

SYNOPTIC VISION: METATHEORY, CONCEPTUALISATION, AND CRITICAL REALISM

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Abstract. This paper takes recent sociological debate about transdisciplinarity (Carroll 2013; Puddephatt and McLaughlin 2015; Mišina 2015) as a springboard for elaborating on the sociological relevance of metatheory and metatheorising, with particular attention to Critical Realism. Sociologists need to more forcefully acknowledge the importance of engaging with metatheory if they are to think more productively and creatively about how the philosophical assumptions which shaped the production of theories, research design, research practice, and the organisation of our field facilitate and delimit the production of insights about the multifaceted nature of sociological objects and practice. As metatheorising promotes the neglected procedure of conceptualisation (as opposed to operationalisation) and because it is transdisciplinary (shedding disciplinary boundary maintenance while remaining rigorous and methodical), it should be routinely utilised by social scientists to yield conceptual synthesis and fuller, more adequate forms of explanation of their particular objects of investigation.

Keywords: Synoptic Vision, Metatheory, Methodology, Epistemology, Ontology, Transdisciplinarity, Sociological Imagination, Sociology, Critical Realism, Conceptualization, Philosophy Of Social Science

Résumé. Mobilisant les récents débats sur la transdisciplinarité (Carroll 2013, Puddephatt et McLaughlin 2015; Mišina 2015), cet article porte sur la pertinence sociologique de la métathéorie et de la métathéorisation. Notre attention se pose spécifiquement sur le réalisme critique. Les sociologues doivent reconnaître davantage l'intérêt de la métathéorie s'ils veulent pouvoir réfléchir de façon plus riche et créative à la manière dont les prémisses philosophiques qui encadrent la production des théories, des devis de recherche, de la pratique de recherche et de l'organisation de notre champ permettent et limitent la production d'idées quant aux objets et à la pratique sociologiques. Puisque la métathéorisation favorise le processus souvent négligé qu'est la conceptualisation (au profit de l'opérationnalisation) et puisqu'elle est transdisciplinaire (transcendant les frontières disciplinaires tout en demeurant rigoureuse et méthodique), elle devrait être utilisée régulièrement par les sociologues afin de produire des synthèses conceptuelles et des explications plus adéquates et plus riches de leurs objets de recherche.

Mots clés: vision synoptique, métathéorie, méthodologie, épistémologie, ontologie, transdisciplinarité, imagination sociologique, sociologie, réalisme critique, conceptualisation, philosophie de science sociale

INTRODUCTION

The philosophy of (social) science known as Critical Realism (CR) has been taken up and developed within sociology, criminology, legal studies, social theory, economics, management studies, organisation studies, nursing, psychology, and a number of other fields of scholarship. It challenges both positivist and idealist representations of (social) science and reconceptualises the nature of (social) reality as comprising three interrelated domains: that of empirical experiences, that of actually occurring events (which may or may not be experienced), and that of the real generative mechanisms/causal powers that produce events and experiences. Although some North American sociologists have taken up the theoretical and methodological challenges posed by CR it has not had significant impact on analysis or empirical enquiry in the USA or Canada. This, in my view, is unfortunate because CR offers a fuller, more developed ontological scheme for conceptualising the objects of social enquiry, the sociological field, and the nature of conceptualisation and explanation. In this regard it offers an advance over the naïve realism of empiricism and the anti-realism and relativism of some interpretivist and much post-modern social science (see Woodiwiss 1990; Sayer 1992; López and Potter 2001; Frauley 2004, 2007; Frauley and Pearce 2007; Rigakos and Frauley 2011).

The naïve realist ontology of positivism and the anti-realist ontologies of post-modern and idealist positions limit our understanding of the complexity and scope of knowledge production and the things social scientists are concerned to understand and explain. Unlike these positions there is nothing about CR that would compel one to choose idiographic or nomothetic enquiry, qualitative or quantitative data, or the study of action over structure. This means that, methodologically speaking, sociologists working with CR can more readily escape old and tired debates that pit positivist against interpretivist forms of enquiry, macro against micro orientations, and quantity against quality (see Bryman 1988; Frauley 2008). These dichotomies that have long plagued and narrowed our understanding and perception of social science simply distract us from hard thinking about the process of knowledge production and the discursive and material contours of the things of which we seek knowledge. CR's speculative "post-empiricist" logic and developed ontological scheme promises relational explanation, empirically informed theorising and theoretically informed empirics (Rigakos and Frauley 2011). It leads away from empiricism, methodological individualism and reification of structure, and it admits only an epistemological relativism in that all explanations are considered fallible and open to revision. It also guides us

to think explicitly about the important procedure of “conceptualisation” and about methodological issues beyond discussion of techniques of data collection.¹

Some readers might argue that the benefits of CR are overstated. It is true that there is a dearth of CR informed empirical research and that there are varieties of positivist and interpretivist enquiry, some more theoretically and methodologically robust than others. As a metatheory, however, CR is explicitly focused on ontology in a way that these varieties of positivism and interpretivism are not. This is important because, even if only implicitly, much of our decision making on how to go about producing knowledge of something, of how to go about accessing it, rests upon a conceptualisation of what that thing is like (Sayer 1992; Layder 1993). If we work with a stronger, more robust model of (social) ontology it stands to reason that we are more likely to be guided to produce more adequate and more robust sociological theories and empirical research (see Layder 1993).

Recently, American sociologist Phillip Gorski (2013), drawing attention to a spate of foundational texts, has advocated CR’s potential for sociological enquiry. William Carroll (2013) has done something similar within the Canadian context. As CR is a metatheory it has implications, Carroll (2013) argues, for how we conceptualise what it is that sociological enquiry does and could possibly describe and explain. It holds promise, he stipulates, for fuelling innovation and change within sociology at the level of research practice. Carroll’s contribution is valuable for at least two reasons: (1) it suggests an affinity between CR, C. Wright Mills (1959), and historical materialism that is worth further exploration and; (2) he illustrates that metatheory and metatheorising are valuable sociological tools for systematically clarifying and articulating precepts upon which can be established a holistic, reflexive, critical, and more adequate sociological practice for analysing and better understanding the complexities of our human condition.

As some readers will point out, Carroll is focused mainly on sociology’s diagnostic and emancipatory role and as such he is mainly concerned with sociological practice. This is certainly true, yet despite that overt objective, Carroll’s argument for what he calls “critical transdisciplinarity” is in large part *metatheoretical*, thus his article is exemplary of the value, use, and role of metatheorising for sociological enquiry. As Ritzer (1990:4) has argued, metatheorising “is widely, if largely covertly, practiced” in sociology to the point where there are practicing metatheoreticians who may not self-identify as such or even understand their work

1. See Bourdieu et al. (1968/1991), Sayer (1992), Blaikie (1993), and Frauley (2008) for distinctions between “method” and “methodology”.

in these terms. In Carroll's rejoinder to critics he (2016:244-245) states although his "essay was addressed to the molecular level of sociological practice" he also had "far greater ambitions" to move sociology toward realising the "promise of social *science* in a postpositivist age of civilizational crisis". Thus although the explicit concern is with substantive sociological enquiry there are good reasons to view his engagement with elements of CR and insights from C. Wright Mills' (1959) pragmatist philosophical understanding of the nature and objectives of social science (embodied in the latter's notion of the "sociological imagination") as an interesting and provocative engagement in metatheorising, one that is set against a general backdrop largely reflective of the politics and critique of positivism proffered by the Frankfurt School's dialectical historical analysis.² As such his paper is instructive, illustrating that metatheorising has an important role to play for sociological analysis.

