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THE ECONOMIC CONTRIBUTIONS OF GEOFFERY COLIN HARCOURT

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The Economic Contributions of *Geoffrey Colin Harcourt*♣

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'What optimists we all were then!'•

♣I regret deeply and sincerely that Geoff Harcourt was not invited to contribute to the **Goodwin Festschrift** (Velupillai, 1990 – but see Harcourt, 1985, 2013); to this must be added two further regrets: that I never managed to open batting for Clare Hall with Geoff and that I have not managed to be Geoff's co-author (Harcourt, 2015?) – although this latter status can still change (after all I am *only* into the end of my seventh decade and Geoff smack in the middle of a very agile, youthful, unbelievably productive, ninth decade).

• Harcourt (2013, p. 12, where two other admirably frank aphorisms add lustre to a typically generous tribute to Anwar Shaikh's deconstruction (Shaikh, 1974) of the Cobb-Douglas with the celebrated HUMBUG: 'We are all guilty here' (*ibid*, p.15) and 'I am not completely lacking in integrity' (p.16). The first 'aphorism' is a characteristic of Harcourt's transparent honesty; the second exemplifies his gentle pungency – although I do, sometimes, reverse the descriptions.

Abstract

The contributions to economics – in its theoretical, applied (or empirical) and policy aspects – by Geoff Harcourt are many splendoured. They are predominantly macroeconomic, with the kind of microeconomic underpinnings that are associated with non-orthodox pioneers. In this – admittedly inadequate – essay, I try to summarise and outline, in a unified way, Harcourt's many faceted and deep contributions to economics.

Key words: Keynes, Post Keynesian Economics, Capital Theory, Golden Age, Cambridge Economics, Kaleckian Economics, Economic Biography

§1. *The Thirteenth Tribe* - Harcourt's Humane Visions[1]

> "We all know that Alfred Marshall said that the Mecca of economists was biology even though he was never able to solve his own dilemma of theorizing in terms of concepts derived from classical physics having a "vision" of capitalism as an evolving organic system.'
> Harcourt, 2011, p. 263.

Geoff Harcourt's visions were, ultimately, grounded in the humane concerns that characterized Hume and Smith, Ricardo and Wicksell and his near Oxbridge contemporaries, Hicks and Dobb. Harcourt[2] is a scholar of impeccable integrity, unrivalled dedication, admirable courage, all tempered by kindness and generosity, even – perhaps, especially – to those who did not, or could not match him in these noble virtues. That I consider GCH the bearer of the traditions of Hume, Smith, Ricardo, Wicksell, Hicks and Dobb, is my way of characterizing his wide and deep scholarship of *classical*, *Marxian and neoclassical* economics[3] and philosophy. There is no

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[1] I have chosen the titles of Arthur Koestler's various books as the headings of the first four sections of this ultra-brief essay on Geoff Harcourt's extraordinarily deep, sustained and prolific contributions to economics. The concluding section should have been titled **Arrival and Departure** – but is not, due to the needs to comply with the publisher's convention. However, nothing in this essay implies any endorsement of Koestler's changing and controversial views and philosophies, nor is there any implication that Geoff Harcourt approves either my choice of Koestler-based headings, or that he adheres to the changing ideological underpinnings of Koestler.

[2] I shall, in the rest of this paper, refer to Harcourt as GCH, for simplicity, and Post Keynesian Economics, for the same reason, as PKE. GCH writes faster than mortals like me can read (certainly in one human lifetime). In Harcourt (2014), GCH estimates 'over 360 articles, etc., and 17 books; the most recent CV I had access to, sent me by GCH about six months ago (Harcourt, 2015) lists 260 articles, notes, chapters in books and review articles and 37 books (*not* counting second editions, translations into non-English languages and reviews) – and this does *not* include his correspondence, reports as an examiner, letters to newspapers (the latest of which was one published in the FT, just a few days ago!). Whether there is a meaningful discrepancy between the two numbers, 'over 360' and 297, and between 17 and 37 books, is, I think, a moot question, especially since a close friend, collaborator and authority on GCH lists, '29 books and over 360 articles and book chapters, not counting numerous notes and non-academic publications' (Blankenburg, 2015, p. 1295). Given, therefore, the word constraint, coupled to the more mortal ones of time and *ability*, cannot but imply that this paper can only be an outline of GCH's amazingly wide, deep and varied contribution – *even only to economics*.

