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Krešimir Žažar

EXAMINING SOCIOLOGY'S POSITION IN AN INCREASINGLY INTERDISCIPLINARY ENVIRONMENT

ABSTRACT

The perspective of growing interdisciplinarity implies the need to establish sociology's position within an even more 'interdisciplinary environment' of contemporary science. Sociology's relationship with other sciences is intimately intertwined with several types of issues scrutinised here: a) the modalities of interdisciplinary conjunctions; b) the attributes of levels at which interdisciplinary cooperation may appear; c) what sociology can provide to and what it may require from other disciplines; and d) potential advantages of participation in interdisciplinary scientific ventures, as well as their possible hazards. Further, the preference for multidisciplinarity as a 'softer' variant of interdisciplinary connection is emphasised. Finally, the urgency pertaining to the disciplinary uniqueness of sociology, due to its capability to adequately answer a vast number of social challenges today, is underlined.

KEY WORDS: contemporary science, disciplines, forms of interdisciplinary conjunctions, fragmentation of sociology, role of sociology

Raziskovanje mesta sociologije v naraščajoče interdisciplinarnem okolju

IZVLEČEK

S perspektive vse večje interdisciplinarnosti se zdi nujno določiti tudi mesto sociologije v kontekstu rastočega interdisciplinarnega okolja sodobne znanosti. Odnos sociologije do drugih znanosti se nemudoma preplete s številnimi vprašanji, ki jih tu preučujemo: a) načini interdisciplinarnih povezav; b) lastnosti ravni, na katerih se lahko pojavijo interdisciplinarna sodelovanja; c) kaj sociologija lahko zagotovi in kaj lahko pričakuje od drugih disciplin; d) potencialne prednosti sodelovanja v interdisciplinarnih znanstvenih podvigih kot tudi njihove morebitne nevarnosti. Poleg tega je poudarjena prednost multidisciplinarnosti kot »mehkejše« različice interdisciplinarne povezanosti. In na koncu, poudarjena je nujnost disciplinarne enotnosti sociologije zaradi njene sposobnosti, da danes ustrezno odgovori na veliko število družbenih izzivov.

KLJUČNE BESEDE: sodobne znanosti, discipline, oblike interdisciplinarnega povezovanja, fragmentacija sociologije, vloga sociologije

1 Introductory Notes

The landscape of the contemporary science has increasingly been marked by *interdisciplinarity* (see, for instance, Henry 2005; Jacobs and Frickel 2009: 45–47; Crane 2010: 170).[1] Obviously, interdisciplinarity has become a certain fashion in the academic world (Burawoy 2013: 7). It has become ascendingly favoured in funding scientific research (Garforth and Kerr 2011: 660) and, particularly in some countries (like the UK) it seems to be on everyone's agenda (Strathern 2007: 125). The depicted situation indicates tremendous expectations of interdisciplinarity that is viewed 'as a solution to a series of contemporary problems' (Barry et al. 2008: 21). While interdisciplinarity represents one of the major topics today, it seems that this concept is frequently taken for granted, without detailed examination of its key features, preceding presumptions and following implications. In this article the basic definition of the concept and crucial determinants of interdisciplinarity will be provided, contextual determinants of its appearance disputed, diverse types of interdisciplinary connections presented, particular flaws and obstacles related to the emergence of interdisciplinary collaborations analysed, as well as critical remarks addressed to the idea of interdisciplinarity debated.

However, the basic aim of this paper is to situate sociology within the growing interdisciplinary map of contemporary science. The relation of sociology with other sciences is tightly linked to several types of issues that will be discussed: forms of interdisciplinary connections, attributes of levels (epistemological, theoretical and methodological) at which interdisciplinary cooperation may be instituted, possible contributions and requirements of sociology regarding other disciplines and probable benefits and dangers of entering into interdisciplinary arrangements. Moreover, a general anticipation of the upcoming trends considering intradisciplinary and interdisciplinary issues of sociology will be briefly exposed.

The anyhow challenging question of the relation of sociology and interdisciplinarity is even more demanding to analyse due to the highly complex nature of sociology itself.

2 Intradisciplinary Queries of Sociology

Perhaps squarely uttered yet quite adequately defining scientific disciplines is the following categorisation: they are 'firmly established social structures for the organization of knowledge' (Greckhamer et al. 2008 according to Crane 2010: 170). This definition highlights the *institutional foundation,* regularly identified with academic departments that educate new generations of students, and the *epistemological foundation*, i.e. theoretical

1. This article is based on the paper presented at the 'Annual Meeting of the Slovenian Sociological Association 2015 – Sociology between Producing Knowledge and Shaping Society' that was held from 6th to 7th November 2015 in Ljubljana, Slovenia.

concepts and tools, codified language and research methods, as crucial determining pillars of any discipline (Coast et al. 2007 according to Crane 2010: 170).[2] A commitment to a particular discipline ensures that certain disciplinary concepts and methods have been applied properly while other elements that are not ranked as part of a discipline are put aside (Barry et al. 2008: 20–21). Any science presumes an organized group of experts who decide about what can be considered as valid disciplinary knowledge. In the most general sense, any discipline is rooted in 'an "assumptive world", beliefs and practices so hallowed that they go without saying, taken completely for granted' (Scheff 2013: 180).

However, in sociology it is intensely demanding to detect such an assumptive, undisputable world. Instead of consensus on the crucial categories of sociology, one can find 'dissensus' about the core of the discipline (Holmwood 2010: 649), blatant disunity, fragmentation and heterogeneity that appears at diverse axes and levels: ontological, epistemological and methodological.