The major focus of this paper is on the metatheoretical foundation of Carroll's "critical transdisciplinary" practice. As I illustrate, concepts foundational to "critical transdisciplinarity" (i.e., "stratification" and "emergence") remain under-conceptualised and under-utilised and so Carroll's argument for a more robust and insightful sociological practice is not as fully developed as it might be. This is important because any further development of critical transdisciplinarity or its refutation will require additional metatheoretical engagement. In addition to highlighting the (important) metatheoretical side of Carroll's paper and outlining some problems with this in an effort to move the transdisciplinary and critical realist project forward, a more general argument put forth is that sociologists need to more forcefully acknowledge the importance of engaging with metatheory and in metatheorising. This is necessary if there is to be more productive and creative thinking about how the philosophical assumptions that have shaped the production of theories, research design, research practice, and the organisation of sociology can facilitate and delimit the production of insights about the multifaceted nature of sociological objects and practice.

Examining the metatheoretical foundation of Carroll's position and that of his critics enables: (1) an examination of the role of metatheorising and the neglected procedure of "conceptualisation" (as opposed to "operationalisation") for explanatory and transdisciplinary social science; (2) an explication of important critical realist concepts that underpin Carroll's model of critical transdisciplinary practice (i.e., "stratification", "emergence", and "causal powers") as well as the implications of

2. Carroll's views of CR, Mills, and his aim of fostering "explanatory critique" are consistent with the work of the Frankfurt School, especially its critique of positivism (see Agger 1991; Morrow 1994; Morrow and Brown 1994).

this for how we might conceptualise objects of sociological enquiry and; (3) a reformulating of the notion of fragmentation that informs Carroll's critique of "boundary maintenance" within social science.

METATHEORETICAL OVERLOOKS AND OVERLOOKING METATHEORY

In many respects, metatheorising is akin to seeing something from a scenic lookout. An overlook — high above a city — can offer us a breathtaking, panoramic view that can broaden our scope. This vantage point can help us see and understand familiar things in unfamiliar ways, gain clarity but also be surprised by what we had routinely taken for granted. An overlook facilitates overlooking (or looking over) because it is at a level higher than our object of scrutiny. From here we can identify and reflect on and even make connections between various elements or facets of the city whereas at lower levels these facets and these connections would likely escape us, or at least not be as clearly presented. Overlooking can no doubt impact our thinking, our outlook, or point of view just as a narrow scope shapes our outlook in a different way.

I suggest we think of metatheory as an overlook from which we can visualise the process of theory construction and knowledge production, the things that we produce knowledge of (including our relation to these things and this process), as well as how the organisation of our intellectual and institutional fields enable and constrain our understanding. Ritzer (1988, 1990, 1991, 1992; see Zhao 1991) has specified several varieties of overlooking. Metatheorising, he (1990:4) argues, should be thought of as the "generic process of theorizing" which makes use of existing theoretical concepts and takes existing theory as the object of scrutiny. This process can lead, in Ritzer's view, to one of three outcomes and it is the outcome that determines the variety of metatheory we are dealing with.

The *first* variety of metatheory concerns the systematic and mainly descriptive examination of the structure of existing theory (i.e., an inter-related set of analytic concepts) in order to deepen and produce a more profound understanding of it. This brand of metatheorising "offers systematic methods of understanding, evaluating, criticizing, and improving extant theories" (Ritzer 1990:7). This might involve comparative study of several theories or schools of thought to uncover or clarify embedded epistemological and ontological assumptions in order to better explicate, refine or reformulate existing concepts. Although understanding and enhanced theory is the goal, theory creation can also result (Ritzer 1990:8). Althusser's (1968/1997) symptomatic reading of Marx's *Capital* is an

example of this genre of metatheory. The *second*, and closely related variety consists of the examination of existing theory with the express goal of producing new sociological theory (i.e., a new interrelated set of concepts). This could include producing a non-eclectic synthesis of existing theory. Carroll's piece can be seen as an example of this. He is working with elements of Mills, CR, and Critical Theory and in weaving these together he develops the concepts of "nexus" and "transdisciplinarity", which inform his conceptual model of "critical transdisciplinarity" and upon which can be founded a transdisciplinary sociological practice. The *third* variety yields metatheories. This is the systematic study of existing theory that yields a "transcendent perspective" (Ritzer 1990:6); that is, "broad and general theoretical orientations regarding the study of the social world" (Zhao 1991:383). CR and, arguably, Carroll's conceptual model of "critical transdisciplinarity" are examples of what this genre of metatheorising can yield.

With this in mind a brief sketch of Carroll's argument (which also includes a look at two responses to his paper as well as his rejoinder to these) will help us to see that critical transdisciplinarity has an important metatheoretical facet that should not be ignored. Recent engagements with Carroll's paper have failed to adequately grasp (or build upon) the broader epistemological significance of his project. However if we want to refute the viability of his transdisciplinary practice (as critics Puddephatt and McLaughlin (2015) are want to do) or refine it (which is my preference) we cannot do so by neglecting its ontological and epistemological supports.

Carroll in brief

Carroll holds that a critical realist philosophy of (social) science, the "sociological imagination" of C. Wright Mills, and dialectical materialism can anchor sociology's transcendence of conventional disciplinary boundaries so that we might relate the various "facets" of "the human condition" that today are designated by categories such as "the economic", "the political", "the social" and "the cultural" (2013:10, 11, 16).

Insisting that the world precedes the word, but granting that language and textuality play a constitutive role in understanding and in human affairs, critical realism can include within social science the important postpositivist insights from the discursive turn without lapsing into antirealist nominalism, all the while holding onto the crucial lessons of historical materialism, social science's original critical paradigm (Carroll 2013:17-18).

In his rejoinder to critics he states: “CR provides a reasoned basis for this stronger form of critical sociological analysis”, a form of analysis that is “consciously” based on values of “freedom, equality and justice”. His realist inspired sociology is “dedicated to progressive social change”, “examines how social structures create relations of domination between social groups”, and is “committed to exposing and undermining their operation” (Carroll 2016:248). The goal is to understand the “complex reality” (Carroll 2013:11) that is “our human condition” (2013:9, 10, 12, 16), particularly “humanity’s interwoven crises” (2013:4), in order to detect and identify causal powers in the dialectical interplay of both institutions and individuals (2013:9, 10). This enhanced comprehension will “enrich practices that may portend a better future” (Carroll 2013:4); it promises “informing the transformative practices needed to move beyond that deeply problematic way of life” (2013:11; see also 16, 20).