[3] I am well aware that the world of macroeconomics is proverbially many faceted – even without beginning to classify varieties of microeconomics. For the limited purposes of this paper, it is sufficient to work with these four enduring 'schools' If 'push comes to shove', it is easy to include, for example, New Keynesian or Newclassical macroeconomics as sub-classes of neoclassical economics. On the other hand the other, microeconomic, divide, between partial and

doubt whatsoever that he forged, out of the economics of Keynes and Kalecki, a wholly new path of enlightened theory and theoretically sound policy; that he was the scholar *par excellence* of the deep economic contributions of his Cambridge mentor – Joan Robinson; that he was the pioneer – at least in my opinion – who fashioned a *Post Keynesian Economics* (PKE), out of the works of these three outstanding economists[4].

Justice, fairness, equality and sympathy for the less privileged, characterized the economic policy proposals – always grounded in the enlightened economic theory of classical, neoclassical and Post Keynesian economics – made him an unquestioned inheritor of the noble traditions of the triple triptych. That GCH enhanced, generalized and finessed these traditions, with his own *visions*, tempered and determined by the new challenges posed by an increasingly virulent orthodoxy, is a tribute to his intellectual, political and personal courage, in the face of obdurate adversaries.

The bare bones of his personal life[5] (Harcourt, 1995) indicate he was born in Melbourne, Australia, on 27 June, 1931, as one of twins[6], to Marjorie and Kenneth Harcourt, who were 'right-wing, assimilationist, agnostic, Jews', making up a household 'in the stuffy, snobby,

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general equilibrium systems is of relevance in considering, even summarily, GCH's contribution to economics. This is obviously because he was a dedicated scholar of Marshall and Pigou.

[4] Had either Keynes or Kalecki displayed the mastery of Marxian or neoclassical economics, respectively, or if only Joan Robinson's impressive scholarship was 'tempered by kindness and generosity', especially to adversaries, I would have had no hesitation to include them in the class of Hume, Smith, Ricardo, Wicksell, Dobb and Hicks – and, hence, forming the triple triptych of the fountainhead of the core economic philosophy and methodology of GCH's sympathetic and outstandingly original theoretical and policy framework.

[5]Much of the material here is available in much greater detail, and placed in the context of the social, political and religious environment in which GCH lived through his formative years in Harcourt (1995, 1999, 2002).

[6]He refers (*ibid*, p. 225) to his twin brother John as 'a distinguished academic dentist' and one who 'Keynes would have approved'. This reference to Keynes' 'approval' is, of course, to the famous last lines of Keynes (1930a; italics added): 'If economists could manage to get themselves thought of as humble competent people, *on a level with dentists*, that would be splendid.' There is no doubt, at least in my mind (and I share this view with GCH, I am sure), at all that Keynes the economist was supremely competent; but humble ….!

sectarian environment which Melbourne was then'. He, and his brother, experienced 'anti-semitism[7] at the private school to which [they] were sent in 1945'.

He, therefore, felt 'liberated' that his secondary and initial University education were at the Methodist Institutions, Wesley and Queen's Colleges, respectively (the latter a constituent College of the University of Melbourne). He married Joan Bartrop, who has graced GCH's life as his wife, now, for over 6o years, on July 30, 1955. They were blessed with four children, Wendy, Robert, Timothy and Rebecca, and now, as grandparents to Caterina and Emma-Claire. Wendy's husband, is the distinguished Italian economist, Claudio Sardoni, who carries on the Marx-Keynes-Kalecki[8] (see Sardoni, 2011) aspects of Post Keynesian Economics I have come to associate with GCH.

I have to mention that GCH considered Kurt Rotschild's *Price Theory and Oligopoly* (Rotschild, 1947), as 'the single most influential article of [his] undergraduate years', but was also introduced to Stone (1945)[9] – all one-hundred and seven pages of it? - by 'Don Cochrane (of Cochrane and Orcutt fame)', in the second year as an undergraduate at Melbourne University Harcourt, 2002, p. 27). These, coupled to a serious reading of Hicks's classic on *Value & Capital* and Swan's – in my opinion – acid review article of Hicks' *Trade Cycle* book (Swan, 1950), gave GCH that grounding in Hicksian economics which made me include the great Oxford economist in the formation of the Cambridge stalwart GCH was to become.

