

“Correlation is the Truth of all Existence,” or Interdisciplinarity as a Methodological Principle of Adequate Social Cognition

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Abstract: The article demonstrates that interdisciplinarity is not only a characteristic of the modern stage of scientific knowledge, as it is usually stated. Nevertheless, it is a methodological expression of the ambiguous nature of knowledge about any social subject, which makes us consider it as a requirement for adequate social knowledge. This nature of knowledge about a social subject stems from the fact that every existing thing (including a social one), always, “by nature” in relations with other things, discovers that it is itself (“the truth of its existence”), only through this relationship, only through another thing, only in interaction with it. We can call this the nature of a thing; the way it exists. Moreover, if all the definitions of a thing, all knowledge about a thing that arises specifically, as a result of its various relationships with other things, are essential for its understanding and cannot be ignored when defining a thing. Then an adequate knowledge of such a thing (social things) will always be only its knowledge as the dialectical unity of many definitions. This implies that the external expression of this fact is interdisciplinarity as a methodological principle of adequate knowledge. That is, adequate knowledge of a thing (which is always multifaceted) is possible only through the interaction of the potential of separate, historically developed systems of concepts that correspond to these faces and form separate social disciplines, i.e. only as interdisciplinarity knowledge.

Keywords: Interdisciplinary, Social Knowledge, Social Philosophy, Scientific Cognition, Subject (Thing).

INTRODUCTION

In recent times, the theme of interdisciplinarity has gained popularity in policy, practice, teaching and research circles. Even as scepticism for the concept exists, it has now gained moral overtones with arguments for why interdisciplinarity is both desirable and inevitable. We are interested in understanding interdisciplinarity as a methodological principle of adequate knowledge in connection with the characterization of social knowledge, more precisely, in relation to the correlation of “social knowledge” and “social philosophy” that we want to talk about. Firstly, apparently, we need to clarify this notion (Alan & Rafols, 2009; Hisham, 2018).

If “interdisciplinarity” is considered (from a logical point of view) as a name (meaning of a name), then, of course, it has many meanings (concepts). One of them, mostly widespread, is that this is a concept that indicates the integrative nature of the modern stage of scientific knowledge. This is true. It seems that this aspect of the matter draws attention to this problem most of all (in the context of the desire to understand the features of the scientific knowledge of our time)¹.

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But this external and trivial circumstance, no matter how significant it is in itself, does not interest us. It is much more important for a philosophical understanding of the nature of social knowledge that interdisciplinarity (as a methodological requirement for adequate knowledge) is only an external expression of the internal ambiguity of an object, an expression of an ambiguous character (as an internal certainty) of all social knowledge, that is, knowledge about any social subject (thing)² and not only a characteristic of precisely the modern stage of scientific knowledge. What does it mean? We discuss it in this study (Hilte *et al.*, 2018).

LITERATURE REVIEW

Limited researchers and authors have studied the subject matter of this article. For example: Razmak & Bélanger (2016) Say: An interdisciplinary approach is necessary for exploring the most critical challenges facing the world today, including business studies, socio-technological issues, societal problems, health care and education reform, and the fostering of innovation and knowledge. Fortunately, there is a wealth of informative literature in the field of interdisciplinary studies in the humanities and social sciences the result of researchers’ efforts to record and study information on such interdisciplinary academic activities such as courses, conferences, and scholarly

¹The literature on the issue of interdisciplinarity is quite large, even as it relates to socio-humanitarian knowledge; we will name only a few works that give an idea of this, both domestic authors (Kasavin, 2004) and foreign (Transdisciplinarity in philosophy and science: approaches, 2015).

²Here an object (thing) is understood in a broad sense, that is, like any social object: a phenomenon, correlation, process, etc.

publications over the course of many years. Okamura (2019) believes: Many of the world's contemporary challenges are inherently complex and cannot be addressed or resolved by any single discipline, requiring a multifaceted and integrated approach across disciplines). Given the widespread recognition today that cross-disciplinary communication and collaboration are necessary to not only pursue a curiosity-driven quest for fundamental knowledge but also address complex socioeconomic issues, interdisciplinary research (IDR) has become increasingly central to both academic interest and government science policies. Accordingly, various national and international programmes, focusing especially on promoting IDR, have recently been launched and developed in many countries through specialised research funding and grants or through staff allocations.