The diversity of sociology is articulated in numerous ways. At the most abstract level, the discipline is considered as multi-paradigmatic, or as a science consisting of diverging research programmes and traditions. It is a fractured discipline (in Moody and Light 2006: 68) that suffers from a pronounced level of incoherence (Davis 1994; Holmwood 2010: 647), permanent proliferation of diverse schools of thought (in Fuller 1991: 313), that has been facing crisis (Gouldner 1970; see also Weiß 1995 according to Steinmetz and Chae 2002: 113), that has been grasped by a decomposition process (Horowitz 1994) and that is 'irremediably interstitial' (Abbot 2001: 6). The interstitial character of sociology betokens that it contains sets of fractal distinctions, or binary dichotomies, which have been ramified across the whole body of the discipline (Abbot 2001: 3–33). Realism – nominalism, structure – agency, positivism – interpretavism are only a few pairs of a considerably more extensive list of binary oppositions that reflect the disruption within the core of sociology. Exceptional subspecialisation also contributes to the disintegration of the discipline, i.e. the dispersion into a tremendous number of particular substantial realms. Due to the enduring process of fragmentation (Garforth and Kerr 2011: 659), at the theoretical level, sociology has become the 'discipline dominated by a highly detailed research on minute problems' (Ritzer 1990: 11) with a bulk of over-specialized theories (Turner and Boynes 2006: 376). The scope of substantial subject matter fields is, thus, ample and among them exist strict boundaries, what implies a lack of interest for the works of sociologists specialized for other topics (Stinchcombe 1994: 283). Regarding this issue, I entirely agree with Scheff (2013: 184) that specialization must not represent an end in itself. From the viewpoint of exponents of sub-specialized fields, sociology may appear as a coherent structure, but a glance at the totality of science indicates 'disconnection and chaos' (Moody and Light 2006: 67).

The disunity of sociology is also manifested at the organizational level. According to Fuchs and Turner (1986: 148–149) this is actually the weakest point of the discipline as

2. Similarly, Fuller (1991: 302) emphasizes the importance of disciplinary boundaries since they 'provide the structure needed for a variety of functions, ranging from the allocation of cognitive authority and material resources to the establishment of reliable access to some extra-social reality'.

governing patterns of organizational control over sociological work imply its immaturity. In comparison to mature sciences marked by a single, homogenous establishment that defines the standards of all dimensions of scientific work, in sociology there is a pluralistic structure with no single group possessing a monopoly position and control 'over the production and administration of sociological knowledge' (Fuchs and Turner 1986: 149). The lack of central control over material, organizational and symbolic resources is perceived as the cause of incoherence and disintegration (Turner 2006). A disintegrated state of affairs goes along with the ineffectiveness of professional organizations (Stinchcombe 1994: 289). In that sense reflexive weakness is attributed to sociology, since it is not capable to be properly constituted as a social unit (Fuller 1991: 314). Additionally, the disintegration of sociology induces steady difficulties for justifying its existence (Stinchcombe 1994: 279) and makes future prospects of the discipline uncertain. This uncertainty is produced by the incapability to obtain consensus about the criteria for stratification of sociologists. Instead of unified criteria for defining excellence, within the discipline a 'partially ordered stratification system' (Stinchcombe 1994: 281) with multiple standards for evaluating research, training and prestige of departments is at work (Stinchcombe 1994: 281–283, 288).

Alongside the denoted frictions and divisions, there is an additional tension related to the adversative conceiving of its final telos. On the one hand, sociology is viewed as stringent science about the social world, while on the opposite side there are sociologists who underline the primacy of social engagement and activism. The enormous disruption of the two contrary angles may even end in a bifurcation and cleavage of sociology as a humanistic and, on the diametric pole, narrowly scientific discipline (Turner 2006: 26).

Even a brief glance at the surface of sociology unfolds that it is a highly messy, disordered, fractional discipline with an amorphous identity. Finally, it can be assessed that 'sociology as a discipline exists in a state of internal interdisciplinarity' (Holmwood 2010: 650, also 646).

3 The Basic Assumptions of Interdisciplinarity

3.1 Definitions of Interdisciplinarity

An incipient preliminary remark when examining interdisciplinarity refers to a common attitude that it represents a *contemporary phenomenon*, what is entirely wrong. There is a long history of coexistence between interdisciplinary centres and academic departments of single disciplines (Strathern 2007: 125). Rather than conceiving interdisciplinarity as something novel, it should be interpreted as a 'historical constant' (Barry et al. 2008: 23). However, what is epochally new is that interdisciplinarity has turned into 'a totalising mode of academic being' (Strathern 2007: 125), i.e. it has been deployed into the core of the academic world, and is faced with huge expectations, as it is perceived as an instrument that should bridge science with society and economy (Barry et al. 2008: 23).

A quite comprehensive definition of interdisciplinarity is provided by Rogers and others (according to Coast et al. 2007: 496) who designate it as the 'emergence of insight and understanding of a problem domain through the integration or derivation of different

concepts, methods and epistemologies from different disciplines in a novel way'. It should be stressed that interdisciplinarity appears in problem domains that cannot be properly comprehended from the angle of a single discipline. In this sense, interdisciplinarity should be primarily seen as complementary to monodisciplinary researches, as it strives to fill knowledge gaps that single disciplines cannot accomplish (Coast et al. 2007: 496). Certainly, interdisciplinary research is not a substitution for disciplinary knowledge, but its completion, as it 'can only enrich our understanding of the world' (Burawoy 2013: 7). The basic intention of interdisciplinary research projects is twofold: a) they aim to produce novel knowledge, i.e. to explain a particular phenomenon under consideration, and b) they try to find a solution for a certain problem. Therefore, besides the *cognitive component,* interdisciplinarity also includes the *practical component*. The latter is particularly emphasized, as interdisciplinarity exhibits a remarkable problem-solving orientation (Burawoy 2013: 7; Barry et al. 2008: 29-30; Jacobs and Frickel 2009: 47). Probably exactly in this attribute lies the attraction of interdisciplinarity to political actors who perceive it as an answer to numerous social challenges.

