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SIGNIFICANT MOMENTS IN THE DEVELOPMENT OF AUSTRALIAN LOGIC: IN CRITICAL APPRECIATION OF LEONARD GODDARD'S MAJOR CONTRIBUTION

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Contemporary logical research in Australia owes much to Len Goddard. More than anyone else, he started up logical research in Australia, set logic on a distinctive and productive research path, and enabled it to flourish, freely, in a substantially hostile environment.([1])

The main motors of positive change were the Armidale school, assembled and directed by Goddard in the mid-sixties from within the Philosophy Department at the University of New England, Armidale, NSW, and the Australasian Association for Logic, forged there, which first convened at Armidale in 1965. Goddard was the prime mover in all this; in particular, it was he who pulled the short-lived but significant school together. The story of the Armidale school and its subsequent influences, critical in explaining the present spread and disposition of logic in Australia, has been told before, especially well by Goddard himself.([2]) But there are some features of that logico-philosophical school, its range of work, and its ethos that have not been brought out or sufficiently stressed.

Before the rise of the Armidale school there had been only a few sporadic and isolated exercises in logical research in Australia. With the school all

([1]) More piquantly, his discontinuous academic career in Australia spanned the rise and fall of logic as a purer science, much of what remains having been captured by information sciences. The more complex story of marked decline has yet to be told. Note that the term logic is used in this article in its wider traditional sense, not, for the most part, in its contemporary contraction. Thus logic comprehends philosophical logic, 'informal' logic, and much of metaphysics. Thus too most of Len Goddard's philosophical investigations fall under logic.

([2]) Goddard 1992; also Grave 1983, Routley 1983, Martin 1992. Hereafter I follow a standard convention, of referring to Len Goddard by his surname, rather than more casually by 'Len' ('Leonard' is a documents-only name). To make the text more friendly to what it celebrates, please substitute (or imagine already substituted) 'Len Goddard' for 'Goddard' almost everywhere.

that changed; substantial collaborative research efforts began.([3]) Before that there had been nothing similar in kind, not merely in Australia but in the whole Antipodes: there was no previous school or similar systematic research endeavour.

It should be stressed that the coming together of the Armidale school was an extraordinary piece of fortune, due to an unlikely concatenation of circumstances, now unlikely to be repeated given the prevailing overcast climate of Australian higher education (on which more below). Nor was anything quite the same achieved again after Armidale, though an effort was made to continue the program under Hamblin's direction in Sydney.([4]) A different sort of school was pieced together, with some of the same people as in Armidale, almost a decade later in Canberra, but it was a school without a teaching program, and, while rich in faculty, relatively poor in students. The luck with Armidale (and also Canberra to some extent) lay not merely in available staff and adequate finance for the exercise (what Hamblin lacked) but, at least as much, in the character and calibre of students available. Here academic mobility and academic-student relations mattered very materially.([5])

Len Goddard not only initiated wider logical research in Australia, but further he had a major influence on the character and ethos of that investigation; for example, its easy, free-wheeling, unauthoritarian, undogmatic character. He encouraged features of what would now be regarded as logical pluralism of a relaxed and far-reaching kind. Not only were there many logical systems and frameworks worth investigating, some of course of more philosophical or technical merit than others; but more, he freely conceded that there may not be a unique correct one, or absolutely right way, among them. Nor, by contrast with common practice elsewhere, did he discourage heterodox logical work, even such unorthodox thought as that prevailing

([3]) Some linked with researchers abroad, e.g., Londey and Hughes on variations upon quantification theory and also Montgomery and Routley on implications and modalities. Montgomery, who was in Christchurch at the time, had learnt his logic by the Prior students-teach-the-class-below method, a nice medieval practice no longer approved by respectable universities. Prior, by the way, leaded no school in Christchurch, but simply a small succession of high-class students.

([4]) See Goddard op. cit., Martin op. cit.

([5]) For example, many of the students at Armidale arrived through acquaintance with Routley at Sydney, and later in Canberra some of the trickle of students were inducted by Rennie, who proved first-rate at interesting intelligent people in logic.

classical ways might be seriously defective, even downright wrong. To the contrary, he early thought that satisfactory resolutions of a range of paradoxes and puzzles should be sought outside entrenched ways; but he did not try to impose his own ideas or interests. In his own research at the time, which was (rather un-Australianly) nonconfrontational, he was certainly looking for resolutions of logical and semantical paradoxes *outside* formal classical logic —though by way of what had long stood at the peripheries of British logical investigations (from Mill through Russell and Ryle), namely significance theory and its contextual enlargements. More generally, there was no attempt, with Goddard as guide and director, to pull or push researchers into some standard line; on the contrary, they were encouraged to roam.

That generous liberal ethos, that free and open atmosphere, has persisted in Australian logic. There has been little strait-jacketing of logic, or insistence upon some school or party line. There is now an extensive spread of ideologies, ranging from classical fundamentalism, in the west, to dialethic radicalism in eastern Australia, and so far wide tolerance of other lines.

In this respect the Armidale school and subsequent logic groups differ conspicuously from other Australian schools, such as the Sydney Andersonianism. Certainly Australia's most prominent philosophical school so far, that gathered around Anderson in Sydney, was run in a tight and —surprisingly given Anderson's acclaimed liberal stance— rather authoritarian way, where deviation from school lines was not always tolerated. Those who stepped beyond approved lines, decided primarily by Anderson himself, were socially ostracized, did not obtain appointments or advancement, or were sent to unfavourable or remote places, and so on. As Srzednicki reports, with little exaggeration,

> the Sydney department was largely monolithic under the rule of John Anderson, who believed that it was incompetent to disagree with his position. That is literally true. I had a stand-up fight with him when still a student attending a Sydney conference. Allan Stout was introduced there as a counterweight to Anderson, but while somewhat influential was not effective in that role.(6)

Supplied therewith is one bundle of reasons why the Andersonian school, by contrast with that at Armidale, does not conform particularly well to the

(6) Foreword in Srzednicki and Wood 1992, p.x.

pattern of regional philosophies it would be good to see evolving and flourishing. Accordingly no-one should be over-enthusiastic about Passmore's magnanimous offer of Andersonianism as the very sort of development advocated under regional philosophy:(7) it was not. Yet that Sydney school had many positive features, and remains one of the few conspicuous landmarks in Australian philosophy.

Before the sixties Australia may have looked, as much of Africa still does, like a logical backwater, which Northern forces of illumination and intellectual development had not reached, for various reasons going beyond mere geographical isolation. While there are threads of truth in the backwater theme, there is also a different perspective: namely, Australia remained a scene of resistance to classical logic and its philosophical inadequacies and crudity. This resistance, which often became a resistance to logic —owing to a persistent and continuing conflation of logic with classical logic— manifested itself in different ways in the two main warring spheres of philosophical influence in pre-sixties Australian philosophy, Sydney and Melbourne. In the Sydney Andersonian sphere, there was heavy opposition to Russellian logic and like logically-based programs. As Anderson 'remarked in passing ... one reason why the doctrine of "material implication" is a philosophical blind-alley is just its ignoring of ... *connection*; implication then becomes quite arbitrary or "magical" —diverted from inquiry'. Instead Aristotelian logic was regarded as in principle adequate, and, apart from a few loose ends, as essentially a closed and completed theory, in good Kantian fashion. Logic could be safely set aside, an atypical though central region of philosophy where main problems had been solved.(8) In the Melbourne sphere, classical logic was resisted or ignored, first for idealist reasons —for instance, Russellian logic was an integral part of yet another avant garde realist program,(9) and better, as Bradley and others had

(7) Passmore 1992, pp.14-15, referring to Sylvan 1985. More on regional philosophy below.

(8) Only later did a small Andersonian program, to close some gaps classical enterprise had revealed in the splendid Aristotelian structure, get under way. See, e.g., Rybacks 1986-87. On Anderson's antipathy to 'the bent of much modern logical theory' and to material implication in particular, see Baker 1986, p.77.

(9) Specifically that of the new realists, led in Britain by Moore and Russell, who around the turn of the century pushed over prevailing idealism. Of course Russell's position in the first decades of the century was more complex than any straightforward metaphysical realism, and was racked by internal tensions: in particular, with his heavy commitments to logical atomism, sense data and logical constructions, Russell was not merely an extravagant-

maintained, it did not capture but distorted basic logical notions— and subsequently for very different Wittgensteinian or ordinary-language reasons.([10]) Gasking and others there reiterated the decadent Wittgensteinian theme that 'work in formal logic was philosophically irrelevant'.([11])

In fact there was opposition to classical logic from its very inception, and its reception was hampered by a variety of paradoxes that came in its train. No philosopher worth his or her salt has been really satisfied with it, on its own. These are among the reasons why, despite considerable propaganda effort (directed against considerable academic inertia), classical logic did not gain a recognized place even among the programs of many Northern universities until after World War II, though leading features of the logic had been worked out almost half a century earlier. However apparently reasonable alternatives to it were not devised until the late sixties, by which time classical logic *had* become widely entrenched (a characteristic ring of defences devised, a plausible account found to paper over adhocery in Zermelo's canonical set theory, and so on). For example, although formalisms for types of relevant logic had been found before classical entrenchment (by Lewis, Orlov, Ackermann and others), it was not until about 1960, after extensive classical entrenchment, that Belnap established weak relevance of viable alternatives to classical systems; and worse still, at that stage satisfactory motivational stories for choice of systems like newly devised system *E* of 'entailment' were still lacking (and in significant respects still are, that choice was premature). In particular, proponents of such systems had no persuasive arguments as to why their particular routes to the promised logical land, which involved abandonment of the ancient principles of Antilogism and Disjunctive Syllogism, should be taken. It was only later, when semantical investigations had advanced, and classical logic become yet further ensconced, that respectable arguments against these principles were rediscovered.([12])

ly reluctive empiricist but looked extraordinarily like an idealist (with everything contructed from atoms which were 'ideas', namely sense data).

