Embodied Reflexivity: Implications of Relational Phenomenology for the Completion of International Student Research Projects

Anastasis Petrou[1,*]

[1]The University of the West of Scotland, London Campus, UK

*Corresponding author: The University of the West of Scotland, London Campus, UK

Abstract

Heretofore, the human body has been viewed as primarily a transportation vehicle for the mind resulting in disembodied views about reflexivity particularly for research and witing projects. The herein focus on embodied reflexivity (ER) starts with a brief account of diverse types of reflexivity that highlight this disembodiment. Gradually, however, the focus shifts to relational dimensions to inform how we humans reflect on our lived experiences as subjects and objects in the material and social environments in our lifeworld at various times and spaces. The Relational Phenomenology-informed analysis of ER highlights links to a new Temporality, Experientiality, Materiality, and Spatiality (TEMS) framework that considers both the mind and body jointly for a range of embodied experiences although the herein applied focus is on research and writing events and activities. The brief discussion at the end is only meant to highlight applicability of core concepts and the promise of benefits from more systematic application in the future for supervision of postgraduate dissertations and capstone research projects among international students. The paper calls for further development of ER using Relational Phenomenology (ReP) in teaching, learning and tutorial sessions.

Keywords: reflexivity, embodiment, Relational Phenomenology, frameworks

1. Introduction

Reflexivity is commonly understood as a critical recognition of the existence of biases in assumptions about the nature of knowledge and truth including perceptions and conceptualizations of ideas about the world around us and those in it. Yet, the above does not represent the many types of reflexivity and the complexities of being a reflective practitioner, learner, and researcher with both a mind and body. A primary objective of the herein study is to add to a growing body of research and particularly to a documented view that embodied knowing is becoming more accepted in addition to disembodied knowing (Küpers and Pauleen, 2015). A second objective is to use a Relational Phenomenology (ReP) research perspective to highlight challenges encountered in conceptualizing and using embodied reflexivity as a complex placeholder for interactions and relationships between mind-body and the environment to frame research projects. Finally, the last objective is to reflect on possibilities for future research using the herein, newly developed Temporality, Experientiality, Materiality, and Spatiality (TEMS) Framework to understand how international postgraduate students undertake research. The efforts in all three objectives stand to make unique contributions in different areas of student dissertation research work within the Social Sciences.

Methodologically, this paper is part of long-term research project that aims to add new insights into how embodied reflexivity orchestrates embodied and interconnected ways of knowing among international students. For the herein effort, the paper connects its discussion to the author's observations and reflections, notes from meetings with students, and lived experiences with postgraduate student research supervision. The observations come from work with international students pursuing postgraduate studies during the past five years. But in this paper the link to the author's supervisory experiences is modest and intended to ground the development of the TEMS Framework. Most of the herein work is conceptual for now.

Herein, the term Dissertation is used interchangeably with capstone research project or CRP to draw attention to a category of research activities where students as researchers are involved. The two terms ae not the same and future research will focus on their differences. Future empirical research could collect TEMS data from colleagues who supervise students, and students themselves in a more systematic way, and as they reflect on their research journeys.

Discussion and understanding of reflexivity are inextricably interwoven in discussions about Research Philosophy, Epistemology, and Ontology. Such understandings help articulate the researcher's (knower's) relationship and approach to what is being studied and to the knowledge existing or being generated about a selected area of study. The use of reflexivity in research is not easy, as controversies about its importance and its meaning do exist (Aunger, 2004). The mind and body are engaged together in discovery, integration, aggregation, and learning in daily life and research. Embodied knowing is relevant to what students do in completing research projects and the work that professionals do in organizations and for research processes. Furthermore, human beings engage in the world and

interact with others not to simply partake in an independent, outside world, but to bring about an interdependent world through embodied action (Varela et al., 1991 and 2016).

The paper highlights some existing controversies surrounding scholarly treatments of reflexivity, but it does not aim to provide a resolution, other than to contribute to critical discussions about knower perceptions, conceptualizations, and embodied reflexivity apparent or its lack thereof in postgraduate research projects, for now.

2. Research Paradigms, Philosophies and Ontologies

As reflexivity is a core philosophical construct in research design and human interactions much can be learned from the proposed research program. Benefits are possible in terms of expanding our academic and research understanding of reflexivity suggested herein. According to Charmaz (2006), who writes under the auspices of a qualitative, interpretive, grounded, and non-positivist research philosophy, reflexivity is "the researcher's scrutiny of his or her research experience, decisions, and interpretations in ways that bring the researcher into the process and allow the reader to assess how and to what extent the researcher's interest, position, and assumptions influenced inquiry. A reflexive stance informs how the researcher conducts his or her research, relates to the research participants, and represents them in written reports" (pp.188-189). Lynch (2000, pp. 26-33) provides a classification of types of reflexivity as follows:

- Mechanical Reflexivity

- Substantive Reflexivity

- Methodological Reflexivity

- Meta-theoretical Reflexivity

- Interpretive Reflexivity

- Ethnomethodological Reflexivity

The above six main categories include fourteen sub-categories in terms of reflexivity types. Sub-categories include the likes of systemic-reflexivity, reflexive objectification, reflexive social construction, and standpoint reflexivity. The six broad classification categories as well as some of the sub-categories are entire domains of study about the nature of epistemology, truth, and reality. Of note is the provided discussion grounded in Ethnomethodology about reflexive and un-reflexive accounts, language, and action. As Lynch (2000) notes "when reflexivity is considered ubiquitous and unavoidable, it no longer makes sense to distinguish reflexive from un-reflexive language or action" (p. 42). A democratisation of reflexivity encapsulated in Lynch (2000) about its ubiquitous nature (i.e., everyone could do it when required) resonates with our understanding of reflexivity, although there is still a need to train postgraduate researchers to be purposive and systematic in their reflexivity as researchers. The work presented in Lynch (2000), however, is primarily focused on a critical discussion of reflexivity within the context of Ethnomethodology. Our intention herein is to retain a

philosophical focus on reflexivity, albeit not exclusively on Ethnomethodology, and with more focus on embodied reflexivity as there is a paucity of research in this area. As noted in this paper's abstract and elsewhere in the paper, heretofore, the human body has been viewed as a vehicle for the mind resulting in disembodied views on thinking and reflexivity. Embodied reflexivity, an underexamined notion in research, affirms an existential priority (as opposed to the traditional essence precedes existence view) in how we relate to other subjects and objects, and our shared physical and social environments.

Furthermore, research papers about reflexivity in Management and Business Research (Johnson and Buberley (2003); Brannick and Coghlan (2007)) discuss links between Research Philosophies and Ontologies and reflexivity and provide valuable insights about systematic reflexivity, but not embodied reflexivity. Furthermore, Johnson and Buberley (2003) point to a more recent problematization of reflexivity in management discourses about research, education, and practice and highlight the diversity of discussion in terms of methodological, deconstructive, or hyper and epistemic reflexivity, respectively. Discussions about methodological and epistemic reflexivity can be useful to briefly trace different research philosophies and ontologies as these two are core in differences in Positivist vs. Critical Theories research paradigms. In their review of reflexivity in Management Valvi and Fragkos (2013) argue for the continuing importance of reflexivity in management although they characterize it still as an emerging research theme in Organisational and Management Theory (OMT) and go on to discuss such innovative research methods as participant reflexivity, autoethnography, and research diary.

However, the continuous focus on two types of reflexivity (i.e., mechanical, and methodological which are primarily disembodied in their foci) is very striking in Positivist and Neo-Empiricist (PoNE) accounts of science addressed in the section that follows. In many respects, the below PoNE discussion about reflexivity is mostly about methodological reflexivity. The focus on the latter in PoNE is high whereas epistemic reflexivity with some considerations about the body is either low or focus is subjugated to the dictates of methodological reflexivity and its objectivist, primarily disembodied, stance.

But, during Critical Theory (CT) discussions provided later in this paper, the above relationship changes dramatically with epistemic reflexivity receiving a higher profile whilst methodological reflexivity is modified a great deal to accommodate a more contextual point of view in terms of applicability and development of qualitative, scientific research approaches. Interpretive Reflexivity and Ethnomethodological Reflexivity, although relevant to the Phenomenological focus on Reflexivity adopted in the paper, have been critiqued further in other areas of work such as Hermeneutics and Sociology. Nevertheless, some focus on these two is provided throughout the paper building up to our analysis of the four modalities (temporality, experientiality, mutuality, and spatiality - TEMS) of Embodied Reflexivity.

2.1 Positivism and Neo-Empiricism (PoNE)

Objectivistic Ontology and Ontological Realism permeate the thinking, research, and writing efforts of Positivist researchers. Objectivists argue that natural reality and social reality both

exist out there and that both are independent of what people as knowers and researchers may think they know, have access to, and perceive about reality. The human mind, its cognitive structures, and contents, simply mirror whatever reality exists out there as that's part of the mind's participation in a grand scheme of things in terms of design. Human perception and conceptualization are both governed by what our senses tell us about the world around us and how our collected data and measurements shape our quantitatively based scientific positions. Even reflexive ethnographic engagement can be quantified according to the scientific method (Aunger, 2004). In the PoNE tradition, what is important is mostly methodological reflexivity and the ability of tools researchers use to collect data and measure natural and social phenomena.

Furthermore, there is a unity to the scientific method and the latter can be fruitfully applied, according to PoNE advocates, to all areas of research (Science, Social Science, and Humanities) irrespective of the research topic. Many are philosophers and scientists who could be mentioned as representatives of the belief in the unity of the scientific method. But that is a topic for another paper. Here a few words are needed about Descartes and his famous "cogito ergo sum (Descartes, 1911) or as it has been translated: I think therefore I am. The latter however is not exactly what Descartes intended the outcome of his famous phrase to be. A more accurate statement would include the mention of doubt in it. His thought was that because I doubt (and subsequently), I am thinking, it is, therefore, appropriate to say that I am. Whichever way the famous phrase is presented, it should be noted that in a powerful way it has ushered a dualism between body and mind, but also made known one other aspect of a person and that is the self and subjectivity.