GCH was awarded a travelling scholarship to continue doctoral studies at Cambridge University, from September, 1955, where he obtained his doctorate, in 1960. His contemporaries, as graduate students in Cambridge in the late 1950s, reads like a veritable 'who's who' of economics in the latter part of the 20th and early 21st centuries: Amartya Sen, Luigi Pasinetti,

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[7] During a light-hearted conversation in Cambridge, in the early 1980s, GCH told me he may well be the only 'Methodist-Jew, who was also a socialist'- I was not sure, then, whether the statement was to be taken with an appropriate 'pinch of salt'!

[8] *MKK*, as I refer to this trio, are as uneasy bedfellows as that other, perhaps more famous trio, referred to as *MKS* (Marx-Keynes-Schumpeter). I am not sure that the popularization of MKS, due to the events of 1883 – one death and two births – is a cogent reason for finding commonalities.

[9] Surely, Harcourt & Pesaran (2002) and, partly, Harcourt & Kitson (1993) reflect these early background influences?

Pierangelo Garegnani and a whole host of Australians, of whom I shall only mention Hugh Hudson.

The work and path towards the *applied* work that became his Cambridge doctoral thesis has left, in my opinion, an indelibly felicitous mark on almost all the outstanding *theoretical* works by GCH. It is, therefore, useful to quote GCH on how this work came about (Harcourt, 2006, p. 146; italics in the original):

> "[K]aldor went on leave for a year and I had Ron Henderson [as my supervisor] from then on. .. He immediately sent me to London to work at the National Institute for Economic and Social Research (NIESR) on the soon-to-be-published combined accounts of all quoted public companies in the United Kingdom for the period 1949-53. … The data I examined became the raw inputs into my dissertation, Harcourt (1959). It was, in effect, Mathews and Grant on inflation and company finance … with Joan Robinson's *Accumulation of Capital* (1956) thrown in."

Those 'in the know' will understand now, how and why GCH's two most cited papers, Harcourt (1965, 1969), are intimately related. GCH has always walked on two feet – sometimes with theory and applied work in harness; at other times with ethics and economics, or policy and poetry, just as much as he remains an *Australian Patriot and a Cambridge Economist* (Harcourt, 1995) – always well anchored on two feet.

GCH has been the recipient of numerous honorary degrees and even more awards and distinctions – ranging from the D.Litt., at Cambridge to the recent Veblen-Commons award by the Association for Evolutionary economics[10]. He is currently a Visiting Professorial Fellow at the University of New South Wales – having been a Lecturer, Senior Lecturer, Reader, Professor and Professor Emeritus at the University of Adelaide, between 1958-1988. At Cambridge he was a 'young' University Lecturer and Fellow and Director of Studies at Trinity Hall in 1964-66 and, in his later 'incarnation', Fellow and College Lecturer at Jesus College and University Lecturer, Reader and Emeritus Reader at Cambridge University, in 1964-66 and 19882-1998. In between he served in the distinguished capacity as the President of Jesus College, Cambridge, twice - in 1988-1989 & 1990-1992 – and equally many times as the Secretary of the Faculty of Economics and Politics, Cambridge University.

[10] See Harcourt (2015) for a full list of degrees, appointments and awards.

The rest of the paper[11] is structured as follows. In the next section there is a discussion of what I consider to be four of the great classics to emanate from the fertile pen of GCH. They provide a Golden Bridge between the empirically loose, yet important world of the Accountant, and the mythical Kingdom of the Golden Age. In § 3, a further six classics by GCH, based on five themes, are the subject matter of discussion. § 4 tries to provide a basis for the type of macroeconomics GCH has made his own. The concluding § 5 is an attempt – perhaps a lame one – to outline the way GCH has tried to propagate the ideas of the pioneers via his expository and review articles. It tries, also, to pay *homage* to the philosophy of GCH.