([10]) Right reasons that were entirely forgotten in the undignified rush of formerly distinguished Wittgensteinians into Quine-Davidson enterprises.

([11]) See e.g., Marshall, in Srzednicki and Wood 1992, p.32.

([12]) For details see Sylvan 1989. The Pittsburgh school formed around Anderson and Belnap was poorly placed to counter classical logic, because of its principle of strength and its connected commitment to classical basics. After Anderson's death, members of the school lapsed into classical logic.

Australian dissatisfaction with classical logic has persisted (despite regressive pockets of classical infiltration). Much of the real work at and ensuing from Armidale went into design of new and more adequate logics: logics with good implications, linked to reasoning, logics with unbiassed quantifiers, free of existential commitments, significance logics, context-sensitive logics, logics more sympatico with natural language and quality argumentation. There has been an attempt to make such original Australian enterprise in logic appear derivative, as much more dependent upon Northern inputs than it has been. There are interestingly incompatible reasons for such attempts. One is at bottom regional: to try to appropriate theories and results to some *other* place (e.g., relevant logic to USA, paraconsistent logic to Brasil, deviant logics to unAmerican and unsound activists). Another is anti-regional, to try to diffuse the idea that there can be regional intellectual enterprises in logic and philosophy.([13]) No doubt the terminology, forged elsewhere to other ends, that has come to be adopted was not very favourable to representation of Australian interests, activities, and originality. Except incidentally, local researchers were not investigating paraconsistent logics or relevance logics, but 'paradox free' logics; and while they were deviating from classical theory, they were not deviants. A more satisfactory logical taxonomy is needed, one more suited to local circumstances.

What should be said? The Australian work was distinctive, but it was not utterly unique. It would be surprising if it had been unique, as researchers in many places were, and are, trying to take account of data of the more or less same sort,([14]) such as the inadequacies of prevailing logical theory to discourse, to inferential practice (even as 'corrected') and so on (through a *wide* field of inadequacy: deduction, reasoning, induction, conditionality, etc. etc.). Despite immense improvements in technology, many of these inadequacies persist.

The Australian work of those Armidale years, and what it lead to, was undoubtedly original, perhaps displaying more originality than it has been given credit for exhibiting. But it would not matter for much at all if it had

([13]) Thus e.g. Passmore 1992, p.10; similarly Brown 1992, p.278. While Passmore is merely dodgy, some of Brown is plain misleading; e.g. the allegation that environmental philosophy is North American in origin, drive and development. Fortunately that misconception has now been straightened out a bit, see e.g., Zimmermann.

([14]) More or less. For more account should be taken, for instance, of variations induced by differences in languages - typically Indo-European. Even within this range of languages there are differences of logical significance, e.g., the absence of articles in Latin and Polish.

been less original; it might not even make much difference to the merit of reporting upon it. It is worth suggesting, in this context, that originality (even in the *right* sort of enterprises) might *be* an overestimated virtue. It is a modern Western emphasis, out of the ever-so-slightly-tarnished maximization box (being *first* in certain sorts of pursuits); it was not even a medieval concern, and generally not an Oriental one. It could almost sink into a 'who-cares?', except that it has become technologically of major importance within capitalism for maintaining profits in the face of the 'law' of diminishing returns, and so has come to, or been made to, matter intellectually and academically, the academic structure increasingly reflecting (in good Marxist fashion) the advanced economic substructure.

While nonclassical logics, upon which much work has been concentrated in Australia, undoubtedly arose as variations, substantial variations upon systems evolved in Europe, as did most buildings in Australia, critical features of such evolution appear somewhat inessential, variation from classical inadequacy is what matters. Europe, after all, had no monopoly or patent upon the notion of shelter and design of shelters (which perhaps reached Europe from Africa). Different sources of building systems and different, more appropriate designs (with inputs from Africa or development of Australasian elements) could have been adopted, for instance by more innovative, less Europhilic migrants. So it is also, in leading respects, with central logical notions and schemes. Consider, for instance, negation, conditionality, consequence and the like. Investigation, and perhaps even schematization, of these notions could have borrowed from Indian logic, or perhaps better have been started from scratch.

Granted that the logics that were worked upon, and varied, often beyond recognition, in fact originated in Europe. But, given the extent to which European assumptions had to be fought, the European inheritance in logic has been a decidedly mixed blessing, like other inheritances such as European political arrangements and class systems, the European rabbit and large domestic animals, and so on and on. Many of us are still fighting to eradicate grossly defective Northern imports in logic: both deleterious notions such as classical consequence, Boolean negation, and so on, and damaging themes such as deductivism, Bayesianism, and so on.

The beginnings of that work go back some way, back into the late 50s. Early dissatisfied with several features of the way things were logically, Goddard began looking at alternatives; so later did Routley. By 1959 Goddard had published the idea that there were worlds where the laws of thought failed to hold (it was another decade before that idea was put to

semantical work). In the same year Routley had travelled to the USA with the idea of drafting a thesis as to how many problems in logic and philosophy of science could be resolved by adjusting basic logic, to a paradox free structure (only decades later is this proposal coming to fruition in philosophy of science). The author (then Routley) met Goddard, in 1962, after he had presented a paper on Richard paradoxes. Both, it quickly transpired, were working on reflexive and other paradoxes.([15]) At that stage Goddard, still under the influence of Russell and Ryle, was adopting a significance approach to reflexive paradoxes. By contrast, Routley, also trying to learn something from British experience, was pursuing an incompleteness, but likewise non-propositional approach. At Armidale, soon after, their approaches converged on the nonpropositional part and on the need for a significance filter, and on the importance of context in all this, especially for the notion of a comprehensive logic of discourse, their grand joint plan. A like accommodation of differences was reached on other issues where deeper detailed differences remained (an interesting example concerns universals, where differences concerning existence were largely pushed back to differences, that did not need to surface, over the interpretations of particular quantifiers). And so a collaborative work on propositionality, significance and context began to emerge, a work partly drafted during their joint Armidale days and expanded and revised during subsequent periods in the late 60s, at St. Andrews.

Neither of their approaches to the logico-semantical paradoxes was to remain static. Subsequently, Routley switched over from an incompleteness to inconsistency bottom line (there is a certain well-appreciated symmetry between the two), otherwise retaining previous couplings. Goddard's move was more dramatic, to testing out an information-extraction approach based on classical quantification logic; it is an apparent regression we shall come to later in the story.

Much of the real work of the Armidale school did not emerge until many years after its brief flowering was over (for instance, work on significance theory and paradox-free implications, some of which took many years to be written up or to appear), with some of its fruits yet to appear (including further work on significance and context logics). For what it is worth, it might be mentioned that output of the Armidale school was seriously delayed in publication or production (sometimes seriously delayed in journals,

([15]) Routley's thesis topic had evolved to just that, paradoxes generally. A large messy manuscript remains unfinished, but its time has come too.

sometimes by editors or authors). But there are other factors that are less boringly familiar. For one, there was in those relaxed days no great pressure to publish (but even some opposition to publishing), and no demand or real hurry to be first. Some of the work was never published, for example the valuable work done by Fitzhardinge on computer generation of matrices and verification of independence results in this way (of course it was soon superseded, as computing machinery improved).

While much of the research was devoted to non-classical topics, a considerable part could be regarded as classical *extensions*, commonly fitting within a liberal classical paradigm. Research on non-normal modal systems, on significance logics and even on ultra-modal functors could be regarded as of this kind. However investigations upon existence-free and ontically neutral logics, on paradox-free systems, and so on, began to diverge further and further from classical settings. But if research so diverged, much of what was taught did not, but was good heavy unsound classical stuff. Most of Londey's courses offered straight classical material (in the style of and along the lines of Hughes and Londey). For myself, I recall in one year laboriously proceeding through all the later chapters of Mendelson's dashing *Introduction to Mathematical Logic*, which had just appeared, a text which was classical to its bootstraps, an excellent period example of American fast standardized logic. Only Goddard was a little more adventurous, teaching as well as classical material von Wright's versions of modal logic.([16]) But I don't think it ever occurred to any of us involved in the school, at that stage, that classical logic was fundamentally wrong; it needed at most rather a *lot* of fixing around the margins. Of course we knew something about intuitionism and constructivism, and about strict finitism and like movements, but were not at all persuaded. It was only later that some of us (*only* some of us) were persuaded that classical logic was wrong, and not merely peripherally; but by then most of us were in no good position to influence what got taught anywhere.

Australian logical activity, for all its non-classical diversity, affords one striking example of regional intellectual endeavour. There is more than one way in which intellectual endeavour may depend upon regional and local influences. For instance, things, especially cultural and environmental

([16]) At St. Andrews subsequently he ventured much further, not only teaching significance logic, Rennie's type-theoretic material, and relevance logic, but going on a non-classical offensive with remarks on the pointlessness of completeness proof (already signalled in '"True" and "Provable"'), criticism of Tarski's theory of truth, and similar.

matters, may be integrated with local culture which depends essentially on the regional landforms and ecological forms. With logics matters are not like this, but there may still be a significant regional dependence, things being done in the region, that are done nowhere else (cf. local industries, which could in principle have established elsewhere).