3.2 Variety of Interdisciplinary Modes

Interdisciplinarity cannot be examined as a monolithic endeavour, but as a heterogeneous phenomenon that is shaped in a variety of disciplinary connections and manifests in multiple forms, fields, institutions, trajectories and practices (Barry et al. 2008: 21, 24, 41). One of the urgent tasks is to distinguish interdisciplinarity from the proliferating akin concepts like *multidisciplinarity* and *transdisciplinarity* (author's emphasis) (Garforth and Kerr 2011: 673).[3] The softest form of interdisciplinary cooperation is multidisciplinarity, within which researches of two or more disciplines work parallel on the same issue without changing their own disciplinary frameworks, epistemologies, theories and methods (Coast et al. 2007: 499–500; Barry et al. 2008: 27; Crane 2010: 171; Strathern 2007: 124–125; Davis 2007). Multidisciplinarity may appear even entirely without a cross-disciplinary connection (Viterbo 2007). On the other side, the strongest forms of interdisciplinary collaboration represent transdisciplinarity that presumes the merging of fundamental norms, epistemological assumptions, theories and methodologies of distinctive disciplines and, finally, their fusion (Coast et al. 2007: 500; Barry et al. 2008: 27; Crane 2010: 171; Strathern 2007: 124–125; Viterbo 2007; Steinmetz 2007: 55; Holmwood 2010: 644, 654). In such circumstances initial disciplines disappear while novel knowledge fields emerge. Such hybrid knowledge fields are designated as *interdisciplines* marked by 'intentionally porous organizational, epistemological and political boundaries' (Frickel 2004 according to Crane 2010: 171). Cultural studies, migration studies, media studies, science studies, gender studies and material culture studies are only a few examples of a dozen of such hybrid knowledge areas (see also Crane 2010). Multidisciplinarity and transdisciplinarity

3. In the rich body of literature about the disciplinary organization of current knowledge production the prefixes pluri-, poli-, cross-, post-, a-, anti-disciplinarity also can be found. Due to limitation of space, and since it is not of crucial importance for this paper, I will omit here a detailed clarification of subtle distinctions among the numerous terms.

may be considered as two extreme poles on a wider continuum of possible interdisciplinary arrangements that may vary in degree and complexity (Strathern 2007: 124–125, 132). I find this gradual image of instances of interdisciplinarity completely convincing. The term interdisciplinarity is within this framework a type of neutral, 'generic term' (Barry et al. 2008: 28) or denominator for a whole array of possible modalities of cooperation between sciences.

Burawoy (2013: 14–17) takes a somewhat different approach in identifying the types of interdisciplinarity. According to him, interdisciplinarity ought to be clarified by answering two questions: a) to whom is the knowledge addressed (whether the knowledge is for an academic or extra-academic audience), and b) what is the purpose of knowledge (is it reflexive or instrumental). Hence, by classifying the types of interdisciplinary connections one should be aware, Burawoy rightly points out, of the nature of the developed knowledge and the social actors who will benefit from it.

3.3 Challenges in Implementing Interdisciplinary Work

Albeit interdisciplinarity has been extensively promoted and placed into the spotlight of contemporary science, there are numerous obstacles in its accomplishing. These barriers can be grouped in four categories: a) epistemic, b) administrative, c) organizational, d) practical.

Epistemic barriers are inevitably outcomes of the specificity of each discipline that differ in the 'incompatible styles of thought, research traditions, techniques, and language' (Jacobs and Frickel 2009: 47) and overall sets of basic ontological, epistemological, theoretical, and methodological assumptions, as well as a variety of codified procedures. Additionally, diverse sciences may operate on a different level of abstractness and generality and that could represent a setback to synchronizing the interworking.

The existing administrative system is regularly not supportive to the researchers that work in interdisciplinary fields. They need to devote greater efforts to conducting more risky interdisciplinary researches (Jacobs and Frickel 2009: 47–48). The present reward and promotional system within academia favours overspecialization and remaining inside the strict specialized topics within single disciplines, which has a discouraging effect on undertaking interdisciplinary work (Wright et al. 2015: 271–272). The evaluation and assessment of interdisciplinary knowledge is a special issue. Currently, there is an obvious dominance of indirect measures, as are a number of patents and publications conveyed through the interdisciplinary research. At the same time, there is a discernible lack, or at least insufficiency, of epistemic criteria (like explanatory power or comprehensiveness) for the estimation of solely interdisciplinary work, and not assessing it through the lens of monodisciplinarity (Mansilla and Gardner 2004; Strathern 2005 according to Coast et al. 2007: 498). Yet, a transparent and satisfactory system of assessing the quality of interdisciplinary work, I would like to emphasize, still needs to be developed.

Closely related to the former are difficulties that appear at the organizational level. The empirical study conducted by Garforth and Kerr (2011) indicates a certain division between different units of a university, i.e. between permanent staff employed in depart-

ments and fixed-term contract staff that works in units on applied research. The latter researchers adhere considerably more to the axial premises of interdisciplinary work. However, scientists from applied research units have quite a low prestige, lack institutional recognition and work in precarious conditions at the periphery of academic structures (Garforth and Kerr 2011: 669, 671). Even though these researchers possess symbolic capital and are skilful in gaining financial capital needed for research projects, they lack academic/scientific capital, which (except in the case of the most successful individuals) very negatively affects their career path (Garforth and Kerr 2011: 671).

Finally, Coast et al. (2007: 497–499) suggest practical obstacles that a researcher, willing to become a practitioner of interdisciplinarity, confronts: training, funding, recognition, institutional structures, time and effort and readiness. Reaching competence in an interdisciplinary field is tremendously demanding, since it is a vexatious process that requires extensive time, lots of patience and hard work and also presumes certain individual traits as open-mindedness, curiosity and aptitude for taking risks. On the other hand, the current scientific system is designed to gauge monodisciplinary science. Despite the nominally proclaimed preferences toward interdisciplinarity, research grant committees 'tend to favour grant proposals that build in interdisciplinarity rhetoric without necessarily delivering interdisciplinarity' (Coast et al. 2007: 498). The exposed difficulties indicate that interdisciplinarity is an agenda that appears attractive as a written word, but that is hardly convertible in concrete research practice.

3.4 The Social Context of Increasing the Relevance of Interdisciplinarity

Why has interdisciplinarity become such a favoured form of scientific endeavour nowadays? Globalization processes, expansion of technological advancement and the postmodern framework are extracted as factors that impact the ascendance of interdisciplinarity (Riley and McCarthy 2003 according to Coast et al. 2007: 494). In addition, there has been a crucial switch in the logic of funding scientific research. Namely, diverse types of funding agencies have begun to privilege research projects at the intersections of diverse disciplines with the attitude that at these boundary areas lie productive research agendas (Coast et al. 2007: 494–495).

