухаючись до вітру змін: соціальне прогнозування крізь призму трансдисциплінарного підходу

Мета. У статті зроблено спробу розглянути соціальне прогнозування крізь призму трансдисциплінарного підходу з урахуванням цілісної природи людини. **Теоретичний базис.** Складність соціального прогнозування полягає в тому, що воно має справу з багатовимірним феноменом людини – людини, яка є і творцем, і творінням соціальних світів, для якої всі економічні, соціальні, політичні, наукові, культурні досягнення, проблеми та перспективи набувають сенсу лише в контексті неї самої, її життя, її власної долі. Таким чином, феномен людини є ключем до розуміння динаміки сучасних трансформаційних процесів і створення перспективних моделей майбутнього розвитку людської спільноти. Оскільки в процесі прогнозування ми намагаємося осягнути майбутнє, яке ще не є визначеним та може мати різні траєкторії розвитку, трансдисциплінарний підхід до прогнозування, який охоплює те, що наявне в межах дисциплін, на перетині дисциплін і поза межами всіх дисциплін, може стати найбільш плідним підходом. **Наукова новизна.** Людина привносить високий рівень непередбачуваності та невизначеності в усі соціальні прогнози. Сьогодні складна багатогранна природа людини як біологічної, психологічної та соціальної істоти потребує більш глибокого розуміння, що вимагає спільних зусиль представників різних наукових напрямів. Взаємозбагачуючись у межах трансдисциплінарної парадигми, представники різних наукових галузей та напрямів можуть створити свого роду путівник, покликаний формувати та пояснювати нову реальність, нове майбутнє. У такому підході на перший план має вийти не "конкуренція" теорій, методологій та протокольних рішень, а спільна мета, спільні мрії та прагнення кращого майбутнього людства. **Висновки.** Трансдисциплінарний підхід до соціального прогнозування має потенціал розглядати всі науки в гуманітарному контексті, зважаючи на складну багатогранну природу людини. Він виходить за рамки традиційних меж, надаючи можливість не лише синтезувати та інтегрувати варіанти розв'язання проблеми, а й височіти над нею. Трансдисциплінарність, визнаючи існування різних реальностей, забезпечує ширший погляд на світ, глибше розуміння явищ та процесів, що сприяє розробці нових проєктів кращого майбутнього людини та людства.

SOCIAL ASPECT OF HUMAN BEING