There has been heavy opposition to themes of regional thought, inquiry and philosophy, particularly from disciples of Anderson and their cohorts and from connected parts of the power structure of Australian philosophy. The Andersonian opposition is more than a little curious, given that Anderson established what is widely considered the most distinctive school that Australian philosophy has seen. Andersonian opposition to regional proposals emanates from Anderson himself (always a maverick).

According to Anderson, 'there is no more an Australian literature than an Australian philosophy or mathematics ... There is a world literature to which Australians contribute'.([17]) A little reflection renders this pronouncement, plausible as it may initially sound (to internationalists), increasingly ridiculous. First, try a few further substitutions upon 'literature': art (no Australian art?), culture, medical fund, tax system, vegetation, bush, ... Second, if there is no regional literature or art, then *ipso facto* there is no world literature or art, such as is presumed, either. For these, as terrestial, are also regional from galactic and wider perspectives: There is, is there, (only) a 'universal' literature to which earthlings contribute? Furthermore, Anderson's pronouncement appears to fly against now established discourse and supporting data. For there is now a strong tradition in Australian literature, well anthologized, taught in Australian schools and universities, and even abroad, a relatively unproblematic rather recent tradition. By contrast, there is hardly a 'world philosophy', catering to the terrestrial region, but not to universal theorizing, to which Australia contributes: philosophy is too piecemeal and fragmented, among other things, for that (as exchanges at 'World Congresses' tend to demonstrate). There are many well recognized varieties of regional philosophy: Western, Continental, British, Indian, and

([17]) Rose quoting Anderson in Srzednicki and Wood, 1992, p.270. Passmore introduces his lead essay in this collection precisely in terms of this Andersonian disjunction, 'Australian Philosophy or Philosophy in Australia?' It is a question, however, which Passmore addresses but does not answer; for, with typical ambivalence, he wants to bet both ways. Still he is inclined, it seems, to buck Anderson. However the editors of the collection are certainly in no doubt, for all their antipathy to Anderson's philosophical practice, and for all that they appear to lack solid reason for their commitment.

so on (for all their vagueness, no worse characterized than many terrestrial ideologies). There is contribution after contribution on Austrian philosophy (including now a few books). Why not on Australian philosophy?

Not so remarkably, Andersonian themes have been pushed heavily by Andersonians, such as Kamenka, an enthusiastic internationalist, who explicitly rejected the notion of *Australian culture* ('so-called "culture"') in favour of *culture in Australia*, and by his team at the History of Ideas Unit, The Australian National University, by Brown, by Rose, and, with typical reservations, by another Andersonian disciple, Passmore.([18]) In his diligent exercise on Australian philosophy, Brown reiterates Passmore but in more trenchant form. Were Brown right, then the significance of the Armidale experience and of the rise of logic in Australia are much exaggerated; they resemble another fairytale of small frogs temporarily protected in a large isolated backwater (a cautionary tale which conceals messages for terrestrial intellectual endeavour). But if Brown is right, which is doubtful, his arguments do not show it. A first argument is from analogy, with this case resting on an even weaker reed than usual, as there are widely recognized differences between natural sciences and subjects like philosophy. According to Brown, 'the personal characteristics and cultural background of an author do not seem to be relevant in any obvious way to matters at issue in these fields', namely 'biology or physics or mathematics' in the basic case.([19]) Then Brown moves (with a 'therefore') to philosophy *of* these fields, and thence to philosophy (also what does not matter is implicitly expanded, to include place and region). The relevance of regional culture, while now recognized in fields like medicine, is regularly underestimated in fields such as mathematics and biology, and is not more extensive only as a matter of accident and suppression.([20]) In any case, philosophy *is* different: history and language, culture and tradition, assume greater impor-

([18]) See articles by Passmore, by Brown (both reprints of previously published excercises), and by Rose in Srzednicki and Wood, and several by Kamenka (for a sample see his 1984). It is perhaps worth noting that Passmore (in 1975) regarded himself as an Australian philosopher, not a philosopher in Australia. If there are Australian philosophers (Passmore is not on his own in this regard either: pace 1992, p.16), then surely there is Australian philosophy (e.g., the philosophy those philosophers do on certain occasions)? Very likely, but depending on what these philosophers do.

([19]) Brown, in Srzednicki and Wood 1992, p.276.

([20]) There is growing literature on these topics, including a vigorous feminist literature. For examples concerning mathematics, see Bishop 1990, Van Bendegem 1990, Sylvan 1994.

tance.([21])

As if aware of the fragility of his first argument, Brown offers three further reasons why 'Australian philosophers are highly unlikely ... to make an intellectual contribution that is uniquely Australian'.([22]) As there already are distinctive contributions (dialethic logics are just one), initial scepticism is warranted, which proves to be well-founded. The reasons offered all turn on *proportions*, statistics which an original philosopher may well evade (more likely though that university philosophers will exclude or hobble such a person): proportions of Australian intellectual life imported from Great Britain, proportion of academics who obtain training abroad (against which they may however react or rebel), proportion committed to Anglo-American analytic philosophy (in significant decline along with analytic philosophy). As regards the first, immigrants who may bring such cultural baggage, can nonetheless contribute significantly to the culture of a region. The birth of Austrian philosophy can be plausibly traced to a work of Brentano, a German in origin;([23]) that of Sydney Andersonianism to Anderson, an intellectually rebellious Scot; that of Australian logical enterprise to Goddard, an Englishman educated in Scotland.

One of the further arguments Brown adduces, turns, in order to succeed, on the premiss that only moral and social topics in philosophy connect suitably with social and cultural background to serve in regional program.([24]) The connection of any other programs, such as in logic and metaphysics, is so remote from regional concerns, 'so indirect and complex', as to be utterly tenuous, not to say unintelligible, and certainly unviable (p.279 lower). Really, this whole drift of argument is astray. For one reason, a regional program does not have to be based in local culture, but, as observed, can be established by contrived or fortuitous circumstances, for instance through work-skilling programs or the accidental assemblage of

([21]) Passmore is far from alone in contending that a philosopher is 'a thinker confronted with problems that he attempts to solve within existing, but [perhaps] conflicting traditions' (1975:150). For some small examples, consider issues concerning the translations of Wittgenstein's works, discussed in Rossi-Landi 1981, pp.119-185.

([22]) Brown ibid., p.276. He is loading the issue with 'uniquely'. Regional and like purposes would be served by something distinctively regional.

([23]) See Haller 1981, p.93.

([24]) This murky argument appears on p.279. Given his attitudes towards regional activity, it is intriguing to fathom why Brown bothered to produce his worthwhile essay on contemporary work in Australian philosophy. For it involved a huge amount of regional work.

outsiders in a place. For another, cultural ethos may be very influential as regards such esoteric matters as metaphysics. Consider, for example, the enormous impact of uniform monotheism in medieval Europe or modern Arabia, and the (negative) effects of an excessive maximizing individualism in contemporary America which distort not merely social and economic practice but run right through metaphysics and philosophy of nature.

After *is*, comes *ought*. Whether or not local distinctiveness obtains, should it? Ought local distinctiveness be encouraged? Or does it simply not matter, as Brown would have us believe it did not matter in medieval Europe? (It did matter then, as it matters now.) What further argument is presented is also inconclusive in a similar kind of way to that for descriptive distinctiveness. In any case, it ought to matter, for a range of reasons: local quality of intellectual life, local competitive advantage, local and regional culture, and so on: arguments on the regional side of the dialectic are as before.

For all its regional contribution, the prolific Armidale school was extraordinarily shortlived, functioning as a graduate program for only two years. It was brought to an end primarily through Goddard's decision to take up the prestigious chair of Logic and Metaphysics at his former alma mater, the University of St. Andrews. So towards the end of 1966, Goddard returned to St. Andrews. As Routley departed too, on leave, but not to return to Armidale, the graduate program upon which the school was centred, was no longer viable.

Although Goddard encountered and managed to encourage a few very good students in St. Andrews, and likewise in Melbourne to where he proceeded a decade later, the Armidale experience was not to be repeated. That remarkable concomitance of circumstances that had enabled the formation of the Armidale school did not recur. Indeed such a concomitance does not offer itself often or easily; nor normally can such a formation simply be purchased (should it be desired, for there are opportunity costs along with professional opposition), even assuming monetary resources are available. It also requires a pool of interest, enthusiasm and talent (not easily obtained once dissipated), and strong forces to draw that pool together and, critically, to bring it to life. Nor was Goddard's own distinctive research output any longer so evident, much work from his St. Andrew's period being carried over from what had emanated in New England (most notably *The Logic of Significance and Context*, nicknamed *SLOG*). In fact subsequently, with a couple of exceptions (most notably his joint work on the metaphysics of the *Tractatus*), his most productive periods occurred in sojourns in Canberra, where a logic group, in significant respects a con-

tinuation of that in Armidale, had, by a different fortunate concomitance of circumstances, managed to re-establish and thrive.