But Descartes stands not at the end of an era, as there are many scientists to this day who prioritize the mind as the important part of the thinking for the derivation of universal rules to understand our world and science rationally. Descartes' influence remains to this day and even among some important thinkers who came after him and who in the initial stages of their philosophical thinking admired the contributions of Descartes although they were striving to articulate philosophies about Human Sciences. Edmund Husserl is one such philosopher considered the father of Phenomenology briefly discussed in the next section. It should be mentioned here that Husserl's philosophy engaged with Descartes' ideas in the former's Transcendental Phenomenology, but as Husserl's thinking matured in the latter years, the realization came that the Human Sciences needed a much different approach inclusive of a focus on lived body experiences. Macdonald (2000) presents similarities and differences between Descartes and Husserl to illustrate elements of the needed approach.

Whilst Husserl's ideas eventually pushed away from Descartes' body and mind dualism his initial work stayed close to the dualist thinking which was presented as a framework for the Human Sciences. There are many within the Postmodernist & Hermeneutics (P&H) traditions and the Critical Theory (CT) camp who advocate the importance of corporeality, embodiment, and the embodied mind. There are large bodies of literature for each of the three areas mentioned (corporeality, embodiment, and embodied mind) and some of this critical discussion will be presented in the discussion about the PERC model which follows in the coming section along with how it relates to management and education. But, for now, we turn

our attention to how P&H researchers view reflexivity.

2.2 Postmodernism and Hermeneutics (P&H)

Whereas theories and approaches within the PoNE tradition share an affinity for objectivism, P&H theories and approaches subscribe to a subjectivist understanding of ontology and epistemology, although there is no need to abandon scientific practices and/or adopt relativism. A focus on language, issues in context, and meanings in the text are recurring themes in the development of P&H theories and approaches. However, this section focuses on how Postmodernism and Hermeneutics frame reflexivity and what this framing tells us about human perception and conceptualization. Reflexivity in the P&H traditions is understood as involving interaction and participation by the observer in phenomena defining social and cultural reality. The observing subject does not stand outside of the observed domain but participates in it. The observer not only observes, but also reflects or engages in serious thought about what has been observed to either explain or understand what has been observed.

PoNE advocates use reflection, perception, and conceptualisation for an explanation, prediction, and measurement. The advocates of P&H use these same ideas for the understanding of phenomena. A major difference between the two traditions has to do with the acknowledgment of the importance of the body in knowledge-making by P&H philosophers. Accepting the importance of the body should not be seen as a sentimental or idealistic route to science-making and neither should be seen as a refutation of science and its importance. The acceptance of the body entails an effort to understand ER concerning the joint journey of body and mind through the world and the formation of interests including research gaps to be pursued in the Human Sciences. A variety of objections exist in that reflexivity characterized in terms of human perceptions, conceptualizations, and beliefs can be understood through a purely Positivist stance in science. Perception is not a simple matter of gathering data through the senses and conceptualization does not readily emerge and in full form out of the human mind. Furthermore, it is not easy and always feasible to acknowledge the nature and scope of research biases up front, i.e., before research starts, although that is hugely important. Issues do arise during research not anticipated early on during research design and it is important to acknowledge and bracket these issues as well. These issues can be understood and brought to the surface primarily through reflection in action and reflection on action and not through methodological reflexivity, the mainstay of Positivist research aiming to measure and quantify perceptions and conceptualisation.

The theme of reflexivity is strongly featured in the work of Bourdieu (2004) and the writings by Bourdieu and Wacqunat (1992). Unlike assertions by Positivists, Bourdieu (1993) argues that it is not possible to hold a fixed view about an objective production of scientific knowledge. The researcher who is aware of the workings of the world must take a reflexive stance in his or her research and acknowledge participation in various fields which contribute to an understanding of how knowledge comes about. Researchers at all levels, including students, need to understand this multiplicity of relations and actions contributing to the development of knowledge and factors such as relations and actions in their cognitive

understanding of the world. Harding (1992) argues in favor of strong objectivity and not the traditional (Positivist) version of objectivity. Harding suggests that "strong objectivity is built upon the sustainable desire for critical self-reflection and an attempt at liberatory social change starting with women's lives … Harding (1992) turns her gaze toward the critique of the social sciences just as Bourdieu (1993) turns the sociological gaze upon itself" (Hesse-Biber 2012, p. 561).

Epistemic reflexivity is at the heart of the work by Bourdieu (1990) and in the work by Bourdieu and Wacquant (1992), although in the latter work the two collaborators focus on the broader value of Reflexive Sociology. For Bourdieu, reflexivity is a necessary condition to produce scientific knowledge. According to Wacquant (1992), Bourdieu's reflexivity differs from that of other social scientists in three ways: "First, its primary target is not the individual analyst, but the social and intellectual unconscious embedded in analytic tools and operations; second, it must be a collective enterprise rather than the burden of the lone academic; and third, it seeks not to assault but to buttress the epistemological security of sociology" (1992, p. 36).

Whilst Bourdieu and Wacquant (1992) are both concerned with (epistemic) reflexivity in Sociology, the issues raised above are of importance to any critical discussions of knowledge production. Criticisms have been levied at epistemic reflexivity found in the work of Bourdieu (1990) by Maton (2003). The latter argues that Bourdieu's epistemic reflexivity still does not fulfil its collective knowledge production focus. Also, Bourdieu's epistemic reflexivity according to Maton (2003) requires an injection in the arm from capital theory to highlight the importance of epistemic capital and epistemic profits. The latter is "about how actors within the intellectual field engage in strategies aimed at maximizing not merely resources and status but also epistemic profits, that is, a better knowledge of the world." (Maton, 2003, p. 62).

But the problem is not so much in Bourdieu's epistemic reflexivity or in any other cultural models of the world which may argue for a contextual understanding of knowledge. And neither is the only way to enhance (epistemic, or any other kind of) reflexivity through the addition of epistemic capital, although that is an attractive idea. At the heart of social and cultural models is a relational epistemology. The latter holds that we understand our world and phenomena in it through engagement and participation in a changing world and interaction with dynamic social phenomena and with others within our cultural and social worlds. Socialization is a critical aspect of how we understand the world. Social theorists have proposed several constructs as ways to understand socialization and how individuals and groups relate to each other and emerging knowledge around them. Examples of such constructs include community (Mead, 1971, 1973), class, habitus, and reflexivity (Bourdieu, 2004), family (Bales and Parsons, 1955), and lifeworld (Habermas, 1971, 1974). Each of the above constructs can help with an understanding of an individual's or group's socialization for a relational understanding of how knowledge emerges and flows within groups and from individual to individual through interaction. Problems with understanding do not reside with the above-mentioned social constructs per se, but in the fact that the world around us now is changing at a much faster pace than it ever has in the past.

Understanding ourselves, along with the many different modes shaping multimodal human experiences in the world, the emerging complexities in our lived world (lifeworld), and how we interact with our environment, means we should attempt to understand the entirety of the human being (its mind and body) as a situated self or being in the world or Dasein (Heidegger, 1927). To this end Phenomenology, undertaken from a Hermeneutics perspective, focuses on the interpretation and understanding of experiences about perceptions, intentionality, social action, imagination, language use, and a variety of other experiences. Some accounts of Phenomenology by Hegel (1807) and early work by Husserl (1901) stressed subjective and objective aspects of phenomenology and discussions contributing to the body-mind dualism. However, work by Merleau-Ponty (1945) emphasizes the whole body and lived experiences as the body exists, feels, and moves through actions in the world. The work by Merleau-Ponty (1945) and by Heidegger (1927) is of particular interest here as both philosophers stressed, contrary to the PoNE tradition discussed in the previous section, that observer cannot detach himself or herself completely from actions and activities in the world whilst engaged in reflection about various observations about phenomenological perceptions and conceptualizations in the world. Reflexivity is an interactive process that happens whilst the observer is in interaction with the phenomena under observation.

Similarly, in the Postmodernist paradigm, self-reflexivity and particularly reflection in action can take place only whilst the researcher is part of local events as these unfold. Attention to language use and narrative one constructs as part of reflection are useful to analyse as such analysis may be a window into how researchers attempt to make sense of events and actions taken. As Bertens (1995) reports "Clement Greenberg, for more than thirty years easily the most influential art critic on the American scene, defined modernism in terms of a wholly autonomous aesthetic, of a radically anti-representational self-reflexivity" (p. 3). The anti-representational, self-reflexivity has attracted attention in many postmodernist discussions of language, arts, and poetry each of which situates reflexivity within its context, space, time, and knowledge domain rendering is multi-vocal in nature and scope. The paper returns to the above issues-particularly narrativity as part of embodied reflection in spaces researchers inhabit as well as in how they experience research time. These discussions will be part of spatiality and temporality in the herein new model of temporality, experientiality, mutuality, and spatiality (TEMS).

2.3 Critical Theory (CT) and Relational Phenomenology (ReP)

ER examines issues of knowledge authority (who speaks, why, and what they say) and examines expertise in research from an existentialist perspective (existence precedes essence) and as an alternative, relational view to Positivism. ER values critical, intersubjective understandings about bodies of situated knowledge of relevance in human action. These intersubjective understandings attempt to gauge the importance of taken for granted ways of acting and behaving, akin to the focus on the habitus that Bourdieu (1990, 1997) talks about in his work, but with a focus on ambiguity prevalent in local and global (or Glocal) levels always part of the mix. Mindfulness is also necessary as Yang (2013) argues to re-evaluate deterministic and structuralist tendencies in Bourdieu's work in a more innovative direction whilst reflexivity for pedagogical purposes.