The interested or curious reader – that elusive creature – should remember Paul Davidson's most handsome characterization of GCH (Davidson, 1996, p. 911):

> "Through [Harcourt's writings], one finds an author who is indefatigable in fighting the 'good fight' for a civilized system, but is also, as Mark Perlman has noted, 'unusually courteous' in a world where that virtue is rare."

There is no doubt he was continuing the Cambridge tradition of 'fighting the good fight for a civilized system', but many who did so, at Cambridge, some of whom were his teachers, mentors, colleagues or friends (and many became all of these, eventually), could not be characterized as being 'unusually courteous', even to each other – and, in the case of two celebrated Cambridge economists, by no stretch of the mind, could such courteousness even be imagined.

§ 2. *The Yogi and the Commissar* – Meanderings, Exhortations and Explorations[12]

[11] The caveat given in the last sentence of footnote 1, above, is most important.

[12] It must be remembered that **The Sleepwalkers** (heading of the next subsection), **The Ghost in the Machine** and **Darkness at Noon**, also have readings that are relevant for the fabric out of which I am trying to carve the tapestry of *The Economics of GCH*. The materialist Commissar, embodies the accountant, from Petty to Harcourt, via Marx, Hicks and Lindahl; the idealist dreamer, the Yogi, the mythical Golden Age theorist from Ricardo to Harcourt, via Marshall, Keynes, Kalecki, Sraffa and Joan Robinson. Myths do not have to be true to be believed; they just have to be constructed consistently, but with imagination – a task the GCH excelled at, as did the triple triptych he based himself on. The pure Koestler and the conscientious Harcourt were both moved by the prevailing injustices, at both individual and societal levels – hence the constant interplay between ethics and economics, between policy and theory and between a theory of the empirical and its grounding in a measurement in theory.

"Harold Lydall … posed for me the puzzle which subsequently gave rise to my best known article (apart from the *1969 survey of capital theory* [Harcourt, 1969]), '*The Accountant in a Golden Age*' [Harcourt, 1965].. ."
Harcourt, 1999, p. 9; italics added.

Professor Geoffrey Whittington, a leading researcher in accounting theory, as a sometime colleague at Cambridge, and co-author, of GCH, is eminently qualified to state that:

"The economist is most likely to associate Geoff Harcourt's name with the capital theory controversies and the development of post-Keynesian economics. … However, he has also made an extremely important contribution to bridging the gap between *economists and accountants* in the related areas of income *measurement* and the *measurement* of the *rate of return*."
Whittington, p. 92; italics added.

'In the late 1940s in Melbourne', writes GCH (Harcourt, 1999, p. 7), he started studying economics 'as a schoolboy', where one of 'the principle textbooks' was Hicks' **Social Framework** - a book that introduced economics on the basis of the social *accounting* he (Hicks) had learned from Myrdal and Lindahl (Hicks, 1977, p.143). It is natural, then, for Hicks (1956[13]; 1982, p. 221; italics added) to note – as befits one who considered himself 'an accountant among economists' (Klamer, 1989) – that:

"In all its main forms, modern *economic dynamics* is an *accounting theory*."[14]

thus linking *capital theory* and *accounting theory* via dynamics to a *monetary production theory* – a draft title of what eventually became the *General Theory* (Keynes, 1973, p. 381, ff & p. 409, ff). It is also Hicks, this time with his development of *A Neo-Austrian Theory* (Hicks, 1973), who made the 'truncation theorem'[15] an integral part of the Cambridge Controversies in Capital Theory.

[13] It was to this essay that Tibor Barna (1957, p. 493) referred, in his outstanding review of Robinson (1956), a review which GCH (Harcourt, 2012, p.331) also found 'most favourable and knowledgeable'.
[14] Adding, (in Hicks , p.143; italics in the original), that Lindahl 'was the father of Social Accounting *theory*. ..'.
[15] Nuti (1970), earlier, and Irving Fisher (1907, ch. 4 and the appendix to it), even before that, had broached this topic most felicitously; the latter, did so as a critique of Böhm-Bawerk's third ground for the existence of a positive rate of interest, and thereby made the calculation of the *internal rate of return* (IRR) routine. The uniqueness of the IRR, under certain circumstances, came to dominate an aspect of capital theory (concisely summarized by Sen, 1975) – and accounting theory. Incidentally, not only is chapter III in this characteristically elegant book by Hicks titled *Social Accounting*, but he also declares, unequivocally (*ibid*, p. 13): 'It is the post-