After years living under Australian skies, in the Australian sun, mostly in a relaxed indigenous way, Goddard's enthusiasm for Northern climes and cities —their frequent greyness, coldness and dreariness, for all their cultural and intellectual advantages— gradually waned, along with his research productivity. As it happens, Goddard was long charmed by climate([25]) and never quite so captured by culture,([26]) he was not put off Australia by its extensive materialism and its abrasive anti-intellectualism, especially as regards theoretical concerns, which penetrates even University organization. Of his ten years as Professor at St. Andrews, he spent much of the last two (1974-1976) on leave in Canberra. While there he wrote, as well as pieces on confirmation and natural laws, his significant but somewhat neglected *Philosophical Problems*, a new production, even though the fruition of much laborious teaching.([27])

Virtually all Goddard's research falls into what is still denominated in Scotland, logics and metaphysics, which includes epistemology —a domain that was once just logic. By contrast, he has published nothing in the moral science (except tangential metaphysical material on freedom and determinism), no ethical or political work (except one applied article, on universities). Like a logician, rather than a philosopher, Goddard tended not to write books. His approach to philosophy, as primarily a matter of persistent problems, militated against grander philosophical enterprises and misguided summative productions. In the main, there was an on-going dialectic, to

([25]) Nowadays he tends to follow the southern sun and seasons, winter in the north, summer further south, like some migrating bird.

([26]) While he was not among those who are seen participating in highbrow culture, Goddard was and is not a cultural philistine. Again the picture is more complex, and wrong impressions easy to gain. He does regularly visit galleries, and even paints himself. Although his favourite reading comprises detective novels and the like, rather than more cultivated works (news that circulated), he also reads serious 19th century novelists. And his lighter reading has a ready explanation. After difficult days or stretches struggling on logic, he prefers his recreational reading to be entertaining, rather than more hard grind. And he did find logic and philosophy hard grind. He was not a social logician or one of those exceptional people who live logic (or their own version of it), and who may be difficult to turn off the subject.

([27]) It is neglected in Australia and in work on Australian philosophy, e.g., it is not mentioned, still less discussed, in relevant sections of Srzednicki and Wood (e.g., chapters 3 and 13).

which novices could be introduced, as once, in a different culture and time, in the Socratic dialogues, and as now in his *Problems* book. Nonetheless he did perform conspicuously better in the book stakes than previous distinguished Australian philosophers.

However, as it stands, despite his intentions, *Philosophical Problems* represents Goddard's main summative work in metaphysics and epistemology. With this small unintimidating introduction to philosophy Goddard tried to enter the lucrative, but substantially closed, textbook market. It was advertized as intended not merely for first-year tertiary students, but for senior school pupils and even for the legendary 'general reader'. 'Unlike other introductory texts, however', the cover blurb continues, 'it contains no description of what philosophy is, no technical terms and no discussion of the history of the subject. Instead, the author tries to take readers immediately to the heart of six major philosophical problems and to *show* them what philosophy is by getting them to engage in it from the start. All the problems arise from questioning simple every day beliefs', well so it says, though inspection of the contents does not altogether confirm the claim. Nor, moreover, was the book without significant precedents, a major one, in more ways than one, being Russell's *Problems of Philosophy* produced 60 years before, a little book of similar scope and selection of problems which *had* sold extraordinarily well and served to introduce many general readers to analytic empiricist philosophy. Unlike Russell's book, Goddard's book, for all that it is more careful and better written, did not altogether succeed in its intended objectives, since it was not widely adopted as a text. The book, for all that it is splendidly written, with all Goddard's characteristic lucidity and style, is too subtle, too rich and disconcertingly discursive and inconclusive for elementary textbook markets. The main North American market much prefers introductions presented in simple, often simplistic and shallow, black and white terms (to continue switching images), with many signposts, with straight very elementary arguments, not continuous essays full of rich and deep shades. But Goddard was intellectually opposed to such shallow mass-market-oriented textbook packaging of philosophy: no 'half-a-dozen easy problems as a gentle introduction ... The only way of learning how to swim in philosophical writers is to be thrown in at the deep end'.([28])

([28]) Philosophical Problems, pp.ix-x. While immersion in depth may be a promising way with some quality students, it is less promising with the hordes of often indifferent students universities are increasingly trying to attract and accommodate.

From a less elementary perspective there were, however, several problems with *Philosophical Problems*. It was set within an empiricist milieu (admittedly still predominant in both Australian and British academic philosophy, and taken for granted as a natural starting position by Goddard), a serious impediment which helped in generating several of the problems the book was supposedly about helping to resolve, including notably the organizing problem of the book, that of causation. It did not bring to bear the simplified fruits of recent advances in logic and semantics, which have proceeded to transform several of the problems selected (for example, given instead object-theory as starting position, there is no genuine problem about perceiving what no longer exists, or, for that matter, conceiving what is beyond possible sense experience; given relevant logic, standard arguments for determinism and against freedom collapse).

A fairly unintrusive empiricism suffuses the book setting its agenda, though surfacing only occasionally. However, where it does surface, it is empiricism taking a surprisingly strong form:

'What is beyond the possibility of experience is beyond our comprehension', not just beyond *knowledge* but beyond *comprehension*![29] It is empiricism, above all, that has made causation seem such a problem, a problem affecting Midas-like everything else causation touches, such as Goddard's half-dozen other bundles of problems. (Some of the further supposedly problematic features, the irreducible, apparently intensional, *relationality* of causation, are also fed by empiricist sources and restrictions.) For causation itself, unless it somehow reduces, appears to lie beyond the reach of experience, which only delivers regular conjunctions and the like.

Along with the new mainstream of Australian empiricism, Goddard proceeded to disown one of the founding fathers of British empiricism, Hume. Hume's only lasting contribution, he now asserts, is the recognition that causation cannot be defined non-circularly, that any satisfactory definition implicitly involves causation itself (as does a definition, like that of number,

[29] Ibid., p.87, the last page of text. This excess is to some extent corrected in the later book on the metaphysics of the Tractatus, much of which is concerned with issues of intentional access beyond possible experience. I am inclined to think that such empiricist principles are false simpliciter. They are also bad news; they have wrought very considerable philosophical damage. What they aimed to achieve and exclude can be effected in other ways.

in terms of paradigm cases, implicitly involve number).([30]) A definition simply in terms of constant conjunction, such as Hume proposes, is inadequate, for reasons Mill and others indicated. Nor is an empiricist forced back to constant conjunction, because, contrary to Hume and other empiricists, relations such as causation are sometimes open to direct perception, not merely inferred.([31]) Thus is causation simply restored to the empiricist fold. Or so it might seem; for many prime examples of causation appears to remain beyond the reach of general experience. As it happens, the further causal regularities that bother Goddard succumb to situational semantical analysis (as his own later investigations help show, but outstanding issues remain).

Beyond causation, Goddard diverged from the Australian empiricist mainstream, in not committing himself to naturalism (witness his curious epistemic agnoticism regarding God's existence, p.87), and in roundly rejecting materialism (witness his treatment of mind: quite deliberately there is no discussion of *-isms* or grand ideologies in Goddard, and no stratospheric philosophy, far from earth, such as now pervades philosophy of mind).

Reasonably enough for an introductory book on problems, only a limited sweep of problems in each area selected gain treatment. So it is, for instance, in the chapter on body and mind, only the issue of the relation between a human's mind and body is discussed and whether mental and physical happenings can cause one another. There is no investigation of the problems of access to other minds, knowledge regarding other minds, of the extent of mind in other creatures, or of intentionality and its operation in pointing to non-referential phenomena, often to what does not exist. And the discussion is vitiated here and there by not taking due notice of functionalist alternatives (e.g., p.56 where alternatives offered are not exhaustive). But, in contrast to most other Australian empiricists, Goddard does arrive, after an intellectual struggle, at common-sense answers to mental-physical intercausation, that each sort of process can and does cause the other sort. But he is left substantially up in the air as to *how* this can happen (once again he never claimed to be solving problems). But, at least, since not intricated in materialist or functionalist dogmas, he *can* concede that the

([30]) All this and much more is brought out in an interesting unpublished paper by Goddard comparing causation and number.

([31]) See the conclusion of chapter 1, p.16. This point, now suddenly a commonplace of Australian empiricism, was earlier cautiously argued, against a heavy empiricist opposition, by Suchting and others at the University of Sydney in the early sixties.

seemingly evident regularly occurs.

What *Philosophical Problems* reveals about Len Goddard's approach and attitudes to philosophy, other productions, especially the earlier *Philosophical Thinking*, confirm. His approach is always analytic and empiricist, in a British tradition strongly influenced by Russell and Ryle but made his own, and always addresses a stock, a standing stock of problems, of which paradoxes are a severe manifestation. That standard problem-set itself was in large measure a legacy of empiricism, as based on mainstream logic (basic problem-generating assumptions such as the reference theory and consistency thesis were simply transferred intact from traditional to classical logical theory).([32]) In an intriguing way, Goddard believed in the conservation of problems, that the core set remains, substantially intact, and that, while philosophy is productive in a curious way, there is little or but limited progress in philosophy, and little or nothing that is cut-and-dried emerges. Should however new techniques develop, which enable advances to be made in formerly intractable reaches, then these reaches would be hived off to new disciplines. But philosophy would not diminish or end, because these newer areas are pouring compensating problems back into philosophy, such as logical paradoxes, decision-theoretic paradoxes, quantum puzzles, methodological problems, and so on.([33])

There is room for scepticism about much of this, about the idea of perennial problems. For the problems depend upon assumptions, received methodological and proof procedures, and are altered with these. Had Goddard broken free of empiricism and its entraining blinkers, as he *had* managed to escape in logical theory, then several of the apparently invariant problems would have looked different. My impression is that Goddard does not get very far in resolving, or advancing the epistemic and metaphysical problems he selected, not nearly as far as he might well have, because he did not break free and bring to bear the newer logical resources at his disposal or

([32]) It is worth incorporating Goddard's response (from which I need hardly dissent) to these remarks and therewith to some of my criticism of his standard starting position: Agreed, you can always change the problem by changing the basic set of assumptions. But then the question becomes - which set of assumptions and why? This takes the discussion to a different plane - one which wouldn't be understood by anyone who hadn't encountered the problems in the first place from within a set of assumptions. In any case, the problems remain for those who are convinced that the preservation of consistency is paramount or who are convinced that reference not aboutness is paramount.