This paper could have positioned its reflexivity discussion simply within a critical ground in terms of what can be said about it and how it can be used in research. CT represents the third way in addition to Positivism and P&H research philosophies. This third way aims to build upon insights from the previous efforts on reflexivity and yet also to bring in the shaping influence of history, institutions, and culture. CT does distance itself from Positivism, but it does maintain useful links with P&H. With CT, there is a turn to more situated instances of embodiment, and Race, Ethnicity, Feminist, and Postcolonial Theories do matter in articulating embodied reflexivity issues. The paper's development is not composed of arguments against the importance of Science, but the gaze is firmly upon valuing all lived experiences and empowering multimodal expressions as scientific and research interests from all researchers in the Human Sciences.

Furthermore, CT is not simply one theory that is critical of a set of scientific activities or practices in society. Feminist, Race Theories and Postcolonial Theories are part of CT although frequent discussions about CT are about the intellectual inheritance from the work done by a group of theorists associated with the Frankfurt School which includes Theodor W. Adorno. A collection of papers edited by Huhn (2004) for the Cambridge University Press, provide insights into the Critical Theory of Society by Theodor W. Adorno. The 2004 collection of papers about the Critical Theory of Society was based on Adorno's unique understanding of Reflexive Sociology and stressing among other issues, links between aesthetics, music, and action in Society. Critical Phenomenology (CP), for Guenther (2013; quoted in Salamon, 2018, p. 9), "an emphasis on intersubjectivity is what makes phenomenology critical". It would have made absolute sense to examine ER from a Critical Phenomenology point of view which problematizes more clearly the role of context, history, and lived experience, the lived body and embodiment. The latter is an inclusive and interdisciplinary way of knowing to examine how reflexivity is put into action through reflective practice in Critical Phenomenological (CP) terms and what sort of issues the knower as researcher perceives in his or her work in diverse contexts to address problems or challenges in practice aided by embodied reflexivity in action and embodied reflexivity on the action.

Yet, there is still a pressing need to further acknowledge that the earlier positions on reflexivity which do not fully account for the body, deal broadly speaking with an internalist account of human cognition. The internalist view accords primacy to the human brain as the authoritative source of cognition and perception. Looking at Conventional Philosophical Approaches such as Positivism and Post-Positivism, the role of the body is considered peripheral or problematic in perception, cognition, and reflexivity. However other views about the brain exist as represented by a set of "e" approaches such as embodied, enactive, extended, and ecological approaches (Gallaher, 2018) which decentre (but do not ignore) the brain and suggest that the mind is more than the brain and it is represented by interactions between brain-body-environment.

Herein embodiment is highlighted but in relational proximity with enactive, extended, embedded and ecological approaches. The herein relational and not only the embodied phenomenology perspective is critical of representational views and naïve realism

perspectives in the traditional computational / naturalist approaches, but its focus is not on their direct re-repudiation as that has been done elsewhere. Rather, the Relational Phenomenology (ReP) point of view, rising from an existentialist acceptance of ambiguity, offers growth room for such relational concepts as spatiality, temporality, experientiality, and mutuality or TEMS for mind-body-environment interactions and relatedness. The four TEMS dimensions are seen as relational conundrums because of unique mind-body-environment ambiguities in each of them which demand further study in this paper and other future efforts. However, each of the four TEMS dimensions contributes to our understanding of ER and how the research of the latter shape (postgraduate or other understandings). The TEMS Framework of ER is seen as part of a relational infrastructure that aids our understanding of ER as a whole and in the world.

3. TEMS Framework

With the above in mind, we take forward the discussion about embodied reflexivity. Discussion is presented about the TEMS Framework based on the ReP perspective to highlight and continue to interrogate relationships, interactions, and engagements between the mind (a mentalist substance) and the body (a substance of materiality, or material significance in terms of being in an external world). The herein envisioning of ReP results in a more complex understanding of the lived body and reflexivity in an experiential, existential, and external rationality sense. Embodied Reflexivity (ER) is the overarching construct of interest acquiring its meaning from the lived body's entanglements in the four modalities (temporality, experientiality, mutuality, and spatiality) as suggested in the TEMS conceptualization of ER. All the four TEMS areas are present in various accounts of Phenomenology and are addressed in the next few pages. Mutuality (the M in TEMS) is preferred as a conceptual placeholder instead of both materiality and corporeality as it is more inclusive in terms of relationships and mutual influence (self, others, and objects in nature, the built environment, and in the Lifeworld).

Although ReP embraces aspects of enaction in the world, as suggested by Varela et. al. (1991 and 2016), the latter perspective is more naturalistic in aim and links with efforts to design Artificial Intelligence (AI) which is a great focus. Although the current study and future inquiry aim to highlight a focus on the embodied mind and to continue discussions about the phenomenological impact of TEMS embodied reflexivity, we are open to integrating lessons from research about enaction in the world, but such integration into the PERC / ER research program is reserved for future papers to accomplish in more detail.

Before the discussion by Varela (1991), Schon (1984) presented his concepts on the Reflective Practitioner and particularly the ideas of reflection-in-action (reflection during an activity) and reflection-on-action (reflection after the activity). The importance of Schon (1984) is in the movement (both physical and intellectual) in space as part of practitioner action to achieve things with the whole body. Both notions of reflection-in-action and reflection-on-action become analytical components in terms of what the body does in the

embodied reflection in the PERC framework and hence are mentioned in the next section as areas of discussion with researchers (students in this instance).
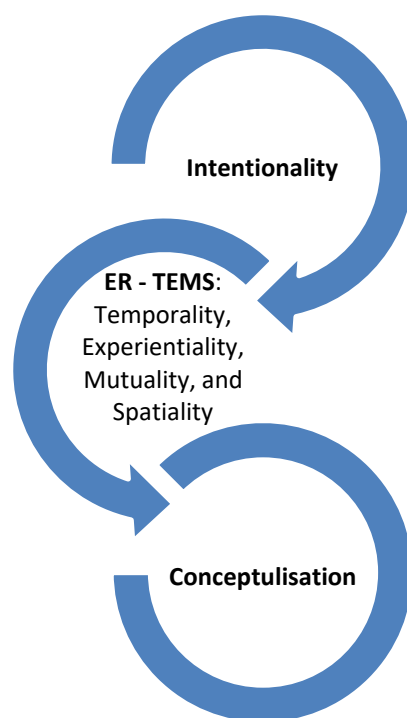

Figure 1. Iteration 2: Temporality, Experientiality, Materiality, and Spatiality

However, reflection can manifest itself as a reflection in action and on action depending on a variety of encounters with events. But, whilst the analytical power of the mind is necessary, the body's positioning and corporeality in space, in time, and human relations (self and other) also make a difference in perception and conceptualization. As Racher and Robinson indicate discussing Merleau Ponty's work "perception needs access to reality; human experience is actualized in four Lifeworlds: space, time, body and human relations" (2003, p. 474). I would not necessarily characterize the above four areas as four Lifeworlds. They can be viewed as four relational modes which help constitute many individual Lifeworlds and in our ER and TEMS model, the view of Relational Phenomenology (ReP) brings into focus the relational entanglements spatiality, temporality, experientiality, and materiality can provide in prepping-up our understanding of ER. The Relational Phenomenology (ReP) view on experientiality offers a fuller view of the lived body as a subject, object, and ontology of reflexive awareness and as such nor problematize heretofore in any other use of ReP to understand the research process of postgraduate students working on Capstone Research Projects (CRPs).

Whilst Husserl in his Ideas and Logical Investigations (1913, 1930) talks about consciousness and transcendence he does not specifically address the "lived body" and the "other" as much as highlights a natural attitude we all possess according to Husserl. The latter is problematic as a construct in a contemporary world of diversity and different philosophical traditions about the body and the embodied mind. Husserl does focus on the lived body to a small

degree in his final work of 1936. However, the focus on a self's natural attitude persists and frames in a narrow way the other is regarded as simply a copy of the self, hence completing negating the otherness of the other. In his last book Crisis of the European Sciences and Transcendental Philosophy, Husserl (1936) begins from the "standpoint of the pregiven public world experienced in the natural attitude rather than from the inner consciousness of the solitary meditating subject" (Moran 2012, p. 57). Part of Husserl's continuing focus on the natural attitude is to indicate that it "is as it were unknown to itself until one applies the transcendental epoché (bracketing, or exclusion) whose very function it is to break with the world and transcend the natural attitude" (Moran 2012, pg.60). Whilst the concept of the transcendental epoché is useful, the notions of bracketing and breaking with the world in transcendence is problematic at best as human existence is integrally part of the world.

Consideration of ideas from the Phenomenology of Perception of Merleau-Ponty (2012 translation and others) enables a differentiation of the Relational Phenomenology (ReP) view as a post-positivist approach. The argument in ReP is not simply of a need to transcend and/or bracket the natural attitude but to engage with assumptions and ambiguities which constitute it. Subsequently, reflexivity and other relational, embodied modes of knowing become a collective relational infrastructure necessary to understand, learn about and further develop embodied mind processes in the world as these are discussed in the TEMS model to frame research narratives. Reflection does afford a person an opportunity to rise above it all, but the embodied mind in reflection is still earth and body-bound and a product of relations in communities of being in the world. Not only the latter but also, the passage of time, diverse relationships, consideration of others' perspectives and lived space all contribute to how the body moves through life usually accompanied by others, gains experiences, develops skills, and much more. All these lived experiences in the community (or in the proximity of others) impact reflection and embodiment involving the whole person living in the world. The latter is not to deny the importance of detachment and objectivity in research, but to note the continuing presence of the "other" in a lived world of "self-other" relationships. What is also critical to note is that there is nothing natural about the natural attitude as it is not a standard issue for all human beings and it changes depending on time, relations, different others in one's life, and lived spaces over time. These four TEMS modes do impact a person's attitudes and embodiment in the world. This is not to say that there is no such thing as a natural attitude, as each person exists within a physical environment of buildings, infrastructure, and physical surroundings which remain the same for considerable amounts of time. Human beings get up in the morning and perform a variety of morning routines to get ready for the day ahead. These routines and daily activities are part of diverse natural attitudes and of the things, we take for granted until something breaks down and we are forced to turn our attention to the mundane as it requires our attention. These aspects of the natural attitude could be transcended in thinking about human lived experiences as Husserl argues. Yet, different temporal and experiential arrangements in the lifeworld constitute the research self in diverse ways and the latter is important to understand in relation to embodied reflexivity. The next sections detail the PERC framework and consider the usefulness of the temporality, experientiality, mutuality and spatiality or TEMS model in Capstone Research Projects, with a focus on ER, and ReP and provide brief discussion and conclusions.