Hisham, (2018) says: What can we say in the most general form about any existence? About any existing thing (including social)? And the fact is that, using Hegel's expression (2010), "everything is in relation to other things, and this relation is the truth of all existence" (Interdisciplinarity in the Modern Humanities and Social Sciences: proceedings of the All-Russian Scientific Conference, 2016). Each thing is multifaceted and reveals its multiple dimensions, what it is now ("the truth of its existence"), its specificity, only being in relation to another thing, only through another thing, only in interaction with it. And also with the second thing, with the third, with all at the same time ... Therefore, each thing, every existence has at the same time, at every moment of time, many names, many definitions, potential and relevant (the latter is what the thing is for us now). The inner certainty of each thing what we can call the nature of a thing, the way of its existence is this multitude of definitions, the unity of multitude which is each thing, each existence. 'As the same thing in us is leaving and dead, waking and sleeping, young and old. For these things having changed around are those and those in turn having changed around are these Heraclitus reveals the nature of things (22 B88 DK). Therefore, a social thing (phenomenon, connection, process) which is not only always "in relationship" with another thing, but also wholly belongs to such a form of being that the whole is a totality of relations (social), that is, society does not have an unambiguous and complete definition (Hilte, *et al.*, 2018). The social thing is always different; like Proteus, capable of assuming different guises. Thus, the field of social and humanitarian knowledge does

not produce the impression of "being scientific", scientific knowledge with its traditional criteria such as universality and necessity, with its adherence to the law of identity. Therefore, this area is more unstable, more indefinite, more difficult to cognize, and the results of cognition are more controversial than in the field of natural science. Therefore, the revision of knowledge in this area (even fundamental, not to mention evaluative) will be much more intensive. What is the result? As a result, we can state that all definitions, all knowledge, all "teachings" and theories about things "will be." Each of them will have its own truth about a thing that cannot be ignored when defining a thing. Lorenzo *et al.* (2015), studies winegrowing in Spain in relation to actual and future climate conditions on the basis of multi-model simulated outputs. Despite some disagreements amongst model results, the analysis shows that climate change will tend to have both a positive effect in some regions and some negative effects in others. The computational mesh of today's regional climate models allows to reach some level of details about the impacts of climate on agricultural practices, but the lack of common model responses in space prevents unequivocal conclusions. The analysis of Scoccimarro *et al.* (2014), based on future projections of heavy precipitation events in Europe, shows how multi-model ensemble results can be used to study statistically the upper tail of the precipitation distribution. Their results led them to conclude that the increase in the width of the right tail is somewhat linked to the availability of the atmospheric water column in a warmer climate, and the latter in this way may be the cause of more severe rainfalls. Ruiz-Villanueva *et al.* (2014) gets into the decadal variability of floods in Poland for the present and future climate conditions, questioning about the magnitude and intensity of such extremes. The data analysis from the mid-twentieth century onwards shows that there has been a shift in seasonality of floods magnitude which is in accordance with other diagnostics with simulated outputs from global and regional climate models. Lorenzo *et al.* (2015), studies winegrowing in Spain in relation to actual and future climate conditions on the basis of multi-model simulated outputs. Despite some disagreements amongst model results, the analysis shows that climate change will tend to have both a positive effect in some regions and some negative effects in others. The computational mesh of today's regional climate models allows to reach some level of details about the impacts of climate on agricultural practices, but the lack of common model responses in space prevents unequivocal conclusions. Finally, the use of tree-ring