The switch towards interdisciplinarity can be conceived as an expression of redefining the relation between society and science at the end of the 20th and the beginning of the 21st century. This relation is reshaped in the requirement for science to be directly involved in solving social issues and actively contribute to *economic development*. In order to achieve the denoted demands, science should exhibit 'the ability to break down disciplinary barriers' (Strathern 2007: 125). By erasing the distance towards publicity, contemporary science, and universities in particular, are faced with two types of expectations: a) to provide the solution for a given social issue, and b) to convey patents and other forms of intellectual properties (Strathern 2007: 127–128).

These currents are effectively articulated in the concept of MODE 2 of knowledge production (Gibbons et al. 1994). MODE 2 accentuates the broader social and econo-

mic context within which various types of actors take part. One of the crucial features of MODE 2 is transdisciplinarity[4], since problem-solving oriented knowledge that is at the forefront today requires overcoming of a single disciplinary framework (see also Gibbons et al. 1994 in Schmidt 2007: 314). The current model of generating knowledge, finally, underlines its social accountability (Gibbons et al. 1994: 7; see also Strathern 2007: 125) and highlights its orientation towards application (Gibbons et al. 1994: 4).

The rise of interdisciplinarity profoundly corresponds to the upheaval in conceiving the social function of scientific institutions. The new agenda insists on the utilization of knowledge for social and economic purposes. Knowledge production organizations are expected to be an integral part of the emerging knowledge economy. Therefore, the reconfigured role of science today may be interpreted as part of a broader project of (re)-instalment of the currently dominant neoliberal socio-economic paradigm.

3.5 Advocates and Critics of Interdisciplinarity

A dozen of recent austere social issues, like climate change, pandemic diseases, terrorism, poverty, social exclusion, structural unemployment, financial and economic crisis, or the more current migration crisis, require proper solutions. Due to the complexity of these phenomena, advocates of interdisciplinarity argue that it is unlikely to expect that right answers would come from single traditional disciplines. Thus they echo the already stated attitudes about economic and overall social benefits of science in its interdisciplinary facet. On the opposite side, critics of interdisciplinarity warn that such claims are unconvincing and the whole concept is conceived as, basically, ideologically driven. According to Schmidt (2007: 313–314, 318) interdisciplinarity is primarily a political term, situated in the heart of current knowledge politics. Nonetheless, interdisciplinarity has become a type of *buzzword* (author's emphasis), frequently used by public administrators (Davis 2007). Without expressing an additional value judgement, I agree with these critical remarks.[5] The current discourse on interdisciplinarity is considerably coloured with a neoliberal agenda that knowledge should be commodified and science put in service to economic (and social) development. Interdisciplinarity is here a popular catchword, a concept often used, but without precise meaning (Schmidt 2007: 313–314, 316). This holds true, I would add, not just for businesspersons and public officers, but also for academics who frequently use the concept entirely uncritically.

Some commentators entirely rightly point out that insisting on interdisciplinary work may present a threat to intellectual autonomy, since such researches are regularly funded by extra-scientific actors who not rarely ignore deeper theoretical insights on a given issue, what may consequently lead to eroding standards and decrease the quality of scientific work (Puddephatt and McLaughlin, 2015: 317).

4. Gibbons et al. (1994, particularly 4–6 and 27–30) prefer transdisciplinarity as the most suitable form of interdisciplinary knowledge production activity.
5. It is mandatory to stress that I am not sceptical considering the idea of social and economic utilization of scientific knowledge, but I am against the primacy of pragmatic logic that might totally instrumentalize science and undermine the standards of scientific work.

The reconfigured financial environment and system of funding scientific institutions compatible with MODE 2 of knowledge production that favours interdisciplinary research could imply a negative impact on single disciplines. In such an environment sociology is particularly vulnerable, since particular thematic sub-fields of this science, marked by weak disciplinary identity, incline to be displaced out of sociology and constitute new, often applicably oriented, subject fields (Holmwood 2010). Eventually, such an institutional environment currently efficient in the UK, Holmwood expresses his concerns (2010: 652), leads to disappearance of sociology.

Critics also unravel the epistemic issues with interdisciplinarity by underlining that to become an expert in a given field one has to learn during the whole lifetime (Davis 2007), so it is not realistic to expect that a specialist for two (or even more) fields will be met in one person. Quite the opposite, under the banner of interdisciplinarity a certain intellectual amateurism is not a rare appearance (Davis 2007). Moreover, 'it is not clear that interdisciplinarity is universally superior to traditional disciplinary research' (Puddephatt and McLaughlin, 2015: 317). Although it holds true that the existing (mono)disciplinary framework of science is not capable of resolving numerous challenges nowadays, I am inclined to express agreement with the convincingly elaborated evinced sceptical views and critical objections addressed to interdisciplinarity.

4 Sociology and Interdisciplinarity

4.1 Modalities of Interdisciplinary Connections

As there are different modalities of interdisciplinary collaboration, there are also various paths of establishing such interdisciplinary connections, as 'researchers have been shown to find various routes into and between disciplines' (Garforth and Kerr 2011: 660). When analysing the dynamics of development of interconnectedness among disciplines, one has to take into account the *epistemic and institutional context* (author's emphasis) (Garforth and Kerr 2011: 660).

By viewing the relations towards original disciplines, three ideal types of interdisciplinarity can be distinguished: integrative-synthesis, subordination-service and agonistic-antagonistic mode (Barry et al. 2008: 28–29). The first mode presumes a productive dialogue of separate disciplines which generates (however, not necessarily) a new common knowledge field. The basic feature of the second mode is the hierarchical division of labour within which some disciplines are valued as more worthy, while others are undervalued. Such distinction of tasks and the inevitable asymmetry in the power relation may, actually, reinforce the stability of a single discipline rather than foster an epistemic change towards a new hybrid interdisciplinary knowledge field (Barry et al. 2008: 28–29). The third mode 'is driven by an agonistic or antagonistic relation to existing forms of disciplinary knowledge and practice' (Barry et al. 2008: 29), thus, it marks the type of establishing interdisciplinarity that emerges exactly in critical dialogue with the starting disciplines. Newly profiled interdisciplines are irreducible to initial disciplines (Barry et al. 2008: 28–29).