3.1 From Individual Perception to Embodiment and Intentionality

What is perception based on in ReP? How does ER impact this understanding of perception? We need to acknowledge the possibility that biases creep into human perceptions for assorted reasons and that biases and assumptions must be checked before the research field is entered. Subsequently, the focus on perception has to do with acknowledging as a first step an intertwining between consciousness as a thinking part of the self with the body's lived experiences. It is this intertwining first observed by Husserl that also guides the work of Merleau-Ponty on perception (Jensen and Moran, Editors, 2013). Moran (2013) in a separate article adds that this intertwining is fundamental to the inner perception of the lived body about itself and an awareness of its own lived existence and thoughts about its environment and ideas and objects in it. According to Gallagher (2010, p. 185), Merleau-Ponty's phenomenological account of embodied perception anticipated and helped inspire much of recent embodied and enactive accounts of mind and body, starting with Varela, Thompson, and Rosch's The Embodied Mind (1991), and running through several recent works (e.g., Berthoz and Petit 2008; Clark 1997; Gallagher 2005; Noe 2004; Shusterman 2008).

However, Merleau-Ponty's work is a reaction against the mind/body dualism advocated by Descartes (1637 and 1644). Furthermore, in his seven lectures on perception translated from French to English by Davis (2004), Merleau-Ponty rejected Descartes' logic of exclusion. The latter is the idea that only cognition (reason) is what defines a human being exclusive, by defending a need to bring back things rejected by Descartes including such philosophical themes as perception. Such return to perception in the Phenomenological tradition offers a fuller understanding of internal and external dimensions of rationality and the need for the mind's higher functions such as ER to help a researcher elicit and synthesize meaningful information and to navigate through the constant noise and/or chatter in the mind and the body's entanglement in the world. As Demuth notes "Both basic theories — externalism and internalism — face the question of how to explain the awareness of new reality in our consciousness, how information (external or internal) is elicited or, in other words — how we meet the world. Some critical philosophers are convinced that the world is a sum of information surrounding the subject. What we call the world is nothing else but a set of various perceptions, feelings, and ideas" (2013, p. 7). We argue that both these theories are needed. Their insights must be harnessed to steady the subject's efforts and intentions for researching a particular phenomenon of interest. At the same time, ways of knowing are needed such as ER to guide the knowing subject in his or her quest for information on their selected phenomenon of interest in the world.

This idea of being in the world is a core notion of Phenomenology. Prendeville (1999, p. 364) in discussing Merleau-Ponty's work and the latter's view on Cezanne's art, states the following: "The painter worked with and within the grain of perception. This ability to operate within the field of inquiry, rather than inspect it from above, was something Merleau-Ponty sought to appropriate for philosophy, in his writing of space. He did so through descriptions of lived perception, through reflective responses to painting, and through the development, in later work, of a suggestive philosophical-poetic vocabulary of space and sensation: écart (relief, divergence), chair (flesh), entrelac (interlacing); `fold',

`entanglement', `leaf of Being', `the interior tapestries of vision'." The opposite of interlace is to detach or disconnect which Merleau-Ponty argued does not apply to human beings as we exist in the world. This is not to say, Merleau-Ponty opposed Scientific efforts to clearly and faithfully present or describe a particular phenomenon, but he was highlighting the idea that our perceptions (even without a bias in them) only provide a partial picture of a phenomenon at hand. Multiple vantage points and levels of examination with their findings interlaced can provide a fuller understanding of the real thing. The tools of Natural Science offer a different view of the human body than a person's view and sense of their embodiment and what it means to have a body with its physical limps functional and mutually interdependent during an action. A Natural Science investigation of the human body can describe the mind separately but does not offer an embodied view of the body.

ER, however, in its phenomenological integration of embodied cognition, places the embodied mind at the center of the brain's internal and external accounting of the world. A person's statement "I feel great today and I can run 10 miles" cannot be replicated in its "affective" depth and as an account of how a person feels by the descriptions of the body by Natural Science methods. Among other things, contemporary Relational Phenomenology examines this relational account that human beings can provide of phenomena. Whatever the nature of a relational account a person provides, it would still need to go through a rigorous examination for its intersubjective validity in terms of whatever has been narrated as part of the account and the latter will stand as that person's recorded sense of a particular phenomenon. But as Wittgenstein (1953) has noted the grouping of such accounts about phenomena can be done in terms of their conceptual similarities over time and in terms of a family resemblance of the associated ideas and concepts arising from perception as we will see under the discussion about Conceptualisation and in the section on Experientiality. In the end, what is being said as part of the account of a phenomenon becomes important as lived experience to be examined for its congruence with other such accounts (and even Natural Science accounts of the phenomena).

Furthermore, information about phenomena and perceptions of them, generated by both the brain and the mind in its higher function of thought and reflection, enters the picture as part of a discussion on perception. Whilst perceptions about our bodies can be pre-reflective and/or basic at least at first, the actions taken to do something about body dimensions are reflective and engaged after a certain sense of uneasiness and action takes root in one's mind and body about the current situation of the body and the current state of the embodied mind. The embodied mind is very chatty, as it generates lots of observations and information about phenomena in the world) and a place where information noise is experienced from time to time. Whilst thoughts are generated in the mind, they can be internal and esoteric about the self but also the external world and others in it. As Moran (2012) notes about Husserl's intentionality, the latter is externally directed to a specific object, so in this instance, bodybuilders may be judging their body by relating its dimensions to those of others. Husserl as per Moran (2012) viewed intentionality "as a complex of performances that end up been layered in such a way as to make up a complex unity of the intentional object" (p. 21).

On the other hand, Merleau-Ponty in his consideration of "intentionality of consciousness (especially of how things are presented in perception) and of the role of the body in perception are recognized as important contributions …" (Merleau-Ponty lectures translated by Oliver Davis 2004). Whilst our human thoughts can attempt the useful exercise of transcendentalism and/or move beyond the confines of our lived, perceptual world, the achieved result is more the product of human imagination, creativity, collaborative or relational effort, and Scientific breakthrough rather than divine input or divine spark from beyond. With the above in mind, embodied reflexivity's task is to offer insight on relational accounts that human beings as researchers can provide over various phenomena they observe and/or are interested in as part of the course of their lives, including the interlacing of lived space, time, experience, and mutuality with research processes.

3.2 ER: Temporality

Cohen (2012) argues that temporality is a core problem in Phenomenology. He suggests that this notion reveals itself in much phenomenological writing including those of Husserl, Heidegger, and Levinas. He states concerning Husserl "… the suspension of the phenomenological reduction marks the necessity to bracket 'constituted time' to retain only those modalities in and within the phenomenological subject which constitute time as such. Hence, by what Husserl calls the 'modes of the constitution of the temporal objects', modes which are always to be thought as intentional, it is, in truth, the very being of consciousness, which is aimed at, that is, it is the very being of consciousness as temporal which is explicated. Consciousness, constituting thus the temporal objects as intentional and in this manner constituting an immanent temporality, reveals itself to be temporality" (p. 365). Along these lines, Husserl also views horizons as an important aspect of what he called the lifeworld. Horizons are understood not simply as the future but also as a gaze across a subject's lived experience in the past, present, and future. A sense of temporality and flow of time and its division into past, present, and future is an especially important aspect of human existence in regulating behavior, action, and positionality. A disrupted temporality in a person's engagement with the world could be a sign of neurological problems or at least indicate an affected party is overwhelmed with current demands on time and is facing challenges in terms of realistically planning future affairs (Schwartz, Schwartz, and Moskalewicz, 2017).

In postgraduate study, each student as a researcher or SaR is asked to determine a topic and a research gap for the MBA / CRP and to provide a plan with milestones detailing the accomplishment of tasks. But, depending on university policies where the SaR is a student, available time to orchestrate completion of the CRP may be of different duration. In some instances, students are given from say September in one year to May of the next year to complete their work. There are also instances, where time to completion is not as generous, and have seen it be as low as 16 weeks. Although some flexibility is available in terms of time to achieve milestones, the 16-week duration is significantly smaller and certainly adds considerable stress, and a certain level of mania as Schwartz, Schwartz, and Moskalewicz (2017) describe, to all involved in the dissertation completion process. In all durations, long

or short, however, ER needs to be engaged fully in the development of milestones in the form of a schedule for completion.

Time for Merleau-Ponty (1945, 1962 translation) is not a linear process and events do not occur in the world in a typical sense of having an observer there to record their happening. He states "Time is, therefore, not a real process, not an actual succession that I am content to record. It arises from my relation to things. Within things themselves, the future and the past are in a kind of eternal state of pre-existence and survival; the water which will flow by tomorrow is at this moment at its source, and the water which has just passed is now a little further downstream in the valley." Time becomes of importance because of the relationship an embodied mind has to things. Time becomes of consequence when it becomes lived time, and it is seen from a subject's point of view. It is in this interaction between spatiality and temporality that we also understand a bit more about the subject himself or herself and how they inhabit both time and space at their disposal. Time allowed for the completion of an MBA Dissertation can make or break the engagement effort of one researcher vs another. The same amount of time will not be inhabited the same way by different students. Subsequently, a provided and adhered to schedule of meetings with students is important in helping them not only complete but also to help them articulate challenges in the production of a piece of work demonstrating goals they had embodied as perceptions and research concepts in their completed work and as part of their embodied reflexivity efforts.

3.3 ER: Experientiality

Gallagher (1986) suggests that there is unnecessary duality or opposition in mainstream discussions of the body. According to the duality view, there is a physiological body and a lived or experienced body in everyday accounts of the body. He goes on to say that "the lived body is physiological, and the physiological body is lived" (p. 140). Furthermore, he adds: "The lived body can be objectified, not in an adequate way, but ambiguously as far as it is physiological. In this lived physiology the brain is not the exclusive locus of control. Of course, the brain and the central nervous system do have central and primary functions to fulfill" (Gallaher 1986, p. 141).