data to infer the avalanche–climate relations in the French Alps by Schläppy *et al.* (2015) shows that dendrogeomorphology is becoming a useful tool to infer past avalanche activity in mountain region in order to devise statistical relations between snow and climate variables. Bauer (2012) says: The common view of science is a misunderstanding of today's science that does not recognize how "modern" science has changed since its inception in the 16th to 17th centuries. Science is generally taken to be objectively reliable because it uses "the scientific method" and because scientists work disinterestedly, publish openly, and keep one another honest through peer review. That common view was not too unrealistic in the early days and the glory days of modern science, but it is quite wrong about contemporary science, which has ceased to be trustworthy because it is subject to commercial and bureaucratic influences that have spawned highly damaging conflicts of interest, institutional as well as personal. The birth of "modern" science is credited uncontroversial to "The" Scientific Revolution of the 17th century, but it has not been widely understood that there have been three distinctly different stages of scientific activity since then. In the first stage, amateurs were seeking to satisfy their curiosity about how the world works. There were essentially no controlling interests other than truth-seeking. Missteps taken resulted chiefly from the inherent difficulty of making discoveries and from such inherent human flaws as pride and avarice. The second stage, roughly the 19th century, saw science becoming a career, a plausible way to make a living, not unlike other careers in academe or professions like engineering: respectable and potentially satisfying but not any obvious path to great influence or wealth. Inevitably there were conflicts of interest between furthering a career and following objectively where evidence pointed, but competition and collegiality served well enough to keep the progress of science little affected by that conflicting career interest. The way to get ahead was by doing good science. In the third and present stage, which began at about the middle of the 20th century, science faces a necessary change in ethos as its centuries-long expansion at an exponential rate has changed to a zero-sum, steady-state situation that has fostered intensely cutthroat competition. At the same time, the record of science's remarkable previous successes has led industry and government to co-opt and exploit science and scientists. Those interactions offer the possibility for individuals to gain considerable public influence and wealth. That possibility tempts to corruption. Outright

fraud in research has become noticeably more frequent, and public pronouncements about matters of science are made for self-interested bureaucratic and commercial motives. The public cannot now rely safely on the soundness of advice from the scientific community.

METHODS

We live in a huge world which is changing day by day in the 21st century. There are a lot of parameters of this big change which are directly connected. Most of us could realize these changes in our daily life but the most important part of this awareness is about perceiving their consequences. We cannot ignore that these alterations have some positive effects (developments) on human beings. On the other hand, most of these effects can lead to the end of earth or/and human beings. Definitely all these effects are pointing out a term called globalization. We cannot deal with global challenges without defining globalization (Kasavin, I.T. (2004). Globalization has become a dominant issue in work organizations all over the world. It has the potential to enrich not only the nation's economy but also the workplace as it can increase productivity, profitability and ease the performance of tasks. However certain changes such as privatization, deregulation, liberalization, subsidies removal, casualization, downsizing, rightsizing, rationalization, recapitalization, merger and acquisition among others, have made it very unpopular among workers in the developing countries. Understandably in the recent times the anti-globalization protests have increased all over the world as a form of resistance to the changes. Against this backdrop this paper examines the Nigerian situation by focusing critically on ways and reasons why workers react and resist changes emanating from globalization both within and outside the work organizations (Okafor, 2007). The claim that interdisciplinarity must be concerned with understanding the behavior of complex systems may at first blush seem at odds with the claim Klein and I make in our 1997 survey of contemporary interdisciplinary studies for the Handbook of the Undergraduate Curriculum, namely that there are diverse motivations for interdisciplinary study. We list seven:

- general and liberal education
- professional training
- social, economic, and technological problem solving
- social, political, and epistemological critique

- faculty development
- financial exigency (downsizing)
- production of new knowledge.

While motives for interdisciplinarity vary, they reflect different consequences of studying complex systems, not different kinds of interdisciplinarity. For example, interdisciplinary courses on phenomena modeled by complex systems promote desirable liberal education outcomes for students, and faculty development for their teachers. Interdisciplinary study prepares future professionals to confront the complex behaviors they will face on the job. It produces new knowledge by synthesizing insights from old knowledge about specific complex systems and by freeing scholars to ask new questions about them. It facilitates fundamental critique by viewing society or politics or knowledge as the dynamic product of a complex of interacting systemic forces. And by partially reorganizing the structure of the university around different categories of complex systems, it reduces the pressure for complete “coverage” of each discipline, thus eliminating an obstacle to downsizing. All seven motivations are consistent with the conception of interdisciplinarity presented in this paper (Gelsdorf, 2010).