The question that inevitably arises in this stage of our discussion is: What types of relations with other disciplines may sociology enter? I suggest at least three possible types of relations considering primarily the distribution of power or the relation of dominance: *interdisciplinary indifference (disciplinary isolationism), hegemonic pretensions* and *equal partnership*. Obligatory emphasis is here placed on 'at least', since I do not intend to claim that some other possible types may also be identified.

4.1.1 Interdisciplinary Indifference / Disciplinary Isolationism

Under this header I presume a mode within which sociology barely establishes connections with other sciences and entirely retains its autonomy. If they even occur, possible connections are superficial and represent minimal scientific communication in the form of reading books and articles shaped in other disciplines, or the participation in discussions at scientific meetings or in a public discourse. The apex of the connection within this mode is the possible borrowing of certain concepts or ideas and methodological procedures, initially formed in other disciplines, like biology, psychology, economics or politics, and transposing them into sociology. Take, just as an illustration, the basic premises of rational choice (theoretical) framework initially developed in economics, the concept of adaption or (natural) selection firstly elaborated in biology, ethnographical researches pioneered by anthropologists, or the method of discourse analysis originally introduced in the field of linguistics. The mentioned theoretical assertions and methodological approaches find their proponents among sociologists who adapted and applied them in a sociological manner. The reverse direction of such transfers is feasible as well. For instance, functionalism developed by Comte, Spencer and especially Durkheim was later embraced by anthropologists. Further examples of such two-directional interchanges are multiple. It is obvious that the depicted type, indeed, does not represent authentic interdisciplinarity in the strict sense. This mode, quite the contrary, strengthens the vision of science as a conglomerate of a series of distinctive disciplines.

4.1.2 Hegemonic Pretensions

When sociology enters the realm of cooperation with other disciplines, it may tend to express its (presumed) superiority and entail itself as a leading (social) science. The idea of the dominant role of sociology in the hierarchy of sciences is not new and can be traced back to the early days of the discipline when already Comte proclaimed its central place among all modern sciences (Comte 2000/1896: 27–55). This motive has been since recognized as the Comtean vision of sociology as the *queen of sciences* (author's emphasis) (Katunarić 2009: 202). The royal image of sociology is rooted in the idea of its capability to encompass and explain society in its totality, which can be accomplished if it hires other disciplines to fill in the gaps in the knowledge about society. The final aim is that sociology should comprise knowledge about the totality of the entire social world (Katunarić 2009: 202–203). In order to acquire the denoted objective, sociology needs to broaden 'disciplinary boundaries outwards into fields covered by other sciences' (Katunarić 2009: 202), which leads to the emergence of 'intradisciplinary interdisciplinarity' (Faber and Scheper 1997 according to Katunarić 2009: 207). Interdisciplinarity

is, conditionally speaking, present here, but it is completely enshrined in the framework of one single discipline – sociology.

According to Steinmetz (2007: 52–56) in particular periods in history sociology managed to impose hegemony over other disciplines. Such circumstances occurred from 1945 until 1970s which is the phase of dominance of hegemonic positivism. This period was marked by Parsons' imperial ambition to promote sociology as the axial social science with other disciplines as its satellites (Steinmetz 2007: 54–55).

The examined type of interdisciplinary connectivity is fully compatible with the above presented subordination-service mode. Within any hierarchy, the elements at the bottom are in an unfavourable position, so in the hierarchy of sciences there is a threat for weak disciplines to be dissolved and to completely vanish (Burawoy 2013: 7).

In the immensely interesting analysis based on the examination of co-citation patterns in social sciences journals, Moody and Light (2006) came to the finding that sociology is the central social science in terms of a vastly broad scope of examined topics. Yet, works of sociologists are not so frequently cited by their colleagues, as is the case with economists, law scientists, psychologists, or political scientists. That indicates that sociology is a general discipline that examines a vast range of issues, evinces weak internal cohesion and has open borders for possible cooperation with other disciplines.

4.1.3 Equal Partnership

There is also the possibility to establish interdisciplinary connections that would not imply an asymmetry in power relations. The basic idea here is that each discipline conduct its own part of research task, after which the assemblage of particular researches would yield the whole mosaic of the phenomenon under scrutiny. The cooperation between disciplines in such cases is centred on specific empirical issues that are analysed from different disciplinary angles. For instance, ethnic conflicts or processes of post-socialist transition represent complex fields of inquiry that require the interworking of economists, political scientists, historians and others without an a priori presumption of the crucial relevance of a given discipline[6] (Katunarić 2009: 209–212). Other examples of such interdisciplinary connections are quite numerous, like the issue of climate change that gathers experts from natural science disciplines, who analyse its dynamic and monitor particular parameters, and a wide span of social scientists who examine the economic, political and overall social consequences of the global warming.

This mode of interdisciplinary nexus does not assume the merging of disciplines at any level, or the emergence of hybrid disciplines, i.e. interdisciplines. It is obvious that it entirely corresponds to multidisciplinarity as it was defined earlier. Within this mode, a discipline may cross the disciplinary borders, but the border remains intact and stable, and the discipline preserves its autonomy.

6. A more careful inspection reveals that this form of interdisciplinary cooperation also comprises the latent hegemonic pretensions of particular disciplines. For example, emphasizing the relevance of the rational choice theory in explaining the behaviour of social actors during the post-socialist transition, in fact, represents an attempt to promote the position of economics, to which the denoted theory is attached (Katunarić 2009: 210–212).

4.2 The Attributes of Levels at Which Interdisciplinary Cooperation May Appear

Regardless of the degree of encounter of disciplines, interdisciplinary work can function at the *methodological level*. This may include applying the same sets of methodological procedures and particular methods and techniques by different sciences in interdisciplinary research projects. Indeed, scientific methods are rarely monopolies of a distinct discipline. Certainly, questionnaires, interviews, observation, diverse types of text analysis and many others are not exclusive methods of sociology[7] as they can be found in the methodological arsenal of different sciences. In short, principally it should not be an obstacle to link diverse disciplines at the methodological level, despite the specific manner in which they can be applied in their home disciplines.