Yet, whilst the brain governs the physiological body's functions and internal activities, the mind interacts with the body and has a bearing on the body's lived experiences in the world and does have a bearing on how the body is recognized in the world and how the mind feels about the body's dimensions. An example of this is bodybuilders who experience their body as small or smaller than that of other men and subsequently engage in bodybuilding to improve the size of the body and how they feel about it. Experientiality as part of the ReP approach gets to these difficult and not always or readily observable relations between mind, body, environment, and others as part of its concerns with the embodied mind and several types of experiences in the world as noted in Table 1.

Table 1. Experientiality Construct and Embodied Reflexivity

Experientiality Construct	Embodied Reflexivity
Lived Experiences of the Subject	Reflection-in-Action is understood from our own embodied perspective, outcomes from enacted actions now including feedback from others in our Lifeworld, and our mindfulness in the world.
	Reflection-on-Action from multiple perspectives (ours and feedback and advice we seek and/or given), our observations, and from our mindfulness in the world.
Lived Experiences as an Object	Reflection-on-Action (primary)
	Reflection-in-Action (secondary and developed over time as we receive expert input (doctor, mentor, health provider, teacher, etc.)
Ontological Lived Experiences	Awareness of how others see us and eventually Reflection-in-Action and Reflection-on-Action

Our lived experiences go beyond what the individual with his or her body and subjective experience experiences in the world. Herein a tripartite construct of experientiality is proposed which involves a self with a body as a subject, an objective view of the embodiment, and even an ontological awareness of the body from the existentialist perspective. All these three aspects of the lived body presented in Table 1 above interact to account for experientiality in broader terms and the environment discussed more fully in the section on Mutuality.

An understanding of experientiality as a tripartite construct for being in the world (Merleau-Ponty, 1945 translation 1962) will need to include attention given to one's experiences in the world (body and mind) as a subject. Experientiality can be about daily entanglements of the body in its totality. The latter include going to and coming from work, making love, working with others, habituated and/or innovative ways a person uses to confront challenges and solve problems, experiencing personal joy from well-conceived efforts resulting in success, sadness in the loss of loved ones and empathy for others in the loss of someone important.

In addition, experientiality could include an objective view of the embodied mind as is the case with information and feedback provided by experts such as doctors, psychiatrists, teachers, mentors, coaches, and others with specialized training. For example, a visit to the doctor for an issue could result among other things in a diagnosis and advice and this may also include a subscription for medicine. The doctor as the medical expert objectively views

the patient's body and gives advice. Finally, the third component of experientiality could include (ontological) awareness of how others view us about various important social values and even skills in the world that we may or may not possess, as an embodied presence in the world.

The above tri-partite understanding of experientiality involves the whole human person's evolution and space and it also relates to mutuality discussed in the next section. However, the importance of the above tripartite relational infrastructure of experientiality stems from links between experientiality, embodied reflexivity, and learning.

Embodiment brings together body and mind and celebrates all types of experiences that use the body and not simply rely on the rational mind as a conduit for understanding. Talero (2006) using Merlau-Ponty as a framework for discussion argues that the embodied view incorporated in experience augments our ability to learn with both our body and mind. Although Talero (2006) refers specifically to the learning subject (the first of our tripartite concepts above), learning is also possible through the objective and ontological bodies. Through the advice of a doctor who examines the inner workings of the body and mind practices and habits objectively, the subject could potentially learn to care for the body and care for everyday processes and habits (including research processes and investigations). Furthermore, ontological awareness involves reflection and that could potentially lead to learning which is essential in research and completion of a postgraduate dissertation or any other research project.

3.4 ER: From Materiality to Mutuality

Leonardi (2010) notes the challenges in different fields of study such as Sociology, Communications, and Management in providing an inclusive definition of materiality and of objects possessing material properties which include such stuff as digital software with other stuff such as wood, steel, and rocks. Subsequently, Leonardi, to provide an answer to "what is materiality," supplied three definitions. "Materiality as (1) matter; (2) practical instantiation; and (3) significance." He argues "if materiality is defined simply as matter, that digital artifacts cannot be said to have materiality. However, when materiality is understood to represent the practical instantiation and the significance of an artifact, digital artifacts can be seen to have materiality. In summary, I argue for using these two alternative definitions as lenses through which to understand the influence of "digital materiality" in the organizing process. I also suggest that using these alternate definitions can help researchers to integrate studies of digital artifacts with other types of intangible phenomena, such as routines and discourse, which are at the core of all theories of the organizing process" (pp. 1-2). The above tripartite view of materiality is of value in all kinds of projects and certainly accommodates diverse research interests not only among dissertation and projects students but also among other researchers across diverse research communities. From the embodiment perspective espoused by Relational Phenomenology (ReP), all three areas of materiality are valuable to keep in mind. However, for ER to gain a fruitful understanding of matter, mind, body, and human action, a commitment to mutuality is also necessary. The interest here is in the principle of embodied self (and reflexivity) – environment mutuality. As Costall (2004) notes:

"Animal and environment are not envisaged as essentially separable, alien entities that just "happen," at some point, to come into relation. They are aspects of a unitary, continual historical process. Animals inherit environments just as much as they do their genes, and their environment already "acknowledges" their existence—from vegetable mold surrounding the earthworm to Skinner boxes and their intended subjects. Of course, a distinction can be made between organism and environment, but it is a distinction that presupposes their relation, just as riverbeds and rivers, and beaten paths and walkers imply one another's existence" (p. 191). The question is does this presupposed relation between embodied self – (social) environment always happens in the same fashion in all modern societies? The answer is no, but history demonstrates a slow march towards such acknowledgment from dyadic relationships struggling for mutual recognition to social contracts and psychological contracts which endeavor to acknowledge the necessity of mutuality in all areas of life. Researchers also struggle with issues of mutuality in terms of wanting access to subjects and the latter wanting full acknowledgment of their rights to privacy and protection of the information they provide as part of the research process.

The above mutuality issues and march for recognition of such issues, and many more, are part of the research process and methods bedrock in all disciplines. Upon these mutuality issues, and the sedimented research bedrock, in each discipline rests a claim to a scientific enterprise. In the Human Sciences (and I would argue in the Natural Sciences as well), scientific practice does not rest upon whether a particular discipline performs quantitative or traditional methods-driven research work as opposed to qualitative, alternative research methods-driven research work. Mutuality mattes or carries an elevated level of significance in both the Natural Sciences as it does in the Human Sciences. Any phenomenon does not appear in its full light when taken out of its Lifeworld. It needs to be examined as it exists and presents itself situated in a context but with the latter being a product of an intellectual experiment or an actual worldly context. Student research projects must acknowledge mutuality as part of their endeavors in a subjective but also objective sense and potentially in an ontological sense. Subsequently, the latter brings objectivity and systematic collections of data firmly back into the fold of research practices even when the subjective concerns are still there too.

But objectivity is not abandoned for a misguided naïve realism (i.e. perception will provide direct access to the reality of a phenomenon), but in acknowledging the essential presence of mutuality one strives to fully bring to the surface assumptions which may impact the soundness of the interaction of a phenomenon with an embodied subject in the world. Mutuality is an ongoing process, and it involves a perception and action which suggests an initial perception can be revised based on the outcome of the action in the world. Lessons from links between perception and action explain why a pilot research project could be instrumental in guiding the initial understanding of findings and allows for corrections in the research design before the actual research project is rolled out. Not all researchers including students pilot research projects, although some do. Literature reviews are however required in student research projects as such efforts give students and tutors a space for mutual reflection which empowers both to see links and relations in research constructs to guide understanding

and shape the research design.

3.5 ER: Spatiality

Lefebvre proposed a triad spatial model which includes the perceived space, conceived space, and lived space (1991: 33, 38-9). His notion of spatiality was different from a standard definition of space. As Zhang (2006) notes Lefebvre's work in organizational theory and management offered the "critical tenet that space should be seen as the site of ongoing interactions of social relations rather than the mere result of such interactions – a process of production, in Lefebvre's words, rather than a product" (p. 219). Whilst space in its physical dimension in an organization or other place may be large or roomy if you will, spatiality may be much more restricted based on hierarchies and rules of engagement and how people are made to relate to them. Such relations may be based on positions of bureaucratic authority restricting relational contacts and hence enlarging the distance between parties. In this sense, spatiality has to do with power and authority and even with economics.

Lived space, on the other hand, whilst part of spatiality may refer to a person's lived situation, arrangement of objects within that space, and routines and activities taking place within that living situation. Gallagher (2010) in his comments about Ponty's work in the Phenomenology of Perception, Part 1, states that spatiality is "not Cartesian geometric space, but the space within which we live and act" (p. 184). Perceptions and actualities about spatiality do differentiate personal and professional actions. Spatiality distance (large or small) impacts one's embodied reflexivity and is possible in such spaces along with the degree of access to resources which can be accomplished within the configurations of spatiality and how it shapes and reproduces human interactions and relations. Van Manen (1997) described lived space as a felt space where each of us has a subjective experience of the space in which we live or exist. However, the analysis offered by Van Manen is framed in a Phenomenology of Practice approach in comparison to the Relational Phenomenology (ReP) used herein.

The discussion of the four ER modalities in this paper, however, aligns more directly with the notions of spatiality and temporality in Merleau-Ponty (1945, 1962) and his ideas about perception and embodiment. In Chapter 3 in his 1945 (1962 translation) publication Phenomenology and Perception, Merleau-Ponty discusses in detail the Spatiality of One's Own Body and Motility. He suggests there is a body image we each possess which encompasses our sense of our bodies in terms of the physical organs they constitute. However, the image is wholistic and we do not as a matter of course think of our bodies in terms of their organs. Merleau-Ponty states "If bodily space and external space form a practical system, the first being the background against which the object as the goal of our action may stand out or the void in front of which it may come to light, it is clearly in action that the spatiality of our body is brought into being, and an analysis of one's movement should enable us to arrive at a better understanding of it. By considering the body in movement, we can see better how it inhabits space (and time) because movement is not limited to submitting passively to space and time, it actively assumes them, it takes them up in their basic significance which is obscured in the commonplaceness of established situations" (1945, 1962, p. 117).