Thus we have all the elements of the connection between the Yogi and the Commissar – between capital theory and accounting theory, mediated by money and dynamics. Before this unifying aspect is discussed, I have to make one detour, especially because I have mentioned *money*'

Not too many months after he was awarded the Nobel Memorial Prize for Economic Science, Prescott (2004, p.253; italics added) felt he had the 'right' – even 'obligation' – to pronounce upon matters on which he was comprehensively ignorant:

> "In the 1960s there was the famous Cambridge capital controversy. This controversy bears on the issue 'What is *money*?' *The Cambridge capital controversy was a silly one,* as pointed out so clearly by Arrow (1989). … I emphasize that this does not mean that a model with a single capital good, which is matched to the value of some capital stock statistic, is not useful in drawing scientific inference."[16]

Just for Professor Prescott's educative information, I would like to quote from one of the most recent articles, by GCH, on the 'Cambridge controversies in capital theory':

Keynesians … who, to their honour, have wrought a classical revival' – a declaration, in his incarnation as simple 'John Hicks', which must gladden GCH quite unreservedly. I myself remember very vividly that GCH went to spend a day with John Hicks, in May, 1973 – just about the time **Capital & Time** was officially published.

[16] First of all, Prescott's interpretation of the meaning of 'scientific inference' is as rickety as his knowledge of the 'Cambridge controversy on capital theory'. Secondly, the first clause in his last sentence is senseless, not only in view of the results in Zambelli (2015), but also due to the central results on the 'Cambridge controversy on capital theory', all the way from Robinson (1953-54) to Samuelson (1966), all summed up neatly in Harcourt (1972). Thirdly, Arrow 'pointed out' *nothing of the sort* – on the contrary he chided 'our so-called new classical friends' for their absurd assumptions, particularly on market clearing (cf. Arrow, ibid, p.150). On the other hand, contrary to the views expressed on Arrow in his otherwise rare caustic review of Feiwel (1989) by GCH (Harcourt, 1991), my own view is that Arrow was not only seriously apologetic on the merits of general equilibrium theory, but embarrassingly incorrect on the technical issues of computation, computability theory and metamathematics – particularly on the algorithmic nature of proof (especially in the kind of mathematics underpinning general equilibrium theory). Obviously he is unaware that a pure mathematician of impeccable competence, G. H. Hardy (1930, p. 18; italics in the original), had a tempered opinion about the nature of 'proof':

> "[T]here is, strictly, no such thing as mathematical proof; that we can, in the last analysis, do nothing but *point*; that proofs are what Littlewood and I call *gas*, rhetorical flourishes designed to affect psychology, pictures on the board in the lecture, devices to stimulate the imagination of pupils. … The image gives us a genuine approximation to the processes of mathematical pedagogy on the one hand and of mathematical discovery on the other; it is only the very unsophisticated outsider who imagines that mathematicians make discoveries by turning the handle of some miraculous machine. Finally the image gives us at any rate a crude picture of Hilbert's metamathematical proof, the sort of proof which is a *ground* for its conclusion and whose object is to *convince*."

> "The aspect of the [Cambridge, UK] critique that was most emphasized was set within the context of capital theory. It concerned the meaning and its corollary, the measurement of capital, and its marginal product in an explanation of the distribution of the national product between wages and profits. By 'meaning' is meant the concept of capital to be found in the two principal alternative 'visions' of how capitalism works: the classical/Marxian 'vision' …. On the one hand, and the principally Fisherian 'vision' of the mainstream, on the other .. ."
> Harcourt, 2015a, p.244.

We now know, or should know, more than sixty years after Robinson (1953-54), almost fifty years since Harcourt (1969) and, above all, almost eighty years after Sraffa's enlightening, even frustrated, letter to Joan Robinson (Harcourt & Riach, 1997, p. 131), what the 'Cambridge capital controversy' was about – and, above all, it was *not* 'silly'. It was about aggregation, (functional income) distribution, switches of techniques, capital reversals and truncation. None of these issues are even remotely considered by Prescott.