If we think according to the ontological scheme offered by CR, Carroll argues, we notice a basic sameness of object running across the social sciences. This, in turn, helps us see that disciplinary boundaries are epistemological obstacles to knowledge production and serve to fragment enquiry, a position congruent with Marxism and C. Wright Mills (1959). Carroll contends the objects of social science are located within the same “singular” domain and that all social scientists study the same thing, albeit different parts or “facets” of that same thing. This object — “human phenomena in its fullness”, the “human condition, in all its diversity” (Carroll 2013:10) — transcends disciplinary boundaries. Whereas natural science enquiry responds to *ontological* factors in that its object of study — the natural world — is stratified, necessitating the formation of specialisms, fragmentation within social science is not grounded in ontological factors as social reality is not stratified in the way that the organisation of the social sciences would suppose (Carroll 2013:8-10, 18). The emergence and current organisational structure of the social sciences is more a response, he argues, to the needs of capital accumulation rather than to the qualities of their respective objects of enquiry. As such this organisation impedes our knowledge and understanding.

It should be noted that the “deficiencies of disciplinary practice” (Carroll 2013:11) must first be overcome in order to produce knowledge that is capable of helping us to more fully understand the very real problems generated within and by contemporary capitalism. The corrective for Carroll comes through an integration of aspects of CR, Mills’ sociological imagination, and dialectical materialism. “Sociological” practice is one of two types discussed by Carroll. The other is “social” practice. Sociological practice is inherently social but social practice is not inherently sociological. Re-organising the sociological field is necessary if

sociological practice is to yield knowledge adequate to describing and understanding the very real problems generated by contemporary capitalism. This more adequate knowledge can then be harnessed for transformative *social* practice. A particular organisation and practice of social science, Carroll suggests, becomes necessary if we shed positivist and idealist lenses for conceptualising knowledge production and the nature of sociological objects.

Bearing in mind Ritzer's scheme and the conceptual underpinning of critical transdisciplinary practice it is not difficult to see the metatheoretical facets of Carroll's vision. Metatheorising is enlisted in order to articulate the conceptual grounds for a more holistic, materialist, justice oriented explanatory practice that can yield real gains toward positive social transformation. In other words, although improved sociological practice and more adequate and holistic research is the main focus, Carroll specifies the theoretical and methodological grounds of this practice and in doing so illustrates the value of metatheorising for sociological analysis.

Critiques in brief

One critique to which Carroll (2016) has recently responded serves as a vehicle to highlight the advantages for sociologists of having some basic metatheoretical literacy. In reacting only to the perceived empirical implications of Carroll's argument, Puddephatt and McLaughlin (2015) attempt to refute critical transdisciplinarity by stating it is impractical and undesirable. Such a position seems hardly adequate, though, to invalidate the theoretical and methodological grounds worked out by Carroll. Although empirics might be the end-game for Carroll any critique would need to pay some attention to the limitations of the practice's conceptual supports. This is because these are what set and define the scope, validity, and legitimacy of critical transdisciplinarity as a more adequate scientific practice of knowledge production than positivist and anti-realist based practices.

As indicated, an important theoretical touchstone for critical transdisciplinarity is critical realist ontology. As CR is a well-developed and well-conceptualised philosophy of (social) science that places heavy emphasis on ontology, it can guide, as Carroll argues, our conceptualising and production of insights about our social world. It is not the "grand theory" criticised by Mills (1959) or the post-modernists (see Lyotard 1984). Nor is it an esoteric or highly abstract "theoretician's theory" (Blaikie 2000:142) or what Bourdieu (1988:774, 775) has referred to as useless "scholastic" or "theoreticist theory". CR isn't "a prophetic or

programmatic discourse that is its own end” (Bourdieu 1988:775) as it sets out methodological protocols and concepts that can be used to guide conceptualising, evaluating, reformulating, refuting or even integrating grand theory and low-level empiricist theory. Empiricist theory is what Blaikie (2000:142) has termed “researcher’s theory”, Mills (1959) “abstracted empiricism”, and Bourdieu (1988) the outcome of operationalisation. This empiricist theory is sometimes mistaken to be a description of some state of the world and thus we often find within social science a specious division that pits “facts” against “theory” or divides the “practical” from the “conceptual”. Puddephatt and McLaughlin have unknowingly reproduced this mistake.

Empiricist theory’s concepts are the result of the procedure known as “operationalisation” and are not well developed as *analytic* concepts. As these are understood to be variables and are not the outcome of rigorous or systematic “conceptualisation”, their authors are lead to conflate facts “as states or properties of the world itself [with] ‘facts’ as ‘factual statements’ putatively made about those states” (Sayer 1992:47; see also Pearce 2007:53). Operationalisation, as the opposite procedure to conceptualisation, turns concepts (lay or otherwise) into variables for the purpose of measurement instead of rigorously developing these into useful analytic tools that can be operated for producing interpretation and explanation. Conceptualisation is an important yet neglected methodological procedure within explanatory social science and the metatheoretical tools furnished by CR can play an invaluable role in helping sociologists engage in this procedure. Metatheories and metatheorising have a clarifying role for practice, whether this practice concerns the construction of analytic concepts and explanations, the scrutiny of data, or the practice of sociology more generally.

There is a second conception of “overlook” that is pertinent to address because it speaks to the neglect of metatheory and metatheorising within sociology and aligned fields such as criminology and criminal justice studies. The first conception, discussed above, helps us to understand how metatheory can help us look over things, make connections, describe, explain, and produce new insights. The second conception of “overlook”, however, is likely much more familiar: to miss something, to disregard or to ignore. This all-too-common process leads Puddephatt and McLaughlin to misrecognise Carroll’s transdisciplinary thesis as an hypothesis to be empirically falsified. Puddephatt and McLaughlin focus on whether Carroll’s vision is empirically practical or politically desirable, stating (2015:312) they do not want to see sociological practice rooted in any one particular philosophy of science or perspective and in this they reject the transdisciplinary thesis. They (2015:314) affirm their

commitment to pluralism and hold that CR, as one among many “sociological perspectives”, is “too narrow on both political and epistemological grounds” to alone underpin sociological practice. A commitment to intellectual diversity, they suggest, means that we need disciplinary boundaries. A brief examination of their position is warranted as it will help us to see the value of metatheoretical literacy for sociology as an adequate refutation (or refining) of Carroll’s arguments requires engagement at a metatheoretical level.

First, despite claims to the contrary, Puddephatt and McLaughlin are committed to *some* philosophy of social science as *some* set of epistemological and ontological assumptions inform and govern their understanding and their preferences pertaining to the substantive level of sociological organisation and research practice. With this move Puddephatt and McLaughlin conflate empirical or *substantive questions* — such as, Will transdisciplinary organisation and procedures bolster or degrade sociology’s status? — with meta-theoretical or *philosophical questions* about the nature of social objects, conceptualisation, and explanation (see Sayer 1992:5). This is to overlook not only Carroll’s *conceptualisation* of “critical transdisciplinarity” for sociological practice but also how empiricist metatheoretical assumptions inform and constrain their own position.