Spatiality presents challenges for distance learning (DL) and for dissertation supervision at a

distance as the tutor and SaR exist in different situations and spaces which their bodies inhabit. For instance, DL is learning using information communications technology (ICT) to link-up students and tutors located in different geographic spaces. At its worst, it can produce distant learning in the sense that communication is ineffective or reduced in terms of low, non-interactive modes of communication that isolate students in spaces that become academic silos. So, in addition to technology for distance learning, pedagogical practices must be put in place to harness the power of the technology to maintain closeness in interactions and benefit from the use of the sophisticated capabilities in today's ICT. Similar spatiality concerns need to be addressed to minimize impacts from low interaction across different spaces between tutors and SaS working on their CRPs or MBA Dissertations. Communication levels and advisement sessions must be scheduled and enacted regularly to ensure that students see their spaces as locations where learning is possible and for the tutor to understand challenges in DL spaces that prevent students from successfully inhabiting their spaces to complete dissertations.

3.6 Conceptualisation

Kranjec and Chatterjee (2010) ponder whether time could be considered an embodied concept. They go on to argue "People often talk and think about temporal concepts in terms of space. This observation, along with linguistic and experimental behavioral data documenting a close conceptual relation between space and time, is often interpreted as evidence that temporal concepts are embodied. However, little neural data is supporting the idea that our temporal concepts are grounded in sensorimotor representations. This lack of evidence may exist because it is still unclear how an embodied concept of time *should* be expressed in the brain" Kranjec and Chatterjee (2010, p. 1). Kranjec and Chatterjee (2010) do not deny the possibility of embodiment, but their statements and analysis speak of their view of a principal place for the brain in understanding embodiment and concepts which excludes the body and makes no mention of the mind. But in all fairness, research in embodiment and cognition still needs development. Nevertheless, their stance is part of what could be viewed as a Classical View, discussed below, on concepts, cognition, and categorization (Gabora, Rosch, & Aerts, 2008).

The Classical View (CV) is for our purposes a philosophical view on how concepts are represented by humans and even other species. The CV can trace its origins back to Aristotle although some research discussions of it have also been made in language studies and psychology (Smith and Medin, 2014). Typically, when concepts are considered from the CV, it is assumed that the categories representing such concepts are isomorphic in terms of properties and real-world interrelationships represented by each category. Philosophy writing on concepts and categories by such philosophers as Wittgenstein (1953) and Ryle (1949) argue for a polymorphic set of properties that can be part of representational features in each category. A polymorphic view on concepts is supported by embraced embodied, external, extended, and ecological views (sometimes referred to as the 4Es Approach to cognition).

The 4Es Approach is not mentioned here as a replacement for the Classical View per se. Rather, the intention is to highlight the need to account for an external impact on the mind's

internal conceptualizations and more specifically to highlight multivalent meanings which are attached to concepts in different epistemic communities. Furthermore, to consider how such epistemic/scientific views on concepts in research differ from those in communities of people out there in the world invited to participate in research projects and to give their information as part of data collection in research projects. The researcher needs to be attuned to such polymorphic representations of meanings in the communities where they conduct their research. The latter is meant to aid researchers to recognise and not discounting the importance of how language can embody diverse relational accounts as narratives that encapsulate contradictory lived experiences in different spaces, times, and relations of conflict, consent, and mutual benefit.

4. Discussion

Baako et al., (2022) discuss the preferred reporting items for systematic reviews and meta-analysis (PRISMA) approach and its value in systematic literature reviews as part of efforts to capture research gaps. A core feature of PRISMA is interaction that needs to take place between the researcher and bodies of knowledge to identify relevant items. The interaction is not a one-time endeavour with the researcher completing all steps and concluding the effort with all needed research items they need to consider. There is need for repetition and for advice from outside the researcher's individual efforts as noted in the herein analysis about TEMS. Steps of the research process may be repeated after talking with others and after the researcher had time to reflect and adjust their thinking to newly acquired knowledge and eventually recalibrate.

Bateson (1972) highlighted several ideas which resonate with the above focus on interaction, repetition, and recalibration, and which are of value to the TEMS framework, although the framework is unique to this paper. For example, interaction with the environment and what is in it (ideas, people, objects, previous research outputs) may require multiple investigations to be undertaken and mastered by a researcher, particularly a novice one, before useful insights cane be gained. Subsequently, recursive epistemological practices need to be embraced. In other words, a researcher should accept that they may not discover and/or understand what the research record includes on their first try. Recursive practices aid one's self-calibration and better positioning towards the area of research interest and this is where the TEMS framework is useful in that it provides four different lenses (temporality, experientiality, materiality and spatiality) which can support such recursive practices and self-calibration. However, there are some other ideas contained in Bateson (1972) worth mentioning and the one that links this research to other areas of work, and going beyond Bateson (1972), undertaken using postmodernist and poststructuralist paradigms is the notion of difference. Other philosophers, such as Foucault (1985) and Deleuze (1994), stress difference as a way of critiquing rationality. Of particular interest is the work of Deleuze (1994) that views difference not as a negation of the self and subjectivity but as method to advance human thinking and as a productive force in human evolution and the power of the mind to hold opposing ideas at the same time and across different relational networks.

The use of Relational Phenomenology (ReP) in this study highlights the importance of relations but also of difference in human thinking as background in the discussion of the four lenses in TEMS. Recognition of research gaps, articulated as differences between past, current and future research efforts, by student researchers in Capstone Research Projects (CPRs) or in research projects conducted by senior researchers is a complicated affair. Failure to get a good handle on a gap initially may be attributed to a lack of previous experience, skillset, and critical methodological training on the part of the researcher in doing such activity. However, going back to Bateson (1972) and Deleuze (1994), the need for self-calibration and trust in one-self to move forward in how one sees the world differently from others can make a difference in the impact of one's research outputs. At the postgraduate level, an up-and-coming researcher needs to make a personal commitment to an approach to research which albeit must be justified academically, it must also make sense to that person above all others.

Subsequently, sustained embodied reflection is needed to assess internal and external levels of knowledge and to develop competences as noted by Damsgaard et al., (2023) who researched about existential aspects in healthcare research. But the questioning of assumptions is not only the job of the student as a researcher (SaR). Postgraduate research methods tutors, as the "others" in the student's research project need to be mindful of how they relate to their students' efforts. In general, the "others" must also check their own diverse ways of seeing and navigating research spaces and the kind of knowledge they require students to engage with but in collaboration with each student.

Furthermore, professional students as learners in postgraduate courses may be breaming with research ideas that may not be neatly aligned with published research but situated in various places of work exemplifying practice-embedded or Mode 2 research efforts. Frequently, one's situatedness, and actual events within it, may reveal parts of the truth, as noted by Gadamer (1975), an individual may wish to pursue even more and through a variety of investigations. A richness in research methods in pursuing a topic of interest will help illuminate the researcher's understanding and quest for a truth for their own situation. Furthermore, Nowotny et al., (2018) state that Mode 1 was superseded by Mode 2 "a new paradigm of knowledge production ('Mode 2'), which was socially distributed, application-oriented, trans-disciplinary, and subject multiple accountabilities" (p. 179). A skilled tutor needs to recognize these Mode 2 research desires driven by professional interests, practice, and action research as opposed to the Mode 1 approaches driven by specific disciplinary interests for knowledge production. Professional learners, as is the case with many postgraduate students, do need the training to question what they know and how these things apply to their current research endeavours. In many ways, Mode 2 students exemplify the most difficult version of embodied reflexivity as their bodies and minds inhabit both professional and academic worlds with their unique demands. Furthermore, commitment is needed to understand the disciplinary ways of carrying out research in a particular field of study so that in the end a renewed relationship emerges between what students thought they knew when they entered a program of study and what needs to be recognized as equally important knowledge and ways of relating in their field of study.

A well-structured research methods course and other taught modules in a student's postgraduate pathway can provide a space in which, over a small period, a lot of background information is provided to help shape perceptions and conceptualizations about research areas where the student may focus for a research gap. Subsequently, tutors must be mindful of how TEMS dimensions are enacted and are made a core part of their modules as these make a difference, otherwise useful information might turn into information noise for students. It is through social interaction and enactment that diverse inputs turn into "embodied mentalisation" (Fini et al., 2023, p. 1684) and in time enhance awareness and success.

For example, in completed dissertations during this past year, students have reported benefits from having taken a research informed policy module where theories and models about Crisis & Communication and Policy Analysis and Practice were carefully covered and students played a role in their learning through self and other collaborative activities and completion of marked assignments with full feedback. Opportunities for collaborative reflections in small teams of students were provided and the application of learned concepts was emphasized thus enhancing the student's stock of knowledge and solidifying their perceptual awareness of the importance of certain concepts. Another area where taught modules and included activities made a difference was in the assignment of readings problematising epistemologies and ontologies a postgraduate student as a researcher would need to know about and engage with as part of their dissertation experience.

Furthermore, analysis of epistemological approaches and models in a taught research methods module for some of the students I have worked with in the past few years across the Social Sciences helps them hit the ground running in terms of not only their selected epistemology but also terms of their proposed and used methodology, methods, and depth of initially demonstrated content reflexivity in the proposal. But moving from perception and reflective awareness to conceptualization or written development of a research gap remains a challenge for all researchers. But embodied reflexivity and use of recursive epistemological practices (Bateson, 1972) play a role in obviating some of the challenges. The changes do not materialise immediately, however. Embodied reflexivity is not readily available, and awareness of one's taken-for-granted assumptions and perceptions of self and others can take time to render visible and in terms of what research gap one needs to pursue. So, practice and relational engagement are needed on all fronts.