A look into the past indicates that sciences have borrowed ideas, concepts and whole theories and usually adapted and refined them to their own purposes. Just to mention the idea of evolution that was imported, unfortunately not seldom with intensely negative effects, from biology. Regarding this topic, Urry (according to Holmwood 2010: 652) yet depicts sociology as a parasite discipline that imports issues and discourse initially introduced in other sciences. Since it is placed in the network centre of social sciences, such position allows it to readily borrow ideas from neighbouring disciplines (Moody and Light 2006: 72–73). On the other hand, sociology has often exported its ideas, frameworks, concepts and theories (Holmwood 2010: 643, 646; Garforth and Kerr 2011: 659). This kind of intellectual interchange among sciences is quite common, and it is likely that it will be maintained in the future. These insights lead to the conclusion that it is not particularly easy to set interdisciplinary connections at the *theoretical level*.

The most demanding task is to institute an interdisciplinary relation at the *epistemological level,* though one could question whether such epistemological connections are inevitable, even advisable at all. My suggestion to this dilemma is simply – no. If there is any defining feature of a particular discipline, it is the specific conceiving of the ontology of a given phenomenological realm that has been examined and a certain set of epistemological assumptions. Thus the possible adopting of the epistemology of another discipline indeed represents an essential transformation of the departing discipline. Such a process actually occurs in the case of transdisciplinarity when at the end initial disciplines cease.

4.3 What Sociology Could Provide to and What it May Require From Other Disciplines?

Certainly, there is the question why sociology should enter into cooperation with other sciences, what the potential benefits are, as well as what it can offer to them. As a sociologist convinced in the profound relevance of the discipline, I would suggest that it can provide immensely valuable insights mainly by unfolding the *social aspect* of a particular

7. Quite the contrary, sociology has serious difficulties to allege its distinctiveness in the methodological field, especially in comparison to other social sciences, such as economics, psychology or anthropology (Holmwood 2010: 645).

phenomenon. Namely, the broad scope of phenomena that primarily represent subject fields of other disciplines inherently possess a social component. Even phenomena that are not of direct interest to sociologists, as climate changes, GMO, diseases, urban design or invention of technological devices, comprises a dimension of emphasized social relevance. Sociologists undoubtedly can reveal the social aspects of these phenomena and thus contribute to the improved understanding of issues under scrutiny of ecologists, medical scientists, architects, technology engineers etc.

On the other hand, sociology may also find the knowledge developed in other fields useful. When it attempts to explain the behaviour of individual actors or groups in social environments, insights from psychology, psychiatry, economics, political science or even ethnography or historiography can represent a valuable contribution. By the same token as diverse non-sociological phenomena include social aspects, different sociological phenomena also contain aspects that are not entirely just social.

Therefore, sociology undoubtedly has a rationale to establish interdisciplinary connections through which knowledge can flow in both directions: from sociology to other sciences and vice versa.

4.4 Advantages and Flaws of Participation in Interdisciplinary Scientific Ventures

In the preceding section some arguments were provided that highlight the leverages that the logic of interdisciplinarity opens to sociology. This is intimately intertwined with the increased awareness that a vast number of phenomena in the sphere of technology, culture, sports, everyday life or medicine is immersed in society and contains a particular social dimension. From this point of view, interdisciplinarity can be comprehended as a platform that provides an extraordinary opportunity for sociology to express its social relevance and urgency.

There are also some threats of the interdisciplinary work of sociologists. One of them is the possible disruption between *professional or disciplinary sociology* and *sociology engaged with social issues,* that is interdisciplinary oriented (Burawoy 2013: 10). The denoted division may take the shape of a spatial split between the Global North, inclined to the former, and the Global South, attached to interdisciplinary researches; the tendency to such geographical allocation of sociological work should be restrained (Burawoy 2013: 10–11, 14). This partition corresponds to the gap between *fundamental researches* conducted within the traditional disciplinary environment of an academia and *applied,* interdisciplinary aimed, *researches* (Garforth and Kerr 2011: 662–668). The major concern related to this division is that it, since applied researches more directly depend on funding, as a final consequence can undermine the autonomy of academia by mitigating the critical inquiry of researchers (Bourdieu according to Garforth and Kerr 2011: 662). In such circumstances, proponents of disciplinarity claim that they preserve the autonomy of scientific labour, while interdisciplinarity is conceived as a danger for an academia (Garforth and Kerr 2011: 667–668; see also Barry et al. 2008: 22). Undoubtedly, this concern is entirely comprehensible, even though it is undisputable that scientists, whether

they act from the disciplinary or interdisciplinary position, are not allowed to diminish the standards of scientific performance when faced by any type of external pressures.

It is also important to avoid the possible interdisciplinary arrangements within which sociology would take a pro forma role, only to legitimate the 'interdisciplinary' character of a certain research. Sociologists ought to think carefully about the real nature of interdisciplinary research projects they intend to be involved into, bearing in mind the already stated proposition that interdisciplinarity is a buzzword, often used completely superficially.

4.5 Sociology between Isolated Monodisciplinarity and Radical Interdisciplinarity – Discussion on Some Key Matters

Regarding the variants of interdisciplinary connections, three envisaged forms are extracted. Taking the position of interdisciplinary indifference, i.e. disciplinary isolationism, may imply that sociology is a self-sufficient science. Some may object that such an argument is somehow naive as social phenomena and processes are too complex to be accurately grasped only with the analytical tools of a sole discipline. In my opinion, it is not an advisable strategy to stay confined to the borders of a single discipline, but there is also no sense in embarking in interdisciplinary projects at any price. The decision to initiate interworking with other sciences needs to be rooted on the estimation that such relation may lead to new, otherwise unreachable, insights and knowledge.