We gain insight into their metatheoretical assumptions when they cite Andrew Abbott’s (2001) book, *Chaos of Disciplines*, to refute the idea that CR can underwrite sociological enquiry. They (2015:312) argue for “chaos” as their foundational concept and reject the critical realist concepts of “emergence” and “stratification” that inform Carroll’s view. They (2015:312) believe chaos facilitates the “intellectual diversity” that “drives our research forward and reshapes intellectual parameters of our field over time”. The “chaos” to which Abbott refers, however, is the ordered chaos of chaos/complexity theory. Abbott uses the model of fractals to explain the development of division and subdivision within the social sciences and knowledge production. There is nothing in complexity theory that would lead one to reject CR or argue that it isn’t capable of underwriting sociological knowledge production. Complexity theory is engaged with “bounded entities which are internally differentiated but holistically integrated” (Byrne and Harvey 2007:64). As a form of non-linear analysis it is compatible with CR. Byrne and Harvey (2007:64) indicate that chaos-complexity and CR “have overlapping agendas” as “both reconceptualised the relation between the natural sciences and the humanities, while preserving their respective objects of enquiry” to produce an alternative path between “stalelated orthodoxies.” The positive nod to chaos therefore seems to affirm rather than undermine

Carroll's position. Their foundational concept of "chaos" is compatible with "emergence" and "stratification" but their vision of sociology is at loggerheads with Carroll's, as Mišina (2015) notes. This incongruence between their substantive position and stated conceptual foundation is due to metatheoretical confusion.

The chaos they advocate is not that of ordered differentiation but of eclecticism. Eclecticism is antithetical to rigorous conceptualising but it is the latter that is needed in order to produce robust descriptions and explanations and to exercise a maximum amount of control over the process of collecting, interpreting and explaining the significance of both qualitative and quantitative data (especially given that social scientists have the heavy burden of studying phenomena within open systems) (Sayer 1992; Blaikie 2000; Carroll 2013). Although they attribute this eclecticism to Abbott, what he actually advocates, despite using the term, is much more akin to open mindedness and the transgression of disciplinary boundaries: "An eclectic ... lacks ... closed-mindedness ... In pursuit of eclecticism, I have for the last fifteen years tried to eradicate some obnoxious intellectual boundaries, in particular that between interpretive and positivistic work in sociology and kindred fields" (Abbott 2001:x). As Abbott's goal is, in part, to undermine boundaries of all sorts that characterise the social sciences and humanities his position bolsters critical transdisciplinarity, as it too is a call to produce conceptual syntheses.

The claim that CR is too narrow in scope is strange not only because it is of a higher level of abstraction and therefore broader than the "sociological perspectives" defended by Puddephatt and McLaughlin (see below) but also because there are different varieties of CR just as there are different varieties of positivism and interpretivism. "Critical realism," as Danermark et al. (2001:1) note, "is not a homogeneous movement in social science. There are many different perspectives and developments. For instance, some authors discuss it from a philosophical angle, while others try to ground an analysis of current social phenomena in the approach." Likewise, López and Potter (2001; Potter 2007) have discussed that CR is a "broad church" with many "fault lines" of internal debate. Additionally, Craib (1984), Blaikie (1993, 2000), López and Potter (2001), and Layder (1990:95) among others suggest that there exists both a structural as well as humanist strain depending on whose work is given precedence (Roy Bhaskar or Rom Harré, for instance). Additionally, there exists a non-positivist sociological realism that is critical in approach, one "not indebted to Bhaskar at all but to thinkers such as Marx, Durkheim, Althusser, Benton, and Keat and Urry" (Datta, Frauley, and Pearce 2010:237). Within this diverse intellectual context it is diffi-

cult to know exactly what Puddephatt and McLaughlin mean when they state that CR is narrow in scope.

Second, Puddephatt and McLaughlin conflate metatheory with sociological theory and, in turn, conflate the latter with subfields of sociology. As Carroll (2016:248) states in his rejoinder, they “seem to think of CR as a specific substantive theory within sociology, with leftist predilections.” CR is “a philosophy and not a substantive social theory,” Sayer (1992:4) lucidly explained over two decades ago. It exists at a higher level, if you will, than sociological theory. As Layder (1990:19) has pointed out, “realism in itself has no substantive theoretical content” as it is “a meta-theory of methodology” and “must attach itself to established social sciences or schools of theory.” Carroll (2016:248) is aware of this, stating CR is a “highly capacious philosophical perspective that can accommodate a wide range of substantive formulations” and, because of its developed ontology, it has promise as a metatheoretical ground for transdisciplinary research practice. CR, then, is unlike what Puddephatt and McLaughlin (2015:32) call the “important sociological traditions” that they believe will be displaced by a critical realist sociology. These “traditions”, it should be noted — including “symbolic interactionism”, “dramaturgy”, “ethnomethodology”, “organizational theory”, “actor-network theory”, “science and technology studies”, “the sociology of culture”, among others — are subtended by metatheoretical assumptions, broad epistemological and ontological assumptions that are unknowingly and uncritically defended by Puddephatt and McLaughlin. Why they believe these “traditions” are worth retaining or why they believe these would be jettisoned under a critical realist orientation is not specified.

Mišina (2015) has argued that Carroll’s critical transdisciplinarity is a “public-political” model of sociology in contrast to Puddephatt and McLaughlin’s “professional-organizational” model. He (2015:529) correctly holds that these are “two distinct, and competing, understandings of sociology’s nature, purpose and relevance”. Each is, first and foremost, a conceptual model of practice founded on different metatheoretical assumptions about the aims and scope of sociological knowledge production and the conditions under which such knowledge is or can be produced. By largely ignoring the conceptual foundation of these models of sociological practice and the very different procedures employed by Carroll and Puddephatt and McLaughlin in arriving at their respective models, Mišina, in my view, reproduces the empiricism of Puddephatt-McLaughlin. For instance, he claims that the major fault with Carroll’s argument is one of practicability: a lack of “how-to specifics” of how to “do” transdisciplinary work and how to assess “transdisciplinary re-

search competence” (Mišina 2015:535-36). As with Puddephatt and McLaughlin, the theoretical criteria that have been established by Carroll are subordinated to practical criteria. “This kind of ‘primacy of practice’”, states Collier (1994:15),

undermines the possibility of subjecting a practical orientation to a certain kind of critique. It prevents us from saying that a given practice rests on certain false or contradictory beliefs. Practical attitudes become immune to theoretical critique, and, by the same token, are reduced to *mere* attitudes, which may certainly clash with other such attitudes, but not be argued about rationally.

Subordinating argument to a primacy of practice means using some under-conceptualised notion of reality as a measuring rod; that is, we end up utilising empiricist theory. We might believe we are evaluating ideas against reality but we are simply measuring one conception acknowledged to be theoretical against another that is not acknowledged to be so. This brings us back to our above discussion of empiricist theory masquerading as a statement of fact. Sociologists must be willing to engage with metatheory and be willing to refute or reformulate currently existing modes and strategies of reasoning (see Datta, Frauley, and Pearce 2010:235). It is surely this failure to acknowledge, understand, and engage in broader metatheoretical contemplation — to overlook an important aspect of social science knowledge production — that contributes to sociology’s “difficult reputation” (Puddephatt and McLaughlin 2015:320) and not attempts to systematically and methodically conceptualise, clarify and develop models and typologies that can then guide more adequate empirical enquiry, concept construction and analysis (see Datta, Frauley, and Pearce 2010).

THEORISING NEXUS AND TRANSDISCIPLINARITY

Carroll has attempted to systematically and methodically conceptualise, clarify and develop a model that can guide more adequate empirical enquiry, concept construction and analysis. This begins with Carroll’s re-conceptualisation of sociology through “the critical-realist insight that reality is *emergent* and *stratified*” (2013:8, emphasis added). This leads him (2013:4) to problematise “the claim that sociology is a discipline in any ordinary sense of the term” and that “social science can be reasonably cleaved into separate ‘disciplines’ on the model of the natural sciences”.

