5.0 - CONCLUSIONS

5.1 **SUMMARY**

This work has put forward (and argued for) a challenging sequence of proposals about the relationship between knowledge, certainties, uncertainties, and ideology:-

- that **certainties and uncertainties** are two fundamental kinds of knowledge (but that we have become so immured by positivism that we are almost blind to uncertainties);

- that knowledge investments can be made in both uncertainties **and** certainties (and so entire domains - like Science, or History - can be viewed as **negative capitals**);

- that there are three (past, present & future) types of possibility and choice, and hence three '**Keatsian uncertainties**';

- that these are all locked into **networks of knowledges**, controlled by sets of **taboos** and **fetishes** about what can/cannot be considered 'knowledge' - a particular **ideology** defines the allowable *patterns of knowledge*;

- that ideologies define what kinds of **choices** (uncertainties), what kinds of **knowledges** (certainties) and what kinds of **knowledge activities** are possible - and so Mintzberg's Ten Schools of strategic management are, essentially, **ideologies**;

- that there are five main logics of knowledge (*undifferentiated*, *pragmatic*, *institutionalised*, *dialectic*, and *modern*), which can be thought of as **ideological templates** (the two dominant ones are *dialectic* and *modern*); and

- that visualising ideologies is a good first step towards **emancipation** - being **in control of** ideology, rather than being **controlled by** it.

Ideology and *politics* are two unspoken words in much business theory: the conflicting ideologies embedded in a company's day-to-day knowledge activities end up aggregated as '*organisational culture*' - while differences in *power* typically only appear as imaginary, immoveable, external '*industry forces*'. Yet in practice, the *craft* of

management is a tricky combination of *Realpolitik* (constructing awkward compromises) and *collaboration* (delegating, coordinating, and reconciling), which rely on 'tacit knowledge' of both politics and ideology.

What are we to make of their absence? Surely to assert (as the younger Wittgenstein did) that *"what we cannot speak about, we must pass over in silence"* is simply to admit that our own ideology has us in chains? I think this can be understood as being the result of business theorists' ongoing attempt to reduce the whole discipline to a 'science' - but which then ran into opposition from the field's more sociological gate-crashers.

The Knowledge Management debate over knowledge can therefore be seen as a fight over theoretical control over *the conceptual means by which people collaborate* - and without a way of bridging between such very different ideologies as exhibited there, only one can win (at any one time). However, I think that we can do **much** better than a 'fight-to-the-death' epistemological approach. By visualising individual ideologies, we can come not only to understand their roots (**deconstruction**), but also to apprehend the chains that hold them in place - as well as to see how those chains may be released (**reconstruction**).

All the same, this is really not to say that the kind of epistemological **emancipation** described here would lead to (literal) 'empowerment': life will always have power differentials. Similarly, bespoke mindsets will always be useful in focused contexts - and so we will always face issues of both **incommensurability** and **incompatibility.** Perhaps the most interesting question is this: would power manifest itself in de-ideologised collaborations more *transparently* and *honestly*? My suspicion is that it might *have to*.

Finally, I hope that this work will persuade you that uncertainties are not a 'ghost in the machine' to be explained away by clever positivistic rhetoric, but rather something for which we should all try to develop a "negative capability". Keats talked admiringly of Shakespeare - but we might extend this admiration to include Francis Bacon, who opined that *"If a man will begin with certainties, he shall end in doubts, but if he will be content*

to begin with doubts, he shall end in certainties."[1]

5.2	**FUTURE WORK**

Etymologically, '*epistemology'* is 'the study of *episteme*' (of certain knowledge) - yet we have no satisfactory word for 'the study of uncertain knowledge', even though this is apparently what many of the loosely connected business knowledge literatures (like Knowledge Management and Knowledge Frameworks) reviewed here particularly strive to do. However, as *uncertain knowledge* seems to subsume *certain knowledge* within its bounds, perhaps the best candidate is the archaic term '**gnosiology**' (the study of [*all*] knowledge). Still, even if you disagree with some (or all) of my conclusions (or see them, as Gourlay (2002)[2] sees Scharmer (2000)[3], as deriving from "speculative philosophy" (p.4)), I hope that my attempt to assemble the diaspora of business knowledge literatures under a single roof will galvanise you into forming your own opinions.

Generally speaking, the future work most obviously indicated here would be the practical task of visualising **many more** ideologies using the toolkit as described. Other possible (more theoretical) projects might include: reconciling the theory with Lincoln & Guba's (1985)[4] *inquiry paradigms* (positivism, postpositivism, critical theory, & constructivism); reconciling it with Aristotle's (numerous) conceptions of knowledges; reconciling it with Johnson & Scholes' (2002)[5] "Cultural Web"; or perhaps tracing out the changes in individual authors' ideologies across their lifetimes (such as Wittgenstein, who moved from über-certainty to über-uncertainty). Incidentally, while writing this, my personal "network of knowledges" has broadened (from an almost exclusively modern mindset), to

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[1] **Bacon, Francis** (1605) "The Advancement of Learning", Book 1, v, 8.
[2] **Gourlay, Stephen** (2002) "Tacit knowledge, tacit knowing or behaving?", OKLC 2002, Athens.
[3] **Scharmer, C.O.** (2000) "Organizing around not-yet-embodied knowledge". Chapter 2 in: **von Krogh, G.; Nonaka, I; Nichiguchi, T. (eds)** "Knowledge Creation. A source of value". Basingstoke and London: Macmillan Press. pp.13-60.
[4] **Lincoln, Y.S; Guba, E.G.** (1985) "Naturalistic Inquiry". Newbury Park, CA: Sage.
[5] **Johnson, G.; Scholes, K.** (2002), Exploring Corporate Strategy, 6th edition, London: Financial Times Prentice Hall

appreciating the extraordinary influence of dialectic knowledges throughout our affairs. Further, the relationship between *emotions* and *knowledge* (discussed by Spender (2002)) might also usefully be examined - although Bertrand Russell (1927)[6] saw emotions as a "hindrance" in philosophy, they may simply be the side-effects of dialectic negotiation i.e. when you are forced to change your mind.