There is a certain ambivalence in estimating the mode of interdisciplinarity between sociology and other disciplines labelled as hegemonic pretensions. The possible outcome of entire disciplines disappearing does not seem attractive and the overall idea of dominance of sociology over other sciences is quite controversial. From the viewpoint of sociologists, there are some advantages of the attitude of superiority of sociology in explaining and understanding the complex social world. Certainly, the comprehensive scope of sociological epistemologies, theories and methodologies represents a powerful set of tools to analytically grasp a dozen of social phenomena and processes and provide quite an overall, if not entirely complete, view of them. Other disciplines gain considerably more particular insights into objects of inquiry that are of interest to sociology, as well. However, it is arguable whether sociology alone is capable of comprehending the totality of the social universe. Therefore, I would suggest that a kind of cooperation between sociology and other disciplines seems inevitable.

In that sense, perhaps the most pertinent type of interworking is the egalitarian partnership. Specific contributions of each discipline may be treated as puzzles that taken together reveal the overall picture of an object of research. Such relation (principally) assumes equal power relations and allow to retain disciplinary distinctiveness. The depicted form of interdisciplinary interlinking was recognized as multidisciplinary.

The stated proposition goes entirely along with the following claim that interdisciplinary connections may be accomplished at the methodological level, and can partially hold also at the theoretical level, as an exchange of ideas, concepts and other theoretical elements. However, the possible connecting of separate disciplines or the linkage at the epistemological level is somehow contradictory, even paradoxical, as it leads towards the

disappearance of genuine disciplines. From the perspective of sociology, such possible transdisciplinary arrangements are not desirable and I would not advise or encourage them.

Undoubtedly, sociology can offer a lot to many other sciences by revealing the social dimension of a broad scope of phenomena, particularly having in mind that numerous issues and challenges nowadays require proper answers of experts. On the other side, sociology may also benefit from the cooperation with diverse disciplines and enrich its corpus of overall knowledge. Other scientists certainly can find interest in cooperating with sociologists, as well as later regard such connections as fruitful.

However, establishing interdisciplinary connections should not be taken for granted, but ought to be accurately and systematically reflected. Prior to enrolling into interdisciplinary projects, I would like to underline, practitioners of a single discipline must mandatorily carefully appraise the potential advantages, as well as identify possible threats of such projects. In the case of sociology, but also of other sciences, possible flaws are concealed in the threatening instrumentalisation, diminishing the norms of a scientific work due to external pressures, or the cleavage of a discipline into fundamental researches and applied researches. The latest issue turns us back to the considerations of some intradisciplinary tensions within the core of sociology and leads us to the attempt of anticipating some future developments.

4.6 A Note about Future Prospects

An inevitable, although intensely demanding question is: Which tendencies are likely to occur in the future regarding the fragmented state of sociology and its interrelation with other sciences. When considering the heterogeneous character of the discipline, its dispersion and fragmentation, one can predict the continuation of this process. Such further specialization of the discipline and the scrutiny of narrow research questions can be conceived as a *centripetal tendency.* It is part of a wider process of internal differentiation, ongoing in all knowledge fields. The further division of sociology into narrow empirical subfields opens the door to particular substantial sociologies to enter interdisciplinary, preferably multidisciplinary, relations with other sciences dealing with the same subject matter.

However, I identify the need, and actually forecast an emergence of the opposite, *centrifugal tendency* that would enhance the level of integration of sociology and elevate disciplinary unity. At the core of this process there is *auto-reflexivity,* or the urgent demand to constantly consider the role, responsibility and challenges of sociology in contemporary societies. Besides, the centrifugal tendency within sociology may also take place at the level of internal epistemological discussion, particularly in quest of *minimal common epistemic standards*. By this syntagma I mean the requirement to achieve a certain consensus about the fundamental features of sociological expertise. Simply speaking, minimal common epistemic standards which I advocate represent a definition of core sociological categories as defining determinants of the discipline. It is immensely important to stipulate this core, since it may prove to be quite lucrative in the possible encounter with other disciplines as

well. Hence, I am rather convinced that centripetal tendencies will be complemented by centrifugal tendencies, and that there is an exigency to achieve a proper balance between the two denoted processes.

5 Concluding Remarks

Albeit interdisciplinarity does not represent a contemporary innovation, in recent time we witness a raising relevance, increasing influence and also certain favouring of various interdisciplinary forms of knowledge production. In such an environment a considerable number of diverse new hybrid research fields and disciplines, as already noted, cultural studies, gender studies or migration studies, has appeared. Undoubtedly, such (inter)disciplines have provided worthy insights; however, it turns out that the emergence of novel disciplines contributes to the further specialization of scientific activity. Principally, any topical or substantial domain may become the subject of a new distinctive science, and such tendencies might represent just an instalment of a new logic of forming of disciplines. However, the crucial question is whether such a tendency really improves our knowledge about given phenomena or makes things even vaguer. New hybrid (inter)disciplines seem to be more vulnerable to external non-scientific factors and pressures, due to the fact that interdisciplinary (especially transdisciplinary) work usually represents an eclectic knowledge domain without clear epistemological standards or criteria of valorisation that is primarily directed to problem solving and is expected to contribute to economic development. Undoubtedly, pertinent criteria and epistemic evaluation measures ought to be urgently developed.

When discussing the variety of forms of interdisciplinarity, it ought to be emphasized - and this is one of the crucial claims of the article - that I advocate multidisciplinarity or, in general, 'softer' versions of interdisciplinary connections of sociology with other sciences. Such types of interdisciplinary encounter do not presume the melting of crucial epistemological categories of single disciplines, and they retain disciplinary autonomy. It is extremely important to maintain the disciplinary uniqueness of sociology, as it is a science capable of providing solutions to a wide range of contemporary social issues. Letting sociology establish transdisciplinary connections would mean the ceasing of sociology and its transmutation into new forged hybrid knowledge fields. I entirely agree with Burawoy's (2013: 13–14) stand of persisting on the relevance and urgency for disciplines, as they represent nutshells which ensure the advancement of knowledge. On the other hand, a serious trap of interdisciplinarity lies in the possible abandonment of disciplines and their substitution with the 'superficial fusing of incompatible frameworks' that frequently produce 'obscure knowledge' (Burawoy 2013: 13, 17). Thus, there is a lasting exigency for the existing of disciplines, as well as an even growing need for sociology. Moreover, it would be a demanding effort to imagine a time that would so desperately need sociology as it is the case today.