What is striking, when we compare the major disciplinary divisions of natural sciences to those of social science, is how the latter refer not to different emergent levels, but to *different aspects of a singular, emergent level of reality*, the social or human (Carroll 2013:9, emphasis added).

Division within social science, he argues, is not supported by and does not refer to real existing divisions between the various disciplines' respective objects. As social reality is emergent all social sciences study emergent phenomena, thus the Comtean vision of the sciences as hierarchically ordered from least to most complex does in some sense capture the complexity that sociology must grapple with but at the same time also leads to a specious division between what are held to be the objects of the respective social sciences.

From Comte forward, a major claim has been that they form a hierarchy of knowledge, building from basic sciences of physical reality to, in Comte's case, sociology as the pinnacle. There is, I believe, a grain of truth in this, yet its ontological premises and entailments need to be clarified, particularly as they affect the status of social science disciplines (Carroll 2013:8).

Carroll's (2013:10) position that the disciplinary structure of social science lacks a "firm ontological basis" is, in the main rooted in, as he states, the critical realist concepts of *emergence* and *stratification*. However, there is an ambiguity here with how these concepts are understood and utilised which, I argue, impacts the development of his "critical transdisciplinarity". It is not hard to accept Carroll's position that the objects of the various social sciences are facets of a greater whole. But what does Carroll (2013:9) mean when he states that the "social or human" domain of social reality is a "singular, emergent level of reality"? If it is a "singular level" or plane of reality what does this mean with respect to the critical realist concept of "stratification"? Does this mean that "the social" is one domain articulated with others that are not social? Does this mean that "the social" is not organised into differing domains or levels? For instance, do human action, experience, and institutional structure all occupy the same social stratum? My point here, as I will show below, is that a critical realist conception of stratification is not employed, or at least vastly underutilised and this has implications for how "emergence" (and "causal powers", see below) is understood. This, in turn, affects Carroll's development of his principal concepts of "transdisciplinarity" and "nexus" which underwrite his critical transdisciplinary practice.

I will put this to one side for the moment in order to further explore the related argument that the organisation of the social sciences lacks a well-articulated ontological basis. This is not simply an empirical

observation. It may appear to be so to some readers but it is a conclusion drawn from viewing the disciplinary division of the social sciences through metatheoretical lenses. Simultaneously it is a critique of both the naïve realism of positivism and the anti-realism of idealist currents within sociology, both of which have been influential to the discipline's development. For Carroll, the way toward a fuller and more adequate conceptualisation of "the social" and then toward a more adequate practice of sociological knowledge production is not to adopt "greater discipline" (2013:11) or increased "boundary work" (2013:12-16) because such boundaries are in large part political. Such a strategy would insulate these dominant but weak ontologies from critique. Rather, what is promoted is the metatheoretical explication of sociology's taken for granted ontological premises and the conceptualisation of analytic tools that can animate a more adequate practice of sociological theorising and research. It is metatheorising that has lead Carroll (2013:16-17) to "recognize", "see" and "re-vision" sociology as a "nexus" for "transdisciplinarity". I cannot stress enough this metatheoretical side of Carroll's position.

"Transdisciplinarity" is not simply a descriptive term but an *epistemological concept* in so far as it refers to how we ought to go about producing sound knowledge and conceptual synthesis, an approach that can "strengthen sociology's capacity to understand our troubled world and to defend and enrich practices that may portend a better future" (Carroll 2013:4). Knowledge produced through transdisciplinary procedures will be more useful for helping us cope with the problems of capitalist modernity, more valid, if you will, more truthful in that it will capture more due to its broader scope. This "synoptic vision" (Mills 1959:153) appeals to some understanding of the *nature* of sociology and its objects.³ This is captured by Carroll's use of the term "nexus", an *ontological concept* that makes reference to the nature of sociology as a "permeable" field that has "dense connectivity to other fields" (Carroll 2013:4) and thus to its potential role as a platform for arriving at a "transdisciplinary formation offering insight and guidance in improving the social conditions for human thriving" (Carroll 2016:251).

"Critical transdisciplinarity" is a praxis wherein critical conceptualisation and critical transformative practice align, where there is a continual dialectical interplay between how we conceptualise what we want to achieve and how we attempt to actualise this. As praxis it is "consciously" based on "values of freedom, equality and justice" and is "dedicated to progressive social change"; it "examines how social structures create

3. Carroll (2016:245) reiterates his Millsian inspiration in his rejoinder to Pudephatt and McLaughlin when he states he is advocating the use of Mills' "sociological imagination".

relations of domination between social groups” and is “committed to exposing and undermining their operation” (Carroll 2016:248). Critical transdisciplinarity is also dedicated to breaking the hegemony of disciplinary division in the social sciences and the dominance of positivist and idealist metatheory.

A major claim made by Carroll, that the respective social sciences do not study autonomous objects, seems to align with the critical realist notion that the objects of science are objects due to their causal powers. This is the critical realist answer to the question of why we ought to be transdisciplinary (Brown 2002:169). Objects are relational and do not respect disciplinary boundaries; powers are emergent but might not be manifest. However, “transdisciplinarity” and “nexus” as broad metatheoretical concepts with methodological implications remain underdeveloped. This is because of the under-conceptualised (or perhaps under-explicated) use of the critical realist concept of “stratification” and, by implication, “emergence” and “causal powers”.

Carroll seems to argue that the (ontological) basis of social science has always been, and should be recognised to be, the unique causal powers of human agents.

All social science is premised upon a crucial ontological emergence — that of *Homo sapiens*, of labor and language, and of the distinct causal powers — what Marx called species being — we have, within human communities, for conceptual reasoning, reflection, intentionality, symbolic interaction, and creative activity that purposively transforms the world, including ourselves. It is these unique causal powers that make us transcendent beings and provide the ontological basis for social science (Carroll 2013:9, references omitted; see also 12, 15, 18-19).

Certainly there could be no social science without the human power to think bound up with a curiosity to understand and explain our existence. However, we can make an analytical distinction between the causal powers of humans for *doing* social science (which can itself be an object of investigation) and the causal powers of the *objects* of that practice (including but extending beyond human beings). It is the causal powers of objects — be they human or non-human — that is the ontological basis for a (critical realist) social science.

Carroll adopts a dialectical notion of causal powers in that humans are held to be dialectically connected to their (our) social environments (2013:9) — to the “problematic relations that shape the experienced world” (2013:20). Critical transdisciplinarity is said to be concerned with “human phenomena as constituted in an ecologically embedded dialectic of agency and structure” (Carroll 2013:21). There is no deny-

ing the crucial role human agents play in reproducing and transforming social structure and their own conditions of possibility, as well as the role our environment plays with respect to shaping our action, but the promise of the realist notion of stratification (and emergence) goes unrealised in this formulation. “Structure” for critical realists does not necessarily mean “social structure” just as “agency” does not necessarily mean “human agency”.