The ReP view along with the TEMS framework bring together ideas that are considered critical elements of reflection in research and Higher Education. The specific attention on embodied reflexivity ER is necessary as many modules in Higher Education prompt students to become more skilled with reflection and the end of module assessments include marked sections with required reflection on how learning topics impact student lived experiences or experientiality, among others. Students need to reflect on what they have read and take iterative actions to link their perceptions about what they have read with how to conceptualize uniquely and as part of their submitted work, and as part of skills development in the workplace. This iterative, embodied reflexivity is required of students individually and in group learning. The TEMS dimensions of temporality, experientiality, mutuality, and spatiality highlight the necessity of a more embodied sense of perception to account for

internal and external sources of information along with embedded and persistent forms of relations which may exclude some points of view due to established ways of knowing and doing things in the world.

But challenges persist in the application of the four lenses in TEMS. For instance, temporality is not the same as the chronological passage of time as noted by Ulla and Larsen (2021). Diverse past experiences and memories are carried forward in research interactions within groups and between a research mentor or tutor and a postgraduate student. It is just as important to share in the present some of those memories that shape perspectives and the selection of epistemological approaches. Research training ought to include discussions that aim to in-form and enhance a researcher's ability to navigate the external world with its multi-layered pockets of knowledge in terms of relational conflict because of failing to understand another person experiences and position. Reflexivity in action is not something that can be transcended from this physical world to some other place beyond it completely by an objectivist stance, i.e., subjective engagement is needed where the researcher steps out into the world of research to collect and analyse empirical data and/or at a minimum synthesize existing knowledge to say something new and unique about it from his or her interested (not biased) point of view. The latter is part of embodiment and enactment students as researchers or SaRs must demonstrate in CRPs and such embodied processes can bring about challenges in achieving a timely balance for students to complete all research processes for their CRPs. A study by Chappell et al., (2023) stress the importance and challenges in developing creativity in courses. They argue that spatiality and materials used make a difference in creativity as does the careful selection of alternative pedagogies which de-centre western approaches.

5. Conclusions and Future Research

The herein study has brought together four lenses, which although studied individually in other studies, have not been assembled in one framework to propose study of completion of research projects by international students. However, stated challenges from this study and elsewhere form the ground for moving forward in new research some of which could include home students. Having noted challenges signified in TEMS and elsewhere, empirical research is not the only way to engage and make a productive contribution. A research project can be conceptual using secondary research, and it can contribute through the development of a new framework and thematic analysis.

But embodied reflexivity (ER) can still aid students as conceptual researchers reflect on their assumptions over time or what they take for granted as they engage with research knowledge utilization (RKU). Individuals and groups attempt to understand the world and their place in it and embodied reflexivity can help make sense of how to go about ascertaining research gaps (or what we do not know and would like to know) as part of CRP work. Although individual and group understanding is embedded within cultural webs of knowledge, the individual nature of a CRP necessitates clarity on the part of the student in terms of their perceptions of the stock of knowledge and state of research in a research domain to ascertain

a meaningful research gap of importance to them and to engage with it productively.

As noted, the reflexivity construct has had many definitions across different research domains. Embodied reflexivity contextualised within a Relational Phenomenology (ReP) Philosophical Perspective, celebrates relational influences between the brain, the mind, and the lived body in the world. Interactions between mind-body-environment take place and these need to be investigated further by researchers at diverse levels, including classroom environments, tertiary or online. Additional research is needed in terms of how different student lived experiences in varied stages of CRP completion come about and particularly to better understand challenges and enablers for embodied reflexivity in research. Mode 1 (theory-motivated) and Mode 2 (practice-motivated) research efforts, utilizing a diverse set of epistemological perspectives, are to be respected and encouraged equally in both postgraduate and undergraduate completions of CRPs so long as the above align with the selected research aim and enhance reflexivity as a valued deliverable for academic and career progression.

The four-partite TEMS framework offers opportunities to witness the unfolding of embodied reflexivity and ways of knowing embedded in a relational view of the lived world. All four areas of the TEMS framework need to be taken forward in future research projects. The paper's understanding of ER is offered through Relational Phenomenology (ReP) which recognizes the power of the brain but at the same time, it argues that the brain is part of a relational infrastructure in human knowledge acquisition inclusive of minds, bodies, and the environmental milieus which change over time.

Further research will add to our understanding of ReP and to a new research question: is embodied reflexivity a friend or foe in the completion of research projects? For now, we respond that Embodied Reflexivity is a friend to the researcher, but a demanding one. However, ER, as portrayed herein using the four dimensions of TEMS, is a friend in that it offers four multi-layered lenses of engaging with a selected research field. As mentioned, it is a needy friend and one that demands a lot in terms of commitment to reflection in action and reflection on action, but one that offers many rewards in terms of the richness it provides for the lived experiences of those who pursue its benefits. ER decentres the brain, but it does not argue it away, although it argues for the richness of insight the mind offers in Social Sciences research using ReP. ER can be a complex placeholder for varied experiences and lessons student researchers acquire as part of their efforts to complete postgraduate research projects and can open doors for the development of research and information management skills needed to prosper in chosen professional spaces and relations within such spaces and the Digital Society, over time and in accumulating rich experiences to inform an emerging professional person's place in the world.

References

Affifi, R. (2024). Aesthetic knowing and ecology: cultivating perception and participation during the ecological crisis. *Environmental Education Research*, 30(7), 1041-1060. https://doi.org/10.1080/13504622.2023.2286933

Aunger, R. (2004). *Reflexive Ethnographic Science*. Alta Mira Press.

Baako, I., Alhassan, H., & Gidisu, P. (2022). Understanding and spotting research gaps through a systematic literature review. *International Journal of Research and Innovation in Social Science (IJRISS), 6(*3), 549-554.

Bales, R. F., & Parsons, T. (1955). *Family: Socialization and Interaction Process* (International Library of Sociology). Routledge.

Bateson, G. (1972). *Steps to an Ecology of Mind*. Ballantine Books: New York.

Bertens, H. (1995). *The Idea of the Postmodern: a history*. Routledge: London and New York.

Berthoz, A., & Petit, J. L. (2008). *The Physiology and Phenomenology of Action*. Oxford University Press.

Bourdieu, P. (1990). *The Logic of Practice.* Cambridge, UK: Polity Press.

Bourdieu, P. and Wacquant, L. J. D. (1992). *An Invitation to Reflexive Sociology.* Cambridge, UK: Polity Press.

Bourdieu, P. (1993). *The Field of Cultural Production*. Columbia University Press.

Bourdieu, P. (1997). *Outline of a Theory of Practice*. Cambridge University Press.

Bourdieu, P. (2004). *Science of Science and Reflexivity* (translated by Richard Nice). Polity.

Brannick, T., & Goglan, D. (2006). Reflexivity in Management and Business Research: What Do We Mean? *The Irish Journal of Management* (January), 143-160. Retrieved from https://web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=1&sid=a459d437-c7c5-4e 78-a846-e8cddb788b98%40redis

Chappell, K., Witt, S., Wren, H., Hampton, L., Woods, P., Swinford, L., & Hampton, M. (2023). Re-Creating Higher Education Pedagogy by Making Materiality and Spatiality Matter. *Journal of Creative Behavior,* 1-21. Retrieved from https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/jocb.619

Charmaz, K. (2000). Grounded Theory: Objectivist & Constructivist Methods. In Denzin, N & Lincoln, Y.S. (Eds.), *Handbook of Qualitative Research*, 2nd edition (pp.509-535). Thousand Oaks: Sage.

Charmaz, K. (2002). Stories and Silences: Disclosures and Self in Chronic Illness. *Qualitative Inquiry 8*, 302- 328 [online]. Retrieved 17 November 2008 from http://qix.sagepub.com/cgi/reprint/8/3/302

Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London: Sage publications.

Clark, A. (1997). *Being There: Putting Mind, Body, and World Together Again*. MIT Press.

Cohen, J. (2012). Levinas and the Problem of Phenomenology. *International Journal of Philosophical Studies*, *20*(3), 363-374. https://doi.org/10.1080/09672559.2012.699309

Costall, A. (2004). From Darwin to Watson (and Cognitivism) and Back Again: The Principle of Animal-Environment Mutuality. *Behavior and Philosophy*, *32*, 179-195.

Damsgaard, J. B., Pilegaard, M., & Brinkmann, S. (2023). Embodied relational research: How can researchers' competences in exploring existential aspects be enhanced? *Scandinavian Journal of Caring Science*, *37*, 424-433. https://doi.org/10.1111/scs.13125

De Beauvoir, S. (1948). *The Ethics of Ambiguity* (English version). Philosophical Library.

Deetz, S.A. (1996). Differences in approaches to organizational science: Rethinking Burrell and Morgan and their legacy. *Organization Science, 7*(2), 191-207. https://doi.org/10.1287/orsc.7.2.191

Deleuze, G. (1994, 1968). *Difference and Repetition*, Paul Patton (trans.). New York: Columbia University Press.

Démuth, A. (2013). *Perception Theories*. Translated by Ing. Danica Chames and Mgr. Stanislava Novotová. Krokow.

Dobson, P., Jackson, P., & Gengatharen, D. (2013). Explaining broadband and adoption in rural Australia: Modes of reflexivity and the morphogenetic approach. *MIS Quarterly, 37*(3), 965-991. https://doi.org/10.25300/misq/2013/37.3.13

Dumouchel, P. (2019). The Ecology of Mind. *Philosophies, 4*(12), 1-9. https://doi.org/10.3390/philosophies4020012.

Elliott, H., Ryan, J., & Hollway, W. (2012). Research encounters, reflexivity, and supervision. *International Journal of Social Research Methodology, 15*(5), 433-444. https://doi.org/10.1080/13645579.2011.610157

Fini, C., Bardi, L., Bolis, D., Fusaro, M., Lisi, M., P., Michalland, A. H., & Era, V. (2023). The social roots of self-development: from a bodily to an intellectual interpersonal dialogue. *Psychological Research, 87,* 1683-1695. https://doi.org/10.1007/s00426-022-01785-6

Foucault, M. (1980). *Power knowledge: Selected interviews and other writings* (C. Gordon ed). New York: Pantheon.