References

Abbott Andrew (2001): Chaos of Disciplines. Chicago – London: The University of Chicago Press.

Barry, Andrew, Born, Georgina, and Weszkalnys, Gisa (2008): Logics of Interdisciplinarity, Economy and Society, 37 (1): 20–49.

Burawoy, Michael (2013): Sociology and Interdisciplinarity: The Promise and the Perils. Philippine Sociological Review, 61 (1): 7–20.

Coast, Ernestina E., Hampshire, Katherine R., and Randall, Sara C. (2007): Disciplining Anthropological Demography. Demographic Research, 16 (16): 493–518.

Comte, Auguste (2000/1896): The Positive Philosophy of Auguste Comte. Volume I. Kitchener: Batoche Books (London: George Bell and Sons).

Crane, Diana (2010): Cultural Sociology and Other Disciplines: Interdisciplinarity in the Cultural Sciences. Sociology Compass, 4 (3): 169–179.

Davis, James A. (1994): What's Wrong with Sociology? Sociological Forum, 9 (2): 179–197.

Davis, Lennard J. (2007): A Grand Unified Theory of Interdisciplinarity. Chronicle of Higher Education, 53 (40): B9. Available from: http://www.chronicle.com/article/A-Grand-Unified-Theory--of/13328 (Accessed 24. 10. 2016.).

Fuchs, Stephan, and Turner, Jonathan H. (1986): What Makes Science 'Mature'?: Patterns of Organizational Control in Scientific Production. Sociological Theory, 4 (2): 143-150.

Fuller, Steve (1991): Disciplinary Boundaries and the Rhetoric of the Social Sciences. Poetics Today, 12 (12): 301–325.

Garforth, Lisa, and Kerr, Anne (2011): Interdisciplinarity and the Social Sciences: Capital, Institutions and Autonomy. The British Journal of Sociology, 62 (4): 657–676.

Gibbons, Michael, Limoges, Camille, Nowotny, Helga, Schwartzman, Simon, Scott, Peter, and Trow, Martin (1994): The New Production of Knowledge. The Dynamics of Science and Research in Contemporary Society. London – Thousand Oaks – New Delhi: SAGE Publications.

Gouldner, Alvin W. (1970): The Coming Crisis of Western Sociology. London – New Delhi: Heinemann.

Henry, Stuart (2005): Disciplinary Hegemony Meets Interdisciplinary Ascendancy: Can Interdisciplinary/Integrative Studies Survive, and If So, How? Issues in Integrative Studies, 23: 1-37.

Holmwood, John (2010): Sociology's Misfortune: Disciplines, Interdisciplinarity and the Impact of Audit Culture. The British Journal of Sociology, 61 (4): 639–658.

Horowitz, Irving Louis (1994): The Decomposition of Sociology. New York – Oxford: Oxford University Press.

Jacobs, Jerry A., and Frickel, Scott (2009): Interdisciplinarity: A Critical Assessment. Annual Review of Sociology, 35: 43–65.

Katunarić, Vjeran (2009): Building Sociological Knowledge Within and Across Disciplinary Boundaries: Megalomania vs. Modesty? Innovation: European Journal of Social Science Research, 22 (2): 201–217.

Mansilla, Veronica Boix, and Gardner, Howard (2004): Assessing Interdisciplinary Work at the Frontier. An Empirical Exploration of 'symptoms of quality'. Available from: http://www.interdisciplines.org/interdisciplinarity/papers/6 (Accessed 7. 10. 2015.).

Moody, James, and Light, Ryan (2006): A View from Above: The Evolving Sociological Landscape. American Sociologist, 37 (2): 67–86.

Puddephatt, Antony J., and McLaughlin, Neil (2015): Critical Nexus or Pluralist Discipline? Institutional Ambivalence and the Future of Canadian Sociology. Canadian Review of Sociology/ Revue canadienne de sociologie, 52 (3): 310–332.

Ritzer, George (1990): Metatheorizing in Sociology. Sociological Forum, 5 (1): 3–13.

Scheff, Thomas (2013): Getting Unstuck: Interdisciplinarity as a New Discipline. Sociological Forum, 28 (1): 179–185.

Schmidt, Jan C. (2007): Knowledge Politics of Interdisciplinarity. Specifying the Type of Interdisciplinarity in the NSF's NBIC scenario. Innovation, 20 (4): 313–328.

Steinmetz, George (2007): Transdisciplinarity as a Noimperial Encounter: For an Open Sociology. Thesis Eleven, 91 (1): 48–65.

Steinmetz, George, and Chae, Ou-Byung (2002): Sociology in an Era of Fragmentation: From the Sociology of Knowledge to the Philosophy of Science, and Back Again. The Sociological Quarterly, 43 (1): 111–137.

Stinchcombe, Arthur L. (1994): Disintegrated Disciplines and the Future of Sociology. Sociological Forum, 9 (2): 279–291.

Strathern, Marilyn (2007): Interdisciplinarity: Some Models from the Human Sciences. Interdisciplinary Science Reviews, 32 (2): 123–134.

Turner, Jonathan H. (2006): American Sociology in Chaos: Differentiation without Integration. American Sociologist, 37 (2): 15–29.

Turner, Jonathan H., and Boynes, David E. (2006): The Return of Grand Theory. In: Jonathan H. Turner (ed.): Handbook of Sociological Theory: 353–378. New York: Springer.

Viterbo, Paula (2007): History of Science as Interdisciplinary Education in American Colleges: Its Origins, Advantages, and Pitfalls. Journal of Research Practice, 3 (2): Article M16. Available from: http://jrp.icaap.org/index.php/jrp/article/view/116/96 (Accessed 16. 5. 2016.)

Wright, J. Talmadge, Embrick, David E., and Henke, Kelsey (2015): Interdisciplinarity, Post-disciplinarity, and Anomic Specialization: Where do We Locate Sociology? Humanity & Society, 39 (3): 267–273.

Author's data

Krešimir Žažar, Postdoctoral Research/Teaching Assistant
University of Zagreb, Faculty of Humanities and Social Sciences,
Department of Sociology
Ivana Lučića 3, 10000 Zagreb, Croatia
E-mail: kzazar@ffzg.hr