Carroll’s formulation does not sufficiently distinguish between the causal powers of human and non-human agents nor does it adequately illustrate that the powers of human beings do not rely on social structure for their existence. Social structure plays a key role with respect to how human causal powers will be or could be *actualised*, and, in turn, if and how they will be experienced, but does not play a part in whether or not human beings actually possess causal powers. The agency-structure problematic that is well entrenched within sociology is not helpful because it assumes “agency” refers to human action, polarising action and structure, when what we are dealing with are *human and non-human structures that have agency*. Suggesting humans and social and natural structures are dialectically related is not in itself a problem but this can divert our attention away from the critical realist implications of the concepts of “stratification”, “emergence”, and “causal powers”. In this regard the agency-structure problematic — that humans and their environment are dialectically related — only helps us understand an *external structuring* within which human causal powers *might* be actualised or impugned. As “causal powers” implies an *internal structure* from which these powers emerge *as well as* an external structuring that can impugn or foster their actualisation, we need to admit that it is, firstly, the structure of an entity, human or not, that is key for the emergence of causal powers and, secondly, how this entity is related to other entities that is important for how these powers might or might not be actualised and experienced.

Brown (2002), drawing on Bhaskar, is instructive here. He argues that we can understand “mind” as a structure that emerges from the brain and the central nervous system. From this structure of mind stems the “emergent power” of “thought”, which enables humans to act on the world. The world also acts on us but our powers of thought stem from “mind” not the world; The world — our social and natural conditions of existence — is important for enabling or impugning the content of our particular thoughts, intentions, and actions. Thus this external structuring is important for whether our causal powers can be realised in action so it is important with respect to questions of social transformation. The thing to keep in mind here, however, is that “mind” is of a different and

higher stratum than the body and “thought” is of, again, a different and higher stratum of reality. “The social”, or perhaps more rightly, “society”, is of a different and higher order than “human beings” but also includes human beings. In this, Carroll’s dialectical formulation does not help us to specify or account for higher and lower orders (or strata) of entities that make up “the social.” His claim that the social is a “singular emergent strata” is true but also misleading because the order of “human causal powers” that he gives emphasis to is of a different and lower order than the conditions for, and the outcomes produced through, exercising these powers. The *content* of human thought is inherently social as is the *realisation* in practice of the human causal power of thought, but the power to think, itself, is not social.

Perhaps I am making too much of this, but the subtleties of this are important because they speak to a critical realist notion of stratification and emergence and why there are grounds to think that Carroll has not realised the promise of these critical realist concepts for his formulation of critical transdisciplinarity. The issue is the degree to which Carroll makes use of the critical realist concepts that he states are important to, and the implication of this for, his “transdisciplinary thesis”. After all, he defends CR in his rejoinder to Puddephatt and McLaughlin so it seems worthwhile to examine the degree to which it has been (under)utilised with respect to his argument for transdisciplinarity.

STRATIFICATION, EMERGENCE, AND CAUSAL POWERS

If we are to refute or refine Carroll’s position and accept or reject his implicit invitation to meta-theorising, we need to begin with the critical realist concepts of emergence and stratification because these are, according to Carroll, foundational to critical transdisciplinary praxis.

Stratification

The critical realist notion of “stratification” refers to a tripartite model of (social) reality that holds there to be three intersecting domains or orders:

the empirical (the limited set of events and phenomena that human beings can experience), *the actual* (all the phenomena and events that have been produced), and *the real* (which includes not only the actual but also the stratified systems of generative structures and mechanisms that have the capacity, which may or may not be exercised, to produce these and possibly other events and phenomena) (Frauley and Pearce 2007:6, emphasis added).

It is important to understand that these three domains cannot be neatly separated.⁴ These domains are interacting and overlapping, orders within orders if you will, but are also hierarchical in the sense that human experiences are contingent upon the manifestation of actual events which, in turn, implies the existence of real casual powers *and* their activation (including the human powers of thought and perception). It is the domain of the relatively enduring real causal powers (of both human and non-human entities) and their realization that is the focus of critical realist (social) explanation.

Given this ontology there is reason to wonder how Carroll's views of "the social" and of transdisciplinary praxis relate. Carroll is unclear as to how "the social" and critical transdisciplinarity correspond to or take into consideration the domain of emergent causal powers, that of actual events and that of empirical experiences and so more must be done to explicate this for this has implications for the conceptual grounding of his transdisciplinary thesis. We must distinguish between "emergent causal powers" and the emergent outcomes generated by those causal powers and also not conflate "actual events" with "experiences" of those events. Actually existing phenomena may or may not be experienced and these in turn might produce further phenomena (which may be detected or remain undetected). For example, what criminologists call the "dark figure" of crime represents undetected but actually existing events. These events are outcomes of the emergent causal powers of human and non-human entities being realised within structured contexts. However, the "dark figure" is not simply a set of events as criminologists often hold but rather can be understood to refer to the existence of emergent causal powers that are capable of generating or contributing to further outcomes such as increased policing, new forms of surveillance, fear of crime, victimisation, criminalisation, among other things. In this the "dark figure" refers to actually existing events and also to real causal powers that have been exercised which have potential to produce further effects. That actually existing events are caused but can also be the basis for the generation of further events suggests that "the social" is populated by different orders of phenomena. That events can exist but remain undetected and that events and experiences are different in kind, with events necessarily pre-existing experiences, suggests that "the social" refers not only to actually existing things and experiences but also to the domain of

4. The work of physicist-philosopher David Bohm (1980/1995; with Hiley 1993; with Fowler 2008) on "implicate" and "explicate orders" and Bourdieu (1967, 1977, 1981, 1987, 1996) on "habitus" and "field" provides us with models for conceptualising how these realist domains might be distinct but overlapping.

real causal powers (potential that may or may not be realised). The upshot here is that the concepts of “emergence” and “stratification” lead to conceptualising “the social” as differentiated in a way different from, but not necessarily incompatible with, what Carroll has outlined. There must be greater discussion of the causal powers of non-human agents as well as a distinction drawn between the emergence of causal powers and the emergence of outcomes generated by those powers should they be activated. Although Carroll does not explicitly deny that “causal powers” can refer to non-human agents, from what he has written it seems as though human causal powers are privileged or at least favoured, that these derive to some degree from our connection to social and natural environments, and that the level of the emergence of causal powers is the same as the level at which emerge outcomes produced through activation of those powers.

Critical realists tend to hold structure to be primary with human agents reproducing and potentially transforming structure. Structure is key to whether or not causal powers will emerge and, in turn, to whether or not these causal powers will be triggered to produce outcomes. Change and reproduction might be conceptualised, as Carroll does, as the outcome of the dialectical interplay of agency and structure but “agency” and “structure” are not simply interrelated and mutually constitutive but are overlapping or “implicate”.⁵ *Human and non-human agents are differently structured entities that possess emergent powers to act in particular ways.* If we accept that social science is about the unique causal powers of human beings, as Carroll *seems* to hold, this would not be a concern with human actors *per se* but rather with the: (1) internal organisation of the various elements from which humans derive their emergent powers and; (2) the external organisational context in which these powers are manifested. Thus the concern is with the structure of something that results in capacities to produce an event (an outcome) *and* with the structured context in which these capacities could be realised or impugned (see Sayer 1992:105, 2000:13). Although some will argue that Carroll captures all of this by placing emphasis on dialectics, his formulation simply does not follow from usage of the critical realist concepts to which he refers. Human and non-human agents are stratified as are the spaces within which these entities are related.-

Emergence and causal powers

At issue for critical realists is the explanation of real casual powers and whether or not effects might be realised or impugned and, further,

5. see note 4.

whether or not events are or could be experienced. These are different, albeit related. Causal powers, according to critical realists, result from the process of emergence and are “synonymous with emergent properties” (Elder-Vass 2007b:229). Causal powers come from the:

interactions between the parts, interactions that only occur when those parts are organised in the particular relations that constitute them into wholes that possess this emergent property. ... [Causal powers] exist only when the relevant type of whole exists; hence they are causal powers of this type of whole and not of its parts (Elder-Vass 2007b:230, see also Elder-Vass 2005, 2012).