Gabora, L., Rosch, E., & Aerts, D. (2008). Toward an ecological theory of concepts. *Ecological Psychology, 20*(1), 84-116. https://doi.org/10.1080/10407410701766676

Gadamer, H.G. (1975). *Truth and Method. Edited and translated by G. Barden and J. Cumming*. New York: Seabury Press.

Gallagher, S. (1986). Lived body and environment. Research in Phenomenology 16: 139-170. *Reprinted in Phenomenology: Critical Concepts in Philosophy* Vol II. D. Moran and L. Embree (eds.), London: Routledge, 2004.

Gallagher, S. (2005). How the body shapes the mind. *Philosophical Psychology, 20*(1), 127-142. https://doi.org/10.1093/0199271941.001.0001

Gallagher, S. (2010). Merleau-Ponty's Phenomenology of Perception. *Topoi, 29*, 183-185.

Gallagher, S. (2018). New mechanisms and the enactivist concept of constitution. Preprint version. Please consult the original in M. P. Guta's (Ed.), *The Metaphysics of Consciousness* (207-220). London: Routledge,

Giroux, H. (1988). Critical theory and the politics of culture and voice: Rethinking the discourse of educational research. In Sherman & R. Webb (Eds.), *Qualitative Research in Education: Focus and Methods* (pp. 190-210). New York: Falmer.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In NK Denzin and YS Lincoln (Eds.), *Handbook of Qualitative Research*, 105-117.

Harding, S. (1992). After the Neutrality Ideal: Science, Politics, and "Strong Objectivity". *Social Research*, *59*(3), 567-587.

Habermas, J. (1971). *Knowledge and Human Interests* (J. Shapiro translation). Boston: Beacon.

Habermas, J. (1973). *Theory and Practice* (T. McCarthy translation). Boston: Beacon.

Hess-Biber, S. N. (2012). *Handbook of Feminist Research: Theory and Praxis* (2nd ed.). SAGE.

Hegel, G. W. F. (1807). *Phenomenology of Spirit* (A.V. Miller translation). Motilal Banarsidass Publishers Private Limited. Delhi.

Heidegger, M. (1927). *Being and Time*. Wiley-Blackwell.

Hill, J., Nelson, A., France, D., & Woodland, W. (2012). Integrating Podcast Technology into Student Learning: A Reflexive Examination. *Journal of Geography in Higher Education, 36*(3), 437-454. https://doi.org/10.1080/03098265.2011.641171.

Holmes, P., Cockburn-Wootten, C., Motion, J., Zorn, E.T., & Roper, J. (2005). Critical reflexive practice in teaching management communication. *Business Communication Quarterly, 6*(2), 247-257. https://doi.org/10.1177/108056990527666.

Huhn, T. (2004). *The Cambridge Companion to Adorno*. Cambridge University Press.

Husserl, E. (1901). *Logical Investigations* (J. N. Findlay translation). Routledge: London and New York.

Jensen, R. T., & Moran, D. (2013). *The Phenomenology of Embodied Subjectivity*. Springer.

Johnson, P., & Duberley, J. (2003). Reflexivity in Management Research. *Journal of*

Management Studies, 40(5), 1279-1303. https://doi.org/10.1111/1467-6486.00380.

Kincheloe, J. L., & McLaren, P. L. (1994). Rethinking critical theory and qualitative research. In NK Denzin and YS Lincoln (Eds.), *Handbook of Qualitative Research*, 138-157. https://doi.org/10.1007/978-94-6091-397-6_23

Küpers, W. M., & Pauleen, D. (2015). Learning Wisdom: Embodied and artful approaches to management education. *Scandinavian Journal of Management, 31*, 493-500. https://doi.org/10.1016/j.scaman.2015.08.003.

Leonardi, M. (2010). Digital materiality? How artifacts without matter, matter. *First Monday, 15*(6). Retrieved from https://firstmonday.org/ojs/index.php/fm/article/download/3036/2567

Lynch, M. (2000). Against Reflexivity as an Academic Virtue and Source of Privileged Knowledge. *Theory, Culture & Society, 17*(3), 26-54). https://doi.org/10.1177/02632760022051202

Mara, P. E. A. (2011). The Capable Human Being and the Role of Language in Paul Ricoeur's Hermeneutical Philosophical Anthropology, *Kritike, 5*(1), 51-61. https://doi.org/10.25138/5.1.A.4

Merleau-Ponty, M. (1962). *Phenomenology of Perception, Trans*. Colin Smith. London: Routledge & K. Paul; New York: Humanities Press (31 May 2014, Kindle Edition).

Merleau-Ponty, M. (2012). *Phenomenology of Perception*, Trans. Donald A. Landes. London and New York: Routledge. Prior translation, 1996, Phenomenology of Perception, Trans. Colin Smith. London and New York: Routledge. From the French original of 1945.

Merleau- Ponty, M. (2002). *The World of Perception* (Oliver Davis, Translator). Routledge.

Maton, K. (2002). Pierre Bourdieu and the Epistemic Conditions of Social Scientific Knowledge. *Space & Culture, 6*(1), 52-65. https://doi.org/10.1177/1206331202238962

Moon, T. (2008). Reflexivity and its Usefulness when Conducting a Secondary Analysis of Existing Data. *Psychology & Society, 1*(1), 77-83. https://doi.org/10.5153/sro.3370

Moran, D. (2012). *Husserl's Crisis of the European Sciences and Transcendental Phenomenology. An Introduction* (Translation). Cambridge.

Noe, A. (2004). *Action in Perception*. Cambridge, MA: MIT Press.

Nowotny, H., Scott, P., & Gibbons, M. (2023). INTRODUCTION: 'Mode 2' Revisited: The New Production of Knowledge. *Source: Minerva, 41*(3), 179-194.

Prendeville, B. (1999). Merleau-Ponty, Realism and Painting: psychophysical space and the space of exchange. *Art History, 22*(3), 364-388.

Racher, F. E., & Robinson, S. (2003). Are Phenomenology and Postpositivism Strange Bedfellows? *Western Journal of Nursing Research, 25*(5), 464-81. https://doi.org/10.1177/0193945903253909

Ricoeur, P. (1992). *Oneself as Another* (Translated by Kathleen Blamey). The University of Chicago Press.

Rich, S., Graham, M, Taket, A. & Shelley, J. (2013). Navigating the terrain of lived experiences: the value of lifeworld existentials for reflective analysis. *International Journal of Qualitative Methods*, *12*, 498-510. https://doi.org/10.1177/160940691301200125

Rosenberg, A. (2013). Reflexivity, uncertainty, and the unity of science. *Journal of Economic Methodology, 20*(4), 429-438. https://doi.org/10.1080/1350178X.2013.859413.

Ryan, T. G. (2005). *The reflexive classroom manager.* Temeron Books/Detselig, Publications. Calgary, AB. Canada.

Sandywell, B. (1996). *Reflexivity and the Crisis of Western Reason: Logological Investigations Volume I*. Routledge.

Shusterman, R. (2008). *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*. Cambridge University Press.

Schwartz, M., Schwartz, E., & Moskalewicz, M. (2017). Putting it all together: How temporality is core to the phenomenology and neurobiology of mania. *European Psychiatry, 41 Supplementary*, S437. https://doi.org/10.1016/j.eurpsy.2017.01.401.

Smith, E. E., & Medin, D. L. (2014). *Categories and Concepts*. Harvard University Press.

Sweetman, P. (2003). Twenty-first Century Dis-ease? Habitual Reflexivity or the Reflexive Habitus. *The Sociological Review*, *51*(4), 528-549. https://doi.org/10.1111/j.1467-954X.2003.00434.x

Talero, M. (2006). Merleau-Ponty and the Bodily Subject of Learning. *International Philosophical Quarterly, 46*(82), 191-2003. https://doi.org/10.1177/0263276416688542

Tsekeris, C., & Katriversis, N. (2008). Reflexivity in Sociological Theory and Social Action. *Philosophy, Sociology, Psychology and History, 7*(1), 1-12.

Ulla, B., & Larsen, A., S. (2021). Humble Hopes in Mentorship and Education: Thinking with Temporality. *Education Sciences, 11*(10), 635-10. https://doi.org/10.3390/educsci11100635

Valvi, A., & Fragkos, K. C. A Review of Reflexivity in Management Theory (March 18, 2013). Retrieved from https://ssrn.com/abstract=3281392.

Varela, F. J. et. al. (1991 and 2016). *The Embodied Mind, Cognitive Science and Human Experience* (Revised Edition). Cambridge: MIT Press.

Wacquant, Löic J. D. (1992). Toward a Social Praxeology: The Structure and Logic of Bourdieu's Sociology. In *An Invitation to Reflexive Sociology*, Pierre Bourdieu, and Löic J.D. Wacquant, 1-59. Cambridge: Polity.

Whitehead, J. (2014). Research Memoir: Enacting Educational Reflexivity in Supervising

Research into Creating Living-Educational-Theories. *Educational Research for Social Change (ERSC),* *3*(2), 81-93. Retrieved from http://ersc.nmmu.ac.za/articles/Vol_3_No_2_Whitehead_pp_81_to_93_November_2014 .pdf

Whittgenstein, L. (1953). *Philosophical Investigations* (translated by Anscombe, G. E. M.) Blackwell: UK.

Yang, Y. (2013). Bourdieu, Practice and Change: Beyond the criticism of determinism. *Educational Philosophy and Theory,* *46(*14), 1522-1540. https://doi.org/10.1080/00131857.2013.839375

Zhang, Z. (2006). What is Lived Space? *Ephemera reviews theory & politics in organization,* *6*(2), 219-223. Retrieved from https://ephemerajournal.org/sites/default/files/6-2zhang.pdf

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