An analysis of the problem under consideration, interdisciplinarity as the principle of adequate knowledge, in accordance with the research goal implied in the title of the work, is possible when relying on the cognitive potential of the dialectic of a single and many, essence and phenomenon, abstract and concrete, content of concepts, relation, part, whole. In the article we tried to consistently adhere to this. We used historical and comparative-historical methods, without which it is difficult to identify interdisciplinarity in the process of cognition as a methodological principle, and at the same time a historically necessary stage in the evolution of social and humanitarian knowledge.

We also applied the method of ascent from the abstract to the concrete which allows clarify that the understanding of the problem carried out in the article, interdisciplinarity as a methodological expression of the ambiguous and multifaceted nature (as internal certainty) of all social knowledge, that is, knowledge of any social subject, is the most productive.

RESULTS AND DISCUSSION

Humanitarian stakeholders are increasingly concerned about the impacts of current or emerging

global challenges, such as climate change, the food crisis and financial crises, extreme poverty, urbanization, water scarcity, energy security, migration and population growth, on the caseloads that humanitarian agencies work with and the operational environments they will have to work in. While anticipating the evolution of these challenges – propelled by various political, economic, legal, demographic, environmental, and technological factors – is a complex task at best, it is clear that their individual and combined impacts are already shaping, and will continue to shape international humanitarian action. 2. Yet, most international humanitarian actors are still not sufficiently focused on the future implications of these challenges both individually and collectively, even though in many cases they may be, by default or design, the actors called upon to adapt and respond to them (Gelsdorf, 2010). The division of disciplines in various branches of universities sets the stage for later advancements in applying interdisciplinary studies to most subjects including business studies. Interdisciplinary studies have considerably changed the way that students and teachers do things, including completing their studies, research, and teaching. They are also an interesting approach that could become a goal for many universities, within different available programs and resources as well, interdisciplinary research has enabled scholars to navigate across disciplines, and help them move from purely academic problems to real-world issues (Razmak & Bélanger, 2016).

Global problems are very different. The division of global problems into three big groups: inter-social global problems usually included the problems like the problem of diverting world wars, nuclear, eventually other conflicts connected to the problematic of armament (the problem of war and peace). At present, there gains in importance also the fight towards terrorism. The problem of the social and economic backwardness of developing countries, eventually the whole north-South relationship also belong there, as well as the problem of solving global debts, the relationship of the indebted and creditors. The problem of the international relationships (namely economic) changes under the new conditions formed namely by the scientific and technological progress. into the second group of natural-social global problems, there are most often included the following problems: environmental problem, raw material and energy problem, population problem, food, respectively nutrition problem. Lastly, the third group of anthropo-

social problems includes the general human problems of the social, cultural and humanitarian-ethical nature. Sometimes, they are ranked as one great complex problem (so-called problem of the future of man), sometimes this group is divided into a number (10–15) of partial “sub-global” problems the common denominator of which are the shortcomings of the development of man in the relationship to the life and social conditions created by himself. here belong different kinds of the unequal approach to education, health care, housing, culture, human rights, eventually also serious defects in their securing or a disharmonic and uncontrolled development (e.g. accelerated urbanisation) (Guthrie 1962; Scholz 2011).

Although “interdisciplinary” and “interdisciplinarity” are frequently viewed as twentieth century terms, the concept has historical antecedents, most notably Greek philosophy (Ausburg, 2006). Julie Thompson Klein attests that “the roots of the concepts lie in a number of ideas that resonate through modern discourse—the ideas of a unified science, general knowledge, synthesis and the integration of knowledge”, (Klein, 1990). while Giles Gunn says that Greek historians and dramatists took elements from other realms of knowledge (such as medicine or philosophy) to further understand their own material (Gunn, 1992). The building of Roman roads required men who understood surveying, material science, logistics and several other disciplines. Any broadminded humanist project involves interdisciplinarity, and history shows a crowd of cases, as seventeenth-century Leibniz’s task to create a system of universal justice, which required linguistics, economics, management, ethics, law philosophy, politics, and even sinology (Andrés-Gallego, 2015). Interdisciplinary programs sometimes arise from a shared conviction that the traditional disciplines are unable or unwilling to address an important problem. For example, social science disciplines such as anthropology and sociology paid little attention to the social analysis of technology throughout most of the twentieth century. As a result, many social scientists with interests in technology have joined science, technology and society programs, which are typically staffed by scholars drawn from numerous disciplines. They may also arise from new research developments, such as nanotechnology, which cannot be addressed without combining the approaches of two or more disciplines. Examples include quantum information processing, an amalgamation of quantum physics and computer science, and bioinformatics, combining molecular