Thus social and natural environments are important for how the parts that are organised into a particular type of whole are brought together, but the causal powers of an entity emerge from its internal relations and whether or not these powers are exercised have to do with external social and natural conditions including the entity’s relations with other wholes. The human capacity for thinking is not due to our social or natural environments yet these obviously play some part in whether the parts align to produce such powers. Depending on how the parts are organised and related to one another the whole might have emergent causal powers to produce certain types of outcomes, and such outcomes can only be produced if external conditions are right. This means that entities, whether human or non-human, can have the capacity to generate an outcome due to how its parts are arranged or related but that these causal powers may or may not produce outcomes. All of this is to reiterate that causal powers are *structural*. “Human agents are bio-psycho-social structures with emergent powers of intentionality. Conversely, social structures have agency, an agency that transcends and influences the intentions of the individual agents that co-constitute them” (Gorski 2013:668-669). Therefore, human beings and action are not, strictly speaking, objects of realist social science. This in part explains why a realist human rights and labour law scholar like Anthony Woodiwiss (1990:25) argues against taking human beings as central to sociological explanation.

To illustrate the emergent nature of causal powers, Elder-Vass (2012:11) gives the example of a laser pointer. It is:

composed of a plastic case, a button, an electric circuit, a battery, and a laser diode. When these parts are organised into the form of a laser pointer, the pointer has the power to shine a focused beam of light at a distant point when the button is pressed. This is a power that depends on the parts but also on the organisation that turns them into a laser pointer, and because of the latter it is a power that is not possessed by the parts *unless* they are organised into a laser pointer. It is therefore an emergent power of the pointer, a new power that is produced when the parts are organised into this form.

The critical realist notion of stratification is illustrated here. The laser pointer is a “higher level” entity whereas its parts are of a lower level (Elder-Vass 2005:317-322). This is because the parts themselves do not possess the causal powers of the laser pointer unless combined in such a way as to constitute a laser pointer. If they remain uncombined or are combined to form something else, the emergent properties will not be those of a laser pointer: “Properties are not free-floating phenomena; they always occur as the effects of a particular configuration of lower-level parts” (Elder-Vass 2005:319). If the laser pointer’s battery is dead there will not be any emergent powers. The dead battery impugns the *emergence* of the causal powers of the laser pointer and also the *potential* to realise these causal powers (that is, to generate the outcome of the focused beam of light). In another case, the battery may be fully charged and so the causal powers and potential to realise an outcome exists (unlike with the dead battery), but these powers will not generate an outcome without also the right external conditions (e.g., someone needs to press the button for the potential to be actualised). The generation of outcomes can only be realised, then, under the right internal and external conditions but causal powers could exist even where external conditions are not favourable to outcomes being generated. Outcomes are simply the *indicators* of what critical realist social scientists focus on: *structure* at various levels from the internal relations and conditions from which causal powers emerge to those conditions external to the entity within which these causal powers might be actualised and then experienced.

FRAGMENTATION AND THE SYNOPTIC VISION

According to Carroll, disciplinary divisions (i.e., “fragmentation”) inhibit the use and growth of what Mills (1959) called the “sociological imagination”. This is akin to stating that divisions impugn the realisation of sociology’s explanatory power. In Carroll’s view these divisions are due to a somewhat muddy view of matters of ontology. However, if we follow a critical realist notion of stratification, we might hold that fragmentation is due to a clear view of matters of ontology.

If there are differing strata of causal powers or entities that might be of concern to social scientists perhaps not all social sciences do study facets of one larger object (that is, if we define “object” as an entity that possesses causal powers). Fragmentation within social science, according to Craib (1984), develops because societies are complex. Layder (1993), drawing on a critical realist ontology, convincingly argues that “the social” is composed of different orders of phenomena ranging from

human action and experiences to broad level social structural features such as tradition, values, and economic organisation. In Craib's scheme even though humans and institutions are related they occupy different strata and have different causal powers, which makes each a legitimate object of social science. For Craib (1984:23) the social world "is made up of two distinct and different types of being", differing kinds of structures, namely social and cognitive. Following lessons from C. Wright Mills, and drawing on the work of Roy Bhaskar (foundational for CR), Craib (1984:217) argues fragmentation in social science results as social scientists grapple with different kinds of "emergent phenomena". Complexity at these different levels requires differing theoretical systems to guide different sorts of enquiry and explanation. As "the social" contains different types of entities each with different sorts of real emergent causal powers that have the capacity to generate events under the right conditions, and as these events might generate further events, and as experience does not exhaust what actually exists, it is important to delineate these different orders that make up the social beyond Carroll's admission that the social is complex or that things are dialectically related.

Interestingly, both Carroll and Craib draw on CR and Mills. Like Carroll, Craib's argument is metatheoretical and premised upon ontological considerations. Unlike Carroll, Craib does not hold to the view that fragmentation impugns robust explanation. In Craib's view, fragmentation is the direct result of a clear view of ontology rather than a muddy one. This is most likely due to how each understands and then utilises the critical realist notion of stratification (and by implication, emergence). That disciplinary division impugns powers of explanation (e.g., the sociological imagination) becomes less tenable. Disciplinary divisions are an enduring aspect of the structured organisation of social science, and it is from this structured organisation that causal powers of explanation emerge. There must be some durability or "significance" or "persistence" (Elder-Vass 2005:317) to the structure of entities for them to have emergent powers. This potential explanatory power of sociology — which rests on the relatively enduring organisation of the sociological field which includes human agents and how they act to reproduce this structured organisation — can be thwarted at the level of internal organisation or its realisation impugned or simply ignored with respect to sociology's connection to other fields. This is not to suggest that re-configuring sociology in the way proposed by Carroll will not lead to improved, more adequate and fuller explanation but this isn't necessary in order to practice critical transdisciplinarity (nor is it possible to escape fragmentation in all of its forms).

There is no doubt that there are power struggles and a politics at work within and between the fields of social science scholarship. However, even if disciplinary boundaries did not exist and we were to have what Mills envisioned as “social studies”, there is likely to still persist a struggle over capital (as described by Bourdieu 1981, 1986, 1991, 1994) and a politics of truth (as described by Foucault 1980a,b) given the different motivations to engage in social science and the different objectives and uses of social science scholarship. There is also the matter of the hierarchical nature of the sociological field embedded as it is within the hierarchically organised bureaucratic structure of the modern university. Therefore even if the Millsian vision of “social studies” were to come to pass, boundary maintenance would continue in some form due to the field’s hierarchical ordering and its lateral articulation with other fields of knowing such as “professional studies” and “the sciences”. Although it may seem as though moving away from an organisational structure that promotes boundary maintenance (and hence fragmentation) will facilitate the growth of the sociological imagination and enhance the analytical, intellectual, and transformative power of sociology, there is no necessity that this would be so.