Teaching is an area where a poor grasp of knowledge differences can lead to problems: Fenstermacher (1994)[7] judges that "*[if] educational policy is grounded in weak or erroneous assumptions about the nature of knowledge, there is a high likelihood that it will fail to address the problems and aspirations of education in positive and ameliorative ways*".(p.2) Few apparently comprehend the important differences between the knowledge logics described here - perhaps schools or universities should aim to teach foundational conceptual tools needed to **bridge** between dialectic worldviews and modern mindsets [Interestingly, Pallas (2001:9)[8] openly flags the need for such tools].[9] What would such an edgy, multi-epistemic education be like? It seems that no-one really knows. Yet there is opposition to even discussing such an idea: Fenstermacher further notes[10] that *"Educational researchers who subscribe to the conventional science view of research have shown skepticism and even hostility towards the possibility of a knowledge type that is not only different from formal knowledge, but perhaps more powerful for understanding and advancing teaching than formal knowledge has been."* (p.50) Clearly, *episteme* has powerful defenders.

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[6] **Russell, Bertrand** (1951) [1927] "An outline of philosophy", George Allen & Unwin Ltd. Quoted in: **Kafkalides, Zephyros** (2000) "Knowledge as an emotional and intellectual realization of the unconscious" *Neuro Endocrinology Letters* Vol 21, No 4, 2000. http://www.12net.gr/kafkalides/gnosiology.html

[7] **Fenstermacher Gary D.** (1994), "The Knower and the Known: The Nature of Knowledge in Research on Teaching"

[8] **Pallas, A. M.** (2001) "Preparing education doctoral students for epistemological diversity". Educational Research, 30(5), pp.6-11

[9] Though it should be noted that Pallas (2001) also warns of a possible "Big Bang" (p.11), as differing underlying epistemologies (more specifically, *ideologies*) become more obviously visible within graduate schools.

[10] Note that Fenstermacher's comment relates to *techne*, or 'practical knowledge': within the framework of Chapter Two, *techne* might well be viewed as 'private/negative knowledge'.

One might also consider developing an epistemologically sound **psychometric test** (similar to Myers-Briggs[11]) to determine an individual's (or a group's, or perhaps an entire company's?) network of knowledges. This test might also find use as a helpful diagnostic for children (or adults) with learning problems, or as a general teaching aid - though Fenstermacher has described this latter part in principle, I hope that the ideas described here might prove capable of being operationalised (and found to be useful) in both classroom and elsewhere.

In **Cognitive Science** in general (and in knowledge representation and reasoning (KR&R) in particular), the ideas here might well prove useful in automatic text comprehension - that is, by helping to infer the structure of arguments, stories, and documents. Once more ideologies have been hand-classified, this process might become easily automated - possibly even to the point of developing an "ideological search engine".

One fascinating possible direction involves developing an **epistemologically sound scientific language,** where all the fundamental concepts (like *scenario*, *theory*, *model*, etc) are defined not with reference to current dictionaries, but solely in terms of the theoretical principles of the modern logic of knowledge described here. Authoring texts in such a language should enable instant sharing of scientific papers in nearly all natural languages (via machine translation), as well as automated highlighting of ideological imbalances, and vastly accelerated computer comprehension. Though this would be what Midgley (1989) characterises as a "slum-clearance" (p.27) strategy (in "the city of organized thought" (pp.23-29)), such a language might enable the vast majority of scientists to achieve a consistently high level of expressive precision in their writing. Even though Gerome (2001)[12] seems to think that this could be extended into a kind of universal "interoperability" via formal languages, I concur with Midgley that "the terms and thought-patterns used in the physical sciences cannot be literally extended to cover all

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[11] **Briggs-Myers, Isabel; Myers, Peter** (1980) "Gifts Differing" Consulting Psychologists Press.
[12] **Gerome, Paul** (2001) "General Gnoseology a Piercian Triad", Workshop on Philosophy of Formal Languages, ITU-T- Study Group 10, Geneva, 15 September 2001. Available online as: http://www.itu.int/itudoc/itu-t/workshop/philosop/gi_gnoss_pp7.ppt

other topics", (p.27) though making just those universally accessible would be an interesting exercise in itself.

Finally, the framework's view of *certainties-as-necessary-fictions* seems a good starting point for **unifying** an exceptionally broad range of themes and academic disciplines, where the kind of visualisation described here should be a substantial first step towards constructing more ideologically-neutral interdisciplinary knowledge frameworks. In the end, by providing a reusable toolkit to help researchers visualise, deconstruct, and reconstruct ideologies in a wide variety of texts, my main hope is that the simple, emancipatory idea of being **in control of ideology** (rather than being *subjugated by it*) may take a more prominent role in mainstream academic practice. Is that too optimistic?