([33]) See further the conclusion of Philosophical Thinking.

within his reach, some of which he had introduced or helped develop. Unfortunately what does persist is a separation of advanced logic from the problems, as if the problems, dependent upon insufficiently investigated arguments, were not amenable to improved treatment. This approach too is a legacy of logical empiricism, exhibited for instance in the way that Russell, Quine and other empiricists (not Goddard however) viewed tougher sceptical arguments, as an area where logic (classical logic, note well) was impotent. But the logical apparatus is now available to make significant advances on some of these problems, scepticism included, not just to dither around in older narrowly analytic ways, leaving problems and their assumption bases intact.

In 1977 Goddard returned permanently to Australia, to the Boyce Gibson chair of philosophy at the University of Melbourne, one of Australia's establishment universities, a chair from which he subsequently retired in 1989. Although philosophically significant, at least by southern standards, Melbourne did not offer fertile ground for logical enterprise. Though logic has been taught in recent times at the University of Melbourne, very little research has emanated from there. (David Londey, an integral member of the Armidale school, who had graduated from Melbourne, used to insist that he was of necessity entirely self-taught in logic.) Nor, despite due diligence, did Goddard manage to effect much change in Melbourne, either in the extent of logical enterprise or in prevailing attitudes towards logic.([34]) Melbourne has never been a centre of logic, but more often hostile to any substantial role for logic in philosophy. Logic has only caught on around the peripheries of the metropolis, and then coupled with mathematics or computer science, not impacting much upon philosophy. At Melbourne University particularly, *the* downtown up-market university, there was no sympathy for the development of logic (to put it kindly) and Goddard found it an uphill battle trying to get it accepted as more than an idiosyncratic peripheral subject. As for Melbourne, so, for the most part, for the establishment universities in Australia: they have rarely been favourable to logical activities, or strong in them. So it is too with the philosophical establishment

([34]) Goddard did the right sorts of things to build up a considerable logical presence at Melbourne. He managed to make several promising appointments in logic, and obtain several prominent visitors. McRobbie and Martin were both appointed, each for two years, and Günther for several years. Dunn and Fine and others visited for worthwhile periods. And several good research students worked under Goddard's influence. But the Philosophy Department and University remained unmoved.

in Australia.([35])

From a logical impact perspective, Goddard made a huge impact at Armidale, less at St. Andrews, and, despite investment of considerable effort in getting logic going there, comparatively little in Melbourne, where his presence and influence appear to be slowly vanishing. Moreover his own research productivity tended to match the level of activity around him, for all that it was dampened later on by administrative work. As for many logicians, a stimulating research *atmosphere*, with active colleagues and good interested students, mattered to Goddard. Melbourne University did not supply such an environment. But the University did make heavy demands. In particular, the demands of undergraduate teaching in Melbourne were much greater than elsewhere, with huge classes, with a very high student-staff ratio, and with far too few support staff. In addition, at Melbourne, especially, Goddard was caught in administration, which became more intrusive and irksome as he became older and slowed down, and from which he *was* glad to retire; his intellectual activity and research suffered accordingly. Again while at Melbourne much of his research, virtually all that was not sole authored, was accomplished in Canberra during three further leave periods.

It has come to pass that academic careers, successful careers, are not at all satisfactorily structured as regards prime academic functions, research and teaching, even though intellectual enquiry and acquisition of quality information, along with its transmission, are supposed to be fundamental to them. For one thing, those considered (from on top) as best at the academic business are regularly pulled out of it, becoming part-time administrators, often overloaded nowadays with activity of administrative kinds, committees especially under the British heritage most Australian universities still enjoy. Salary rewards and incentive systems also tend to push academics in these directions. Goddard was a very successful academic, by all ordinary standards, so he was pulled and pushed (he was one of the reluctant kind, he always protested). Also he was pretty good at this administrative stuff, and good with people, especially by philosophical standards, so his load increased; he acquired more administrative work. He came to resent this time and effort diverted from academic to administrative work, and looks back with a certain resentment.

([35]) The establishment's guard was briefly relaxed in Canberra in the seventies. The story of how that brief window of opportunity was slammed shut, the guards up again, is also a story for another occasion.

But he was also, if increasingly reluctantly, part of the system as well as caught within it, and he was not going to bucket it or play other than by its rules. As well he was, like many other academics, increasingly unhappy with what was happening to universities, to what has happened over the last few years, especially again in universities of predominantly British heritage. And he did eventually make it plain, in the only publication he lists outside logic and metaphysics, that he was entirely opposed to the direction universities were being forced to take.

Not to mince matters, he was appalled by, and resented, the changes that began taking place in the Universities in the 80s, in particular their conversion in the direction of managerially organized business enterprises, demand and supply driven. His objections, some of which are recorded in his response to the 'Green Paper' outlining proposed reorientation and restructuring of tertiary education, extend right across the field, to include for instance objectives and roles, structure and organization of universities. He rightly and reasonably took exception to the several interconnected alterations canvassed or made to Australian universities. Firstly he objected to the governmental reshaping of universities as market responsive institutions, as supply and demand driven institutions primarily delivering knowledge and skills to industry and business, assisting employment by delivering professional and vocational education, and so on; in short, as further economic enterprises. He rightly rejected the sort of (unsound) disjunctive syllogism often used to argue to economic restructuring: that either universities really are economic institutions, or they are obsolete or obsolescent institutions (such as religious structures, temples, ivory towers, etc.); but they are not obsolescent, but functioning and indeed needed in advanced capitalism; therefore they must be economic, at least in latent form and explicitly so to survive (to pile more onto an already defective and overloaded argument). The disjunction is false, because universities have long had other non-economic roles, of *social* and *cultural* cast, roles not yet obsolescent. To take education which is one, but one, of a university's functions: education is about personal, social and cultural development, not simply economic development or acquisition of economically prized skills; it is about understanding and living in a social and cultural setting, about contribution to and participation in some good life, good society and quality environments; it is about coming to know and appreciate alternatives to present economically-dominated social and political arrangements; it includes learning about the heavy negative impacts environmentally and socially of present practices, and so on.

In the original twelfth-century philosophical debate in Paris on the functions of a university, there were two opposing positions. Neither had anything directly to do with contemporary economic emphases. On the one side, it was argued, notably by Bernard of Clairvaux, that the function of university education should be the formation of the whole, including education in moral as well as intellectual virtue. On the other side, it was contended, conspicuously by Abelard, that emphasis should be placed primarily on the intellectual. In this regard, the latter prevailed. The Western university adopted, in principle and practice, the theme that intellectual formation was to be its primary purpose. There was nothing mentioned then about contribution to national economics, or to a vocational and professional skill-base. Economic objectives, still less commercial ones, were not contemplated, and would have been roundly rejected by all sides. It is but recently this century that universities have been substantially perverted to serve predominantly economic ends.

The elevation of economic roles, as what really mattered, and the diminution of everything that could not be given a suitable economic pedigree, Goddard traced largely to an unwarranted exultation of economics, and, corresponding penetration of people trained in mainstream economic ideology into key administrative and decision-making positions. He saw economics as exalted far beyond its capabilities, and assigned a central place in social and organizational sciences which it did not deserve; and he saw its main exponents, economists, as a new dark priesthood, one as little justified and as socially dangerous as previous privileged expert classes.

Of course, economic restructuring of the universities led towards the corporate university, one of the inevitable legacies, so it is claimed, of a rationalized higher education system (narrowly economically rationalized, that is). The corporate university shares many of the features and managerial patterns of the modern business. Its organizational ethos displays the dynamics of a market-oriented outlook, in which the pursuits of scholarship and teaching are geared to commercial ends. There are many conspicuous signs of corporate reorganization: strategic planning, mission statements of university objectives, promotional activities and image establishment, advertizing and marketing activities. Likewise such economic restructuring involved both corporate remodelling of administrative structure and top-down command chains, with heavy penetration of competitive practices and accountability demands and with promotion of entrepreneurial and corporate serving academics, and also, equally insidious, transformation of curricula and student funding to economic ends, degradation of intellectual ideals (with

knowledge for instance becoming economically useful information([36]), and submergence of subjects not of economic relevance (*relevance* itself coming to mean economic relevance). Against these 'adjustments' too, Goddard supported familiar, correct, but unheeded, objections: for instance, that economics and administration should be but means to facilitate independently justified ends, to which grander ends curricula, education and research answer directly. There is little point or virtue in administration, or applied economics, for the sake of administration. Universities and higher education are, once again, directed at the unadulterated acquisition and conservation, transmission and extension of knowledge and associated intellectual and appreciative skills; corporate and resource management are in principle subsidiary to these objectives, mere underlabouring exercises that should be recompensed accordingly. University restructuring, under economically rational demands and supervision, has therefore taken a wrong, crassly mercantile route, and requires re-routing. While Goddard would prefer to see a return from newly imposed hierarchical authoritarian corporate management structures to academic government *by* and *for* academics, more meritorious alternatives beckon than a return to inefficient Old Boys' networks (still far from dismantled, only relocated). An attractive alternative looks forward to a wider democratic restructuring, with non-prejudicial input from the local intellectual community that a university functions within and to some extent serves.([37])

Many academics have retired early (Len just among them) dismayed with what has been happening in Australian universities, irritated with or overburdened under the new pushy productivity-demanding managerialism, typically reflected in more teaching, more outreach and association, more

([36]) Knowledge proper, which implies truth, had already often been diluted under impact of forces like Popperianism to something like justified belief or corroborated belief. Nowadays knowledge even gets displaced by information, the adequacy of which (in semantic and epistemic quality) does not count for very much. Such qualities as truth, soundness and justification enter only obliquely at best into market assessments; they matter very little, for instance, in which books get published, reprinted or remaindered. Popular or entertaining false or ill-founded texts or theories may generate far more throughput and enterpreneurial activity than those with genuine semantic quality. Because of semantic degradation, assessments of workplace productivity through such simple qualitative criteria as number of pages of books published (even by reputable publishers) are even more seriously flawed than the old disappearing academy should have insisted.