There is a more plausible anchor for critical transdisciplinarity. This, as I have argued above, is present but undeveloped in Carroll: the avenue of metatheory and metatheorising. If metatheory and metatheorising come to be recognised as indispensable tools of conceptualisation and analysis then one can more easily achieve transdisciplinary praxis and realise the promise of the sociological imagination despite the current organisation of the social sciences. Although Carroll engages with metatheory and in metatheorising *to rethink sociology* he doesn’t explicitly include this practice as necessary to the production of sociological knowledge about “the social” or the “human condition”. Rather than attempt to construct a vision of “the social” that will in turn authorise “transdisciplinarity” perhaps what we ought to do is see metatheoretical analysis as legitimate in its own right and as a necessary first step with respect to empirics. The problem is not the existence of specialisms but the insular nature of much of the work carried on within them following reification of their boundaries. Rather than begin enquiry with: (1) a *topic-centred approach* where one begins from a specialty (e.g., “crime”, “labour”, “pay-equity” or what have you); (2) a *data-specific approach* where one defaults to a favoured form of data (e.g., qualitative or quantitative) or; (3) a *techniques approach* where one defaults to a favoured method (e.g., interviews or surveys), we might begin from epistemology, ontology and methodology. This will enable us to see that disciplinary

boundaries are, at one level, artificial, but at another play an important organising role for making enquiry possible and manageable.

Unlike the substantive enquiry and various forms of empiricist and general theorising found within the various social scientific disciplines, metatheoretical enquiry is already transdisciplinary because of its focus on big issues that all social sciences have in common. It is not beholden to disciplinary boundaries but it does promote *disciplined* conceptualisation. Thus we can transcend disciplinary boundaries or as Mills argued, “transcend our milieu”, by engaging with metatheory as a first step in identifying features of our point of interest such as the conditions under which human and non-human agents do or could act; what their causal powers are; and how their broader conditions of existence might help to realise or impugn the exercising of these causal powers. Instead of holding that metatheoretical reflection is too far removed from empirics to be useful to social scientists we could see it as a platform from which to bring the various social sciences together, as an initial overlooking point before moving to a more substantive and lower level of analysis. This is in keeping with what Mills advocated in his *Sociological Imagination* (Frauley 2010, 2015).

When reading *The Sociological Imagination* one is struck by Mills’ rejection of both inductive and deductive logic. His model of society and understanding of social science is underpinned by a dynamic mode of speculative reasoning that has the ability to produce new insights and creative synthesis, which neither induction nor deduction can produce as these latter two modes of reasoning are primarily concerned with pattern seeking and are thus best suited to nomothetic enquiry (Stebbins 2001; Frauley 2008). Many have written about Mills’ connection to American pragmatism including Mills himself (Mills 1966; Scimecca 1977; Horowitz 1983; Gross 2007; Strydom 2011; Aronowitz 2012). Charles Pierce, the founder of this philosophy, advanced a mode of reasoning called “abduction” and this is what we find underlying Mills’ critique of what he called “grand theory” and “abstracted empiricism”. I (2015) have elsewhere argued that Mills offers a kind of “refractive thinking” informed by abduction and that this is the theoretical method underlying the sociological imagination, a method that can be developed and harnessed for conceptualisation within the social sciences.

Mills’ vision of the practice of the sociological imagination is metatheoretical just as Carroll’s vision of critical transdisciplinary praxis is. Neither of them would have been able to arrive at their respective models of enquiry by overlooking metatheory. As Mouton (1996) has noted, the knowledge producing practices of the (social) sciences become an object of study when we engage in meta-science and indeed

anyone who argues for reflexivity is arguing for this sort of metatheoretical engagement.⁶ According to Mouton (1996), meta-science is simply one domain or “world” of scientific enquiry and it is at this level that social scientists are reflexive about their own fields of knowledge and practice, taking one’s field, methods, and analytical frameworks as objects of scrutiny to better understand and develop the platforms on which sociological analysis can rest.

The value of CR is that because it is a metatheory with a developed ontological scheme it can enable metascientific enquiry and the “refractive” thinking that can inform sociological enquiry and theorising at a more substantive level. Transcending disciplinary boundaries means much more than avoiding the politics of “boundary maintenance”. It requires that we bridge knowledge and forms of enquiry but we first need the bridge. Metatheorising is well suited to this task. It offers us such a bridge without sacrificing rigour or succumbing to eclecticism. It is not necessarily “disciplinary” but is in keeping with the disciplined approach to knowledge production (one that is methodical and rigorous) that is the hallmark of good scholarship across the natural and social sciences, one capable of synthesis and of situating substantive studies within a broad intellectual context. We will benefit from breaking with a doxic conception of “disciplined” as “disciplinary”, from relinquishing the idea that social science requires internal political divisions but also that such divisions must be done away with in order to engage in critical transdisciplinary praxis.

CONCLUSION

Carroll’s discussion of critical transdisciplinarity has been used as a catalyst to explore the place and role of metatheorising for sociological conceptualisation and analysis. Exploring Carroll’s transdisciplinary thesis and the response by critics serves as a platform to highlight the need for a more rigorous and disciplined (but not necessarily disciplinary) approach to metatheoretical issues especially if the promise of CR is to be realised for sociology. Overall there is ambiguity as to how Carroll’s view of “the social”, as a “singular, emergent level of reality” in which agents and structure are related dialectically, is related to CR’s tripartite model of reality. A realist, stratified ontology would have us distinguish

6. Zhao (1991) divides meta-enquiry into three distinct forms: meta-method (i.e. methodology); meta-theory and; meta-analysis. The most developed is methodology. The goal of meta study is understanding and explanation and to do so one must engage in conceptualisation (the scrutiny, refinement, production, and use of analytic concepts).

more forcefully between an emergent level of causal powers and a higher order level concerning the conditions under which those causal powers are or could be realised to generate outcomes. A CR based transdisciplinary practice would need to, *first*, sufficiently distinguish between human and non-human agents, as both types of entities can have “casual powers” to produce outcomes. *Second*, as “causal powers” and also the activation of such powers are due to the organisational *structure* of an entity and its broader context, respectively, it is organisational structure that is vital for transdisciplinary enquiry to describe and explain. In this respect agents are structures that possess causal powers. *Third*, critical transdisciplinary enquiry would need to locate the agent in question within its natural and social environment in order to identify and explain the conditions (relations with other entities) under which causal powers are or could be activated and/or impugned. This effort is especially important if critical transdisciplinary enquiry is concerned to produce or facilitate positive social transformation, as change has to do with whether or not causal powers are or could be exercised.

Despite the underutilised concept of “stratification” and the limitations this might have for transdisciplinary practice, Carroll does illustrate in exemplary fashion the use, role, and value of metatheorising for sociological enquiry. It is this metatheoretical practice that I have highlighted here to be an important facet of critical transdisciplinarity. Following from this, social scientists need to more forcefully acknowledge the importance of engaging with this rigorous and disciplined approach to conceptualising as it is already transdisciplinary and will prompt consideration of the advantages of moving away not necessarily from disciplinary work but from inadequate epistemologies, ontologies and methodologies which beget inadequate or weak insights. Unless we promote metatheoretical engagement there can be no real refutation or refinement of sociological practice as this latter rests upon epistemological and ontological presuppositions.

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