biology with computer science. Sustainable development as a research area deals with problems requiring analysis and synthesis across economic, social and environmental spheres; often an integration of multiple social and natural science disciplines. Interdisciplinary research is also key to the study of health sciences, for example in studying optimal solutions to diseases. Some institutions of higher education offer accredited degree programs in Interdisciplinary Studies.

Here a typical example is the following situation. Hypercriticism, that is the overthrow of what was previously considered universally recognized, and established at one time (70s - trans. half of the 80s of the XIX century) that took place in the study of ancient Greece³ (including in relation to ancient Greek philosophy⁴), was replaced (already from the second half of the same 80s of the 19th century), as a prominent Russian classics scholar V.P. Buzeskul (2005) wrote, during the time of “a more calm and impartial attitude to the facts and sources of Greek history, a return in many respects to former views” (Origgi & Sperber, 2000). However, the previous critical stage did not pass without a trace and uselessly, was not completely discarded; the critical arguments were “not entirely unfounded ... were useful.” Therefore, we say the final (at a certain point in time) definition of a thing (for example, ancient Greek democracy or the so-called Pythagoreans, historian Thucydides, the politician Pericles or sophists) included all these “truths”, old and new, all moments of subcritical, critical and post-critical history of the study of Greek history. An even more revealing example is that of Aristotle in the context of hypercriticism. It is known that Aristotle’s almost undeniable reputation for centuries as a historian of philosophy was seriously questioned by the book of the American classic Harold Cherniss (1964) (*Aristotle’s Criticism of Presocratic Philosophy*), published in 1935 (Piaget, 1972). A number of the book’s provisions in the future aroused criticism, however, now there is no doubt that Aristotle, being one of our most important sources on pre-Socratics, as the historian of philosophy, is necessarily considered and from the point of view of Harold Cherniss (well-known our specialist of philosophical antiquity, L.Ya.

³It was largely a reaction to admiration for Athens, a romantic attitude towards everything ancient Greek in the spirit of I. Winkelmann (the philosopher Lev Shestov also wrote at the beginning of the 20th century that we were still under the hypnosis of the ancient Greeks).

⁴So, for the Hungarian historian of that time (second half of the 19th century) Julius Schwartz, the “Politics” of Aristotle is just “pretty empty rants” - see (Origgi & Sperber, 2000).

Zhmud (2015), even states in the preface to the recently published book in the Russian translation of W. Guthrie, "The History of Greek Philosophy," that no one has yet been able to refute the views of Chernsa (Guthrie 1962; Scholz 2011).

The essential definition of "ancient Greek" was undivided with "rational", "harmonious", "bright" from the time of I. Winkelman. After the work of E.R. Dodds "The Greeks and the Irrational" (1951) (Hegel, 2010) it began to include quite fundamentally "irrational" and "dark" (although it must be said that after the release of the Dodds book we were still for a long time, and to this day, perhaps, we are "under the hypnosis of the ancient Greeks", continuing to consider the Greek in many ways, in the words of Marx, as "the norm and an unattainable sample.")

And if this is so, as it has already been said, all definitions, all knowledge of a thing "will have a right to be" and for each of them there will be "own truth", which cannot be ignored when defining a thing, then adequate knowledge of such a thing (social thing) will always be only its knowledge as the dialectical unity of many definitions. This means that since the differentiation of knowledge ("divisions of sciences"), the external expression of this fact has been interdisciplinarity as a methodological principle of adequate knowledge. The understanding of the multifaceted (multilevel) nature of a thing, which was possible with the help of mythologies or conceptual images (say, in Heraclitus or in Tao de Ching), which surpass the concept in terms of its richness, being replaced by conceptual dissection of it, requires the use of simultaneously different separate systems of concepts, that is, disciplines.