([37]) Details of such a demarchical reorganization of a university can be pieced together from Burnheim's investigations, see esp. Burnheim 1985.

students and declining staff-students ratios, the increase to excess in paperwork, and so on. While negatives in an academic career are increasing, and many of the 'good old days' are gone, things may be differently unsatisfactory after retirement —a major hiatus in many an intellectual life— arrives.

Len Goddard did belong to the good days. He represented a style of academic that is not merely passing out of fashion, but that is being forced out of existence, in the new economically performing universities. It was a style that was leisured and cultivated, with time to reflect and browse, time to become widely knowledgeable, and time to do nothing, by contrast with newer enterpreneurial styles. It was often a pre-computer style, where work was laboriously produced and gone over long-hand, and finally typed up through secretarial assistance. No doubt it was, as regards labour, an inefficient and unproductive style. It is a style particularly struck down by dismissal or retirement, where much support falls abruptly away.

An intellectual or academic life, however, does not abruptly finish with retirement in the way that a career, especially a teaching career, normally terminates. An academic career structure is, to set the matter another way round, ill-fitted to a satisfactory academic life. For commonly, with retirement, a support system to which a life is geared and attuned, is suddenly withdrawn. Few alternatives or substitutes are available, for example in the way of grants, to enable or to encourage older academics, many in good shape, to continue research. Present incentive systems, for what they are worth,([38]) are much too heavily linked to and governed by career advancement, resulting in forced production earlier in life and often no production, though better placed, later in life. There is a mature academic 'force' out there, unorganized, partly detached from the academy, much of it intellectually idling.

From a wider intellectual and economic perspective there is a definite loss in having mature academics so often drop out in one way or another, into an intellectual or administrative vacuum —to become, sometimes, like Goddard, extensively occupied with sightseeing and gardening. While there is a respectable place for many such activities distributed throughout a worthwhile life, it does not represent smart career rationalization and life planning to dump so many in a pretty exclusive lump towards the end.

Certainly some mature academics who have finished their main work, should be allowed, even encouraged, to snooze through or stay away from

([38]) Much less than standard economic and educational theory fondly imagines: see e.g. Kohn.

seminars, and perhaps to frolic and snooze through the remainder of life. But when there is real work to be accomplished, they should be discouraged from finally hanging up their intellectual boots, and not be let lie in empty peace. From a research perspective, Goddard for one retired too early, when many of his ideas remained to be worked out satisfactorily, or set down in publishable form. Further, he still has various academic debts to discharge and promises to keep.([39]) Unfortunately we cannot reasonably hold him to such commitments, and we cannot expect any papers; for as he now confesses, 'I only published for career reasons'.

But let us intrude in the text that obligatory footnote to Plato, and get the debt to Plato largely done with: The real work of an intellectual has to do with ideas, of a logician with forms and combinators in ideal contexts, not with paper productions and positional achievements, nor with material and economic conditions, important as these are for ensuring satisfactory working mileaux. It is a trifle irritating, then, to consider the way in which intellectuals are recorded by 'the system', both outside and thoroughly interpenetrating universities, and are expected to present themselves: in terms of such matters as appointments held, official positions, state roles, degrees and prizes conferred, such state registry and taxation details as addresses, spouses, off-springs, perhaps more confidentially salary and material possessions, with such matters as clubs and 'recreations' added as though an afterthought, periphera, not of the economic and administrative essence. 'The system' tries to turn significant 'achievements' in any reach of ideas back into bureaucratic or administrative ones, such as what posts have been held, prizes given, and, at best in the direction of ideas attained, produce delivered such as books published. Little or nothing is recorded or expected about the richness or emptiness of their intellectual and emotional lives; nothing about the good or evil they variously achieved; nothing, in short, about the value, meaningfulness or meaninglessness, of their lives. Holding official positions for example, however prestigious, celebrated, or financially beneficial, does not constitute real intellectual work, but often is incidental, or inimical, to it. Along with some others among the multitude listed in *Who's Who in Australia* and like publications, Goddard is short-changed in this sort of way. There is nothing about his role in initiating logical research, in its free way, in Australia, still less is there anything about his real intellectual work in logic and philosophy.

([39]) Günther has compiled a remarkably large list of promises, yet to be met, many of them directly ascribable to Goddard, from his collaborative work on significance and context.

There are several features which make it difficult to offer any summation of Goddard's real work at this stage, of what he stood or stands for, of his 'contribution', among them the present incompleteness of his work. Not only is there no summation or the like from him, nor any manifesto; but moreover, it would not be straightforward to try to provide such. In certain respects, furthermore, Goddard would be opposed to any such presentation or summation,([40]) and would correctly point out that such are not, or no longer, standard or expected for philosophers: philosophers are no longer philosophers (in that older usage). Like scientists, contemporary philosophers are not ideologues, or grand thinkers; rather they make piecemeal but cumulative contributions to problems, where they can, upon a largely established and usually slowly evolving stock of problems. Such is one main facet of the analytic approach. Ironically, these very features begin upon distinguishing Goddard's work, which is highly analytic, substantially traditional (within broadly British philosophy), and, as observed, logical empiricist: it thus falls slap within prevailing Anglo-American philosophy, primarily British empiricism, though with American overtones, as will emerge. While the typology so far remains unduly wide, it is readily narrowed in terms of Goddard's logical and philosophical commitments: to the relevance and centrality of logic, to the importance of significance as a category and a condition not all sentences meet for propositionality, to the fundamental contextuality of central semantic and epistemic notions, including truth and significance, causality and evidence, and so on — through further rudiments of a distinctive position which we can extract from his work or still solicit from him.

Thus while Goddard has, like most significant philosophers, issued no manifesto or prepared statement as to where he stood or stands in logic or elsewhere in philosophy, a position can be gleaned from what he has written and said. It is worth trying to articulate that position as regards logic broadly construed, tentative or vague though it is on many issues once a small firmer central area is left behind. For it is now in broad outline a not uncommon sort of position among liberal logicians, even among most of those of less orthodox disposition or who, further afield, operate primarily in non-standard areas.

As will be evident from the attached bibliography, though he has accomplished much in metaphysics and epistemology, Len Goddard's real work

([40]) Asked about a summation of contributions, Goddard responded that he did not think that way. Interest lies in the problems, not in these distractions.

has been predominantly in logic, notably philosophical logic. He was and remains very much a philosophers' logician. Although he gained prizes in mathematics as a student at St. Andrews and completed a Masters degree in mathematics there, his approach to logic and research practice was always through philosophy; he was driven not by mathematical problems, but motivated by philosophical puzzles. Of course he often proved features he conjectured concerning systems. But by most logical research standards he spent comparatively little time and effort messing about with attractive, or repugnant, symbolic systems or vexing technical puzzles, and, by contrast, much time mulling over philosophical difficulties associated with particular systems or logical systematization. While committed to logical ways of doing things, intellectual things, still much in logical fundamentals bothered him, beginning with such preliminary issues as preparing discourse and paraphrazing arguments into symbolism, and including therewith questions regarding correct logical form.

In interesting respects, Goddard's own approach to logic was, like Andersonian attitudes he initially encountered at Armidale,([41]) quaintly old-fashioned. Nowhere is this more evident, it seems to me, than in his continuing emphasis upon, even obsession with, logical form, an emphasis running through and colouring much of his research, for instance surfacing conspicuously in material on the metaphysics of Wittgenstein's *Tractatus* —which can be seen as the quixotic quest for that singular logical form of classical crystalline purity which will reveal both how things and the world fundamentally are and all that can be sensibly said. While logical form may no longer supply some sort of metaphysical essence to be distilled out of correct representation of discourse, yet as Goddard recently reports, 'I still regard as one of the fundamental yet still unresolved problems in the philosophy of logic: with what justification can we ever say that a given sentence is or is not in correct logical form?'([42]) There are different issues to be disentangled concerning logical form: what it is (some canonical logical syntax, or some underlying metaphysical structure?), whether it is singular, whether it exercises exclusivity powers (e.g., with respect to discourse or to types of things), ways and means of transforming discourse into it or its

([41]) Goddard 1992, p.170. In an appendix to this article, sparked by my misunderstanding of his position on logical form and intended to put the record straight, Goddard himself goes some considerable way towards resolving the fundamental problem and to dissolving his question. But it seems to me that he is still stuck with old-fashioned realist problems.

([42]) Ibid.

surface form. There are now pluralistic grounds for thinking that most of these issues develop out of traditional muddles, and in particular that the quest for *the correct* logical form is misconceived. While there are certainly many problems with the transcription of discourse, many not satisfactorily resolved (and often under-researched) problems, there is no underlying absolute, the correct form. As there are various logics, so there are various symbolic logical forms, some better, some worse; some more comprehensive, some less (and so affording questionable exclusions); and so on.

When confronted by Rennie's proposed 'universal syntax', supplied by transposed and reinterpreted type theory, in which 'every natural-language structure finds direct representation', Goddard responded that 'the concept of logical form becomes empty and the need for a metaphysical theory to underpin the logic would seem to disappear'.([43]) On the face of it, both claims appear astray, the second because *other* metaphysical roles than propping up historic exclusion practices remain, the first because it depends upon a defective no-contrast assumption. For a notion can be viable, not empty, though it enjoys no contrasts. As it happens, contrasts persist; some (perhaps not enough) ungrammatical natural-language strings will fail to be well-formed, not have a 'logical form'. Such advances in logic as Rennie's, far beyond historical, traditional and classical, confines and forms, alters for ever older metaphysical harness and technology.

Although such formalization of discourse and dialogue blew out the boundaries of historical forms and limitations, logical and inferential principles of classical logic were not usually questioned (traditional logic had of course earlier been 'corrected' by its classical successor). Such logical enlargements were regarded, under a more liberal classical position, as merely *extending* classical logic. Expanded classicism, while not insisting upon standard classical requirements of extensionality and existentiality (i.e., upon the reference theory) everywhere, nonetheless retained a dogmatic classical centre. Expanded classicism soon encountered a double unadventurous opposition: on the older inside, conservative forms insistent upon referentiality, and on a newer outside, anti-formal-logic forms, demanding, insofar as logic was to retain any worthwhile role, less exacting varieties such as 'informal logic'.

([43]) Goddard 1992, p.172. Though Rennie's type-theoretic proposal does not quite succeed, flexible variations upon it can. While Goddard approved of Rennie's enterprise and liked the idea of dispersion of metaphysical theory, he certainly did not believe that the idea of logical form was empty.

All these positions, expanded classical and its inner and outer variations, were early challenged by radical logical movements in Australia, movements that became more radicalized with the passage of time. At the very least, so it already seemed in Armidale, some sort of significance filter had to operate, before classical logic could function correctly. Likewise contextual requirements had to operate. More, classical interpretations had to be altered, some thought, to avoid carriage of unwanted classical ontological baggage. Nor was it long then before classical logic syntax, its metatheory (including quotation) and its inferential apparatus also came under renewed questioning. It did not take too long, then, as it became appreciated how much damage classical logic was itself affecting, before part of the small Australian logic community became highly radicalized.

While Goddard, always a moderate liberal with pluralistic tendencies, was sympathetic to most of these developments, he was not drawn into committing himself to them. As he was not attracted by, or into, an outlandish empiricism, promoted largely from an Australian right, so he was not captured by a left logical radicalism forged primarily in Australia, such as noneism earlier and dialethism later. While he was supportive of such activity taking place (as Passmore was for most of the 70s), he remained aloof and largely neutral. Nonetheless, owing also to some of his own agnostic anti-classical presentations, he was left in an awkward position, which he tried to escape through a pragmatic turn.

As a result Goddard appears to have come to adopt a *pragmatic* classicism —a position worth dignifying by a title, because it appears to have been adopted by, or to be the *modus operandi* of several theorists, including da Costa who holds a more explicit form of the position (in particular da Costa has explicitly developed a formal version of the pragmatic theory of truth).([44]) Pragmatic classicism starts from more or less the same picture as that of liberal classicism, with classical logic extended in all sorts of ways, by modal logic, predicate modifiers, mereology, erotetic logic, dialogue theory, and so on. But the picture soon itself expands or changes; for classical logic is also flanked by a number of alternative logics (and their extensions, and so on), alternatives that may operate rather like rivals instead of just non-conformist or unruly extensions. While classical logic is not supplanted from a central position, it is part of wider network. The

([44]) Pragmatic classicism can be seen as descending from Carnap's mature philosophy of logic, particularly his eclectic synthesis by way of external/internal issues distinctions, matters much discussed critically in the Armidale days.

critical concession, that differentiates pragmatic classicism from a yet more liberal expanded classicism, is that *classical logic may not always work*. For some purposes, other systems and systematizations might be more appropriate. Observe that at the same time the language of truth and correctness has been quietly abandoned, to be replaced by that of working, appropriateness, serving purposes. At its dubious extreme, which Goddard seems now inclined to adopt, there is no question of right or wrong with a system or systemization, only questions of what purposes they serve, how well, and so on (external questions in Carnap's terminology). Yet classical logic somehow manages to maintain a highly privileged place in this pragmatic network. It is claimed that it works for a large part of logical activity, despite its deficiencies (paradoxes of implications and so, problematic substitutional conditions, unwarranted ontic commitments, etc.). My own contrasting view is that it *made* to work, though it does not work well, for a mix of familiar business reasons: conservativeness, especially as regards new investment, reluctance to adopt improved technology, and so on.([45]) The pragmatic approach taken by Goddard, though more flexible than the stance of da Costa, appears less adventurous. It is more flexible because it does not try to insist upon the invariant ranking: classical, or failing that intuitionist, or failing that (because even such constructive 'safety-first' technology will not work) something else, such as inconsistentist. But the approach is less adventurous because room for selection of inconsistent systems gets closed off (though Goddard had early allowed([46]) for alternative situations from the actual where laws of thought fail, i.e., for paraconsistency as opposed to dialethism).

Remarkably within this free-wheeling setting, Goddard's thinking on logico-semantical paradoxes has swung to a narrowly classical fortress strategy, for reasons we have already seen: classical theory is the problem setting from which he starts, indeed from which one has to start. Fortress strategies, which seemingly offer both safety and opportunities of wider forays, have proved very popular, not only in medieval times before the advent of heavier weapons, but in modern intellectual life. Mainstream logical practice regarding paradoxes exemplifies the strategy, justifying damaging forays into semantical and cognitive territory from a set theoretical citadel, itself of dubious soundness. The strategy depends upon an

([45]) For elaboration see Routley and others 1982, introduction, especially the pump analogy.

([46]) E.g., in his 1959 remarks on 'laws of thought'.

artificial division of paradoxes (a division rejected by Goddard and many other Australian logicians) into two classes: set theoretic which are (supposedly) put out of reach by a suitable quasi-constructive set theory, and semantic, formerly proclaimed as not of mathematical concern, but where free exploitation was nonetheless permitted (and prospects of a satisfactory uniform theory, thereby sabotaged). The set theoretical citadel was of course condemned as unsound by intuitionists and others, and evidently many other fortresses can be designed instead in different places (too many, that is one of many problems with such fortress mentalities). One such fortress, which has looked both attractive and invulnerable, is classical quantification theory (with identity and functional symbols), from which Goddard conducts forays, with information-extortion and theorem-proving objectives.

'The analysis, of the reflexive paradoxes is carried out entirely in terms of classical two valued logic'; it is assumed not merely correct but adequate for representation of reflexive paradoxes; *it* offers the proper logical forms.([47]) Simple reflexive paradoxes, always, so it is plausible to claim, employ premisses or yield results that can be represented classically as $(\exists x)(y).f(y,x) \cong \sim f(y,y)$, and accordingly are one and all upset classically by Thomson's observation that $\sim(\exists x)(y).f(y,x) \cong \sim f(y,y)$ is a theorem of quantificational logic.

The fortress strategy from the citadel of classical quantificational logic is exposed at the end of part I

> ... quantification theory is consistent. So there is no inconsistency at this level. The inconsistency arises when ... the [scheme $(\exists x)(y).f(y,x) \cong \sim f(y,y)$] is assumed as a premiss; and exactly this is a feature of the familiar paradox arguments.
>
> What is paradoxical about the paradoxes ... is ... that the assumptions which are made ... seem ... inherently plausible ... But since the plausible assumptions *are* contradictions, the plausibility must be spurious (given that we are not going to give up quantification theory). ... we have a remedy in terms of which the contradictions can be removed ...

namely, modify quantificational conditions to remove inconsistency (remedy

([47]) Cf. 1983, p.491.

R_1): 'no other course ... is open to us'.([48])

The deadly enemy, an old enemy, is contradiction, and an objective of part II is to indicate how to venture as far as possible out of the citadel while avoiding capture by the enemy, 'to find a maximally consistent set of minimally modified formulas'.([49]) The adequacy of the complex detailed strategy proposed, which can be seen as interestingly generalizing Frege's 'way out', is not demonstrated. Nor are workable logical theories for fields beyond the fortress really provided.

Dialethical resolutions —where the enemy is transformed (even, as in the Cold War, into an occasional ally)— are, among others, entirely left out of account, as is the idea of repairing paradoxical items: 'these are and will remain inconsistent concepts', beyond restoration.([50]) The proclaimed generality of the exercise is accordingly misleading. The exercise does not arrive, or approach, 'the general conditions which must be satisfied by any reflexive paradox and any proposed solution'.([51]) Only a narrow spectrum of resolutions within a fixed classical setting is delivered. Moreover, the exercise does not, in my view, reveal 'the nature of reflexive paradoxes' (the title) or 'how and why they arise'; and despite a disclaimer, it does militate against analyses which substantially change the underlying logic, specifically which do not leave classical logic intact. The softening response that 'since the paradoxes arise in classical two-valued logic, that is where we should begin',([52]) is nicely ambiguous. While the paradoxes do occur in that setting, they did not originate there, but mostly have a much longer history and enjoy striking independence of particular logics. Were the exercise a *reductio ad absurdum* of classical fortress approaches, with a

([48]) The inset quotation is from p.507 of this two part article on the reflexive paradoxes of 1983-84 (the first part is jointly authored); there are textual problems regarding the third sentence of this inset. The further quotation comes from p.506 where R1 is also presented.