The need for interdisciplinary studies to address the complex issues, too broad to deal adequately by a single discipline, is widely acknowledged in literature. Many issues in modern days such as climate change, food security and energy crisis, are interdisciplinary in nature. The success of interdisciplinary studies depends on 'collaboration' and 'synthesizing mind' among researchers in different disciplines. Research studies have identified disciplinary focus, assumptions, theories and practices, research design, and methodological pluralism as the major sources of conflict in an interdisciplinary context. Interdisciplinary research is defined as a mode of research by teams or individuals that integrates perspectives/concepts/theories and/or tools techniques and/or information/data from two or more bodies of knowledge or research practice (Porter & Rafols, 2009). The role of

interdisciplinary research, by integrating insights and learning's from different disciplines working in collaboration with each other to address a complex research problem like sustainable development, alternate sources of energy, food security; climate change and curing cancer (Ruiz-Villanueva *et al.*, 2014); sustainable energy struggle; food, water and energy security (Ignaciuk, *et al.*, 2012) is well acclaimed in academic literature. Also, the awareness that many of the scientific problems 'cannot be compartmentalized into arbitrary disciplinary structures' contributed to the growth of interdisciplinary research. Ausburg (2006), cited examples of interdisciplinary studies involving social and natural sciences in order to solve environmental problems. Ignaciuk *et al.* (2012) tried to bring two groups together: social scientists (who study social phenomena broadly or deeply) and computer scientists (who have computational approaches) in order to balance the trade-off between depth and breadth in an interdisciplinary study. Ignaciuk (2012) mentioned that the non-linearity and complexity of natural and social processes are recognized and policy makers pose questions for which solutions require collaboration between various fields. An example is a research focused on problems of food, water and energy security. These research studies need to be tackled in more holistic ways, allowing for a variety of different systemic feedback and inclusion of the expertise of many different disciplines. Bauer (2012), observed that the complex environmental problems require well-researched policies that integrate knowledge from both the natural and social sciences. Thus, the progress gained from viewing a research problem in its entirety stimulated many researchers into interdisciplinary research. Funding agencies and institutions are creating initiatives to encourage interdisciplinary research (Alan & Rafols, 2009).

This means, for example, in relation to ancient Greek philosophy, that its history, which was developed for a long time by classical philologists who focused on, of course, mainly on the features of the text, could only become complete since professional philosophers and authors of others specialties began to write it (just like we really began to understand ancient Greek civilization since we ceased to understand it only as the history of Hellenic poetry, art, and looked at it from the economic, say, agrarian, point of view, both politically and technically).

CONCLUSIONS

The justice of the marked nature of all social knowledge becomes apparent when we try to

determine the subject of social philosophy, and we have to draw a demarcation line between it and social knowledge (sciences, disciplines).

The need to characterize such a social subject as a public person (zoon politicon), that is, have (social-humanitarian) knowledge about it, required an appeal in Aristotle's "Politics" to both political, sociological, legal, economic, historical knowledge. However, the development of thought in the process of studying the subject "from the essence of the first order" to "the essence of the second order", the desire to cover the subject more profound and more comprehensively, inevitably led to differentiation.

What later will constitute the totality of individual socio-philosophical disciplines or the "corps of philosophy" was initially presented in a relatively *single* socio-philosophical knowledge or social philosophy. As soon as each relationship in which the subject could be located, each facet of the subject required for its in-depth knowledge of a separate system of concepts, spiritually specific, the passage of time became inevitable separation of sociology, political science, and anthropology. From the aspects of a *single* knowledge of the subject into *separate* disciplines (sciences), leaving behind social philosophy hardly the significance of only methodology and distant from the scientific rigor of reflection on the social being of a person and his entertaining history.

In our opinion, this is one of the justifications for interdisciplinary as a methodological principle of adequate social cognition since "everything that exists is in relation, and this relation is the truth of all existence."

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