([49]) P.57.

([50]) P.507.

([51]) P.491. The paragraph which follows this quotation is, in my view, substantially misleading. However it is only fair to add that apparently Goddard did not intend to make such sweeping claims; the claims were supposed to be contextually set. His 'concern was', he says, 'to see how far we can proceed in a classical framework where inconsistency is not tolerated. And the answer is that the paradoxes can be eliminated in that context. For every paradox argument employs a false premiss because the paradoxical items do not exist: i.e., the paradox arguments do not lead to inconsistency; they begin with it'.

([52]) Quotes from p.492 and p.491.

promised part III where 'better ways of handling the paradoxes' get considered, then some of us would be appeased; unfortunately part II (which does have an air of reduction about it) gives signs and impressions of finality. But of course it, like most else in philosophical logic, is not final, but, so Goddard assures me, is programmatic, with several loose ends and problems left (e.g., some semantical paradoxes such as the Liar are difficult to accommodate and may require a different treatment outside the uniform quantificational strategy!).

Another striking classical venture that engaged Goddard's attention while at Melbourne was the salvaging and refloating of Wittgenstein's *Tractatus Logico-Philosophicus* —a very ambitious but much applauded undertaking. What Goddard and Judge, his coworker, aimed to show, primarily on the basis of a geometrical modelling of propositions 1-2.063 of the *Tractatus*, was nothing less than this: 'that the metaphysics of the *Tractatus* is not only coherent but plausible' and moreover is relevant to several contemporary philosophical issues.([53]) Whether or not it shows as such (I myself remain sceptical, especially as regards plausibility), whether or not it reveals what Wittgenstein was really on about in the *Tractatus* (little evidence in this direction is adduced), it does afford a challenging perspective on that problematic work.

Like several logicians, Goddard gravitated, in later research life, beyond deductive logics to wider, but still less firm, reaches of logic, important but difficult and neglected reaches. Unlike many, however, he was, once again, committed against heady or heavy reduction enterprises, for instance of all logic to deductive logic, or less drastically of all logical matters to deductive logic supplemented by probability theory (and perhaps one or two other small additions, for instance to comprehend decision theory). His wider expeditions have proved of varying success, those on *reasoning* for instance casting up interesting positive results and systematization, those on *evidence* yielding so far only negative results —though some of these can be presented with a more positive appearance. For example, he worked his way to the conclusion that none of the standard marketed wares on induction are satisfactory, least of all simple inductive methods, and that the best of a bad selection of methods was falsification as recently sponsored by Popper. But he also concluded that a satisfactory account of evidence, rather like that of cause (and conditionality semantics) would have to involve a three-place

([53]) See Goddard and Judge 1982, p.5.

relation rather than just two: not just 'A is evidence for B' but 'A is evidence for B relative to C (e.g., against background C)'. There is in each case a *field*, which is critical to adequate symbolic representation. In such cases some of the inevitable context has to be taken up into a general analysis.

The admission of defeat on main problems concerning evidence is one characteristic of the man: honesty in intellectual endeavours, no pretence, no cover-up, no manipulation of data or evidence. Another virtuous feature is modesty: modest aims, modest claims. A connected feature, much more common in academia, is a certain justifiable conservatism: do not go to extremes without good cause, do not upset standard practices and settings unless really required. These features suffuse Goddard's practice. As he comments himself,

> With the *Problems* book for example, I quite deliberately start from the standard representation of classical problems and hope to have left the reader with a feeling of unease (of the kind 'There's got to be more to it than this') —but even with such modest aims, it turned out to be too hard. You can't teach people to run before they can walk— yet most of the modern developments that you refer to (... e.g., paraconsistency, situational semantics, object theory, whatever ...) have risen out of a response to classical problems. How could they be understood by someone who has never confronted the classical problems? And with the paradoxes paper, as I've said, I set myself the very limited aim of finding out if the paradoxes could be eliminated in a 2-valued context. When I started it, I didn't know what the answer would be or where I would end up. And in fact I virtually ended up with a (strange) paraconsistent system. [Similarly with] the *Confirmation* paper —where I start from a standard classical position and end up in a non-classical one. That's just my style. I have to be pushed out of classical positions by argument (to convince myself). I can't just jump out.

While it would be uncharitable, and is unnecessary, to contest much in this presentation, there is point in remarking that the standard position assumed is Anglo-American empiricism, whereas main problems (like some modern developments) can arise in much wider settings. Further, while such empiricism is widely taken for granted, in places where English is the main medium of philosophy, as if it were self-evident, it is not evident. Nor is it a neutral or a classical (Greek) starting position, but highly culturally and

ideologically dependent. Moreover, what matters here, it precludes a range of resolutions of the problems, and often renders them much harder to solve or even unsolvable. Certainly I do not intend to imply that Goddard is ideologically unsound because he began from a large assumption framework (such an accusation would be like a radical pot calling out a clean kettle). As well, I appreciate and applaud his grand classical *reductio* strategy and style. Rather my aim was to expose what is going on metalogically, and hopefully to uncover more attractive alternatives.

Our ideological differences, such as they are, have not hampered joint work and cooperation over a long period. It has been a great privilege to have been associated for so long with Len Goddard, and a very considerable pleasure to have worked collaboratively with him likewise over a long period. I wish him well for the future; many happy hours in both work and play.([54])

Richard Sylvan (olim Routley)
Eco-Logical Organization

Appendix: Goddard himself responding on logical form

1) I don't believe there is such a thing as *the correct* logical form of a given sentence, since to display the logical form is just to display another grammatical form. We 'show' the logical form by translating a given grammatical form into another. But what makes the second *correct* and the first *incorrect*? At this point one gets pushed into metaphysical answers in such terms as ... a correct logical (grammatical) form 'pictures' (displays, represents mirrors ...) the structure of a fact (empirical or otherwise): cf. Russell and early Wittgenstein.

2) I don't like this metaphysical push for a number of reasons. First, because I think one can have perfectly good linguistic communication without picturing (though truth demands something more than good communication). Second, it is artificial. I can, *e.g.*, *understand* (and not merely communicate) 'the'sentences without knowing anything about Russell's theory of descriptions; what's more I can handle them in arguments without know-

([54]) I am much indebted to Len Goddard for very helpful detailed comments on an earlier, rougher and even less gracious version of this article. I also have a debt of sorts to Graham Priest, who encouraged me (and more) to persist with production of this difficult article.

ing the theory of descriptions (or somebody else's theory of descriptions). What the search for correct logical form really comes down to is the search for correct truth conditions —but then, we can determine truth conditions without fiddling with grammatical structure— so it's not *just* that.

3) Connected to the search for correct truth conditions is the idea that there are a small number of paradigmatic (grammatical) logical forms, with crystal clear truth conditions from which all other grammatical (logical) forms can be constructed. Hence the truth values of complex sentences become crystal clear (again Russell and Wittgenstein). But what motivates this idea? Simply the Aristotelian 'discovery' (a) that the validity of an argument is a function of its structure independently of its content (hence the structure of the component sentences is crucial) and (b) validity (more properly invalidity) gets cashed out in terms of truth conditions.

4) So it seems that we can't have general logical principles unless we have exposed logical structures (sentences and sets of sentences) with precise truth conditions. Thus the idea of correct logical form derives from the need for a general theory of validity. Logical form determines validity. No formal logic without it.

5) This is simply the standard line, but I think it has to be taken seriously. For in terms of it, if we fail in a given instance to establish the correct logical form of a sentence, we shall make mistakes about the validity of arguments containing it. We could, of course, simply regard logic as the theory of canonical forms, but if we want it to be applicable to arguments in ordinary discourse (as I do) then we have to translate sentences into canonical forms and know when we have got it right: i.e., we have to know the answer to the question 'Is this in correct logical form?'

6) What I *think* I want to say about it, is this: that the mistake arises when we suppose that logical form determines validity. Rather, I think it's worth investigating the idea that validity determines logical form. Consider, e.g., the old puzzle cases like:

This pen is his	This dog is his
This pen is a Parker	This dog is a father
This pen is his Parker	This dog is his father

I think what we do is to recognize the validity of the first and the invalidity of the second (because the conclusion is false/absurd) and so conclude that 'This pen is a Parker' and 'This dog is a father', though having a common grammatical form must have differing logical forms. Similarly, what moti-

vated Russell to re-express the 'correct' form of A-propositions as hypotheticals, was the recognition that arguments in Darapti are invalid, because they have false (or possibly false) conclusions. He certainly didn't do it by discovering (observing) hypothetical facts which correspond to universal propositions. Now it may be that having recognized the distinction between 'This pen is a Parker' and 'This dog is a father' and represented them differently, nevertheless we find that the new logical form we have bestowed on them, fails to provide the right answers in other contexts —so we modify them again. So the search for *the* logical form is misplaced, and the metaphysical push to justify it as *the* form is also misplaced. We don't need to go outside arguments to determine sentential form.

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In addition to his published work, Len Goddard has rich piles of unpublished material, so far uncatalogued. Notable within these piles lie buried substantial parts of *The Logic of Significance and Context*, volume 2.