Both classics, of 1965 and 1969, one a pioneering study of the eternal link between the accountant and the theorist, the other on the plain of pure theory, have 'stood the test of time' (Harcourt, 2002, p. 33). To go back to the Yogi and the Commissar, or to capital and accounting theory, their intimate connection comes to the fore via the implication of truncation of production *flows*– and, hence, to dynamics and to the relevant distinction between an internal rate of return (IRR) and an accounting rate of return (ARR)[17]. Both of these, themselves, are intrinsically dynamic, fundamentally monetary-inflationary and expectational phenomena. This is why GCH adheres to the theories in *The Treatise* (Keynes, 1930) and the *General Theory* (Keynes, 1936) and to a Kalecki-(Joan) Robinson dominated Post Keynesian Economics.

Incidentally, the Yogi's abode is the ideal – indeed, mythical – world of the Golden Age (Robinson, 1956, p. 99, ff[18]), of which by far the most lucid account, in the context of the kind of

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[17] The criticism by Kay (1976), of Harcourt (1965), is quite irrelevant, from many points of view, some of which are clearly pointed out by Wright (1978, especially footnote 4, pp. 467-8) and Fisher (1984, especially footnote 2, p. 510). My own criticism of Kay (*ibid*) is related to the erroneous remarks he makes on proposition II (ibid, p. 450) and the notion of algorithm he invokes (p. 563), apart from the more elementary infelicities on pp. 563-4. Obvious space constraints preclude any further details on these points.

[18] In my reading of **The Accumulation of Capital** I found that the concept of the Golden Age was being used before it was formally defined! I must be wrong.

economics that is congenial to GCH, is that by Gautam Mathur (1969) – himself a Cambridge economist and an Indian patriot, if I may paraphrase GCH, and also a contemporary of GCH. It is not without significance that Mathur's (*ibid*, p. 413, italics added) is a:

> "Revised version of paper (sic!) read at a seminar in May *1985 under the Chairmanship of Professor Geoffrey Harcourt* to the members and scholars of Cambridge University, Faculty of Economics and Politics"[19]

GCH has continued to contribute to various aspects of capital theory, doctrine historically, methodologically, analytically and pedagogically, from that initial famous 'survey' (Harcourt, 1969) right through to Harcourt (2015a), by way of Harcourt & Cohen (2003)[20], for example.

I myself have been fascinated by his two important joint efforts with Vincent Massaro (Harcourt & Massaro, 1963, 1964) and the appendix to chapter 4 of Harcourt (1972), on clarifying difficult points in Sraffa (1960). Even here, there is the important interaction between the Yogi and the Commissar, especially with regard to depreciation formulas in Champernowne & Kahn (1953-54) and Sraffa (*ibid*). The exposition of the Sraffa's device of *sub-systems*, to demonstrate the possibility of reduction to dated quantities of labour, using imaginative diagrams, coupled to algebra, in Harcourt & Massaro (1964a), are most ingenious.[21]

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[19] The footnote from which this quote is taken goes on to thank, among others, a 'Dr Jayanti Ghosh'! I surmise that this refers to GCH's prize Indian pupil, Jayati Ghosh, who was instrumental in getting Harcourt & Turnell (2005) published in the influential and important Indian journal, **Economic & Political Weekly** (Harcourt, 2012, p. 1).

[20] This article has, for the last ten years, been included in my reading list for lectures on advanced macroeconomics. Graduate students at Universities in Italy, Ireland and the US have found it an exceptionally clear pedagogical introduction to important aspects of the Cambridge controversies in capital theory – and also a model example of writing clearly on intrinsically difficult concepts.

[21] I must confess being one of those who believes Sraffa 'never makes mistakes; he just makes peculiar assumptions' (*pace*, Sen 1974). Thus, I am in rare disagreement with GCH! In Harcourt (1972), p. 191, that the tractor example of § 81, in Sraffa (*op.cit*), is 'wrong'. In a personal conversation, GCH told me that Sraffa had agreed, at first, that there was a 'mistake', but then retracted almost vociferously! This is corroborated by the re-narration of this story in Harcourt (2002), especially p. 42 (The Pope, according to Sraffa, as reported by GCH, is supposed to be 'infallible'; but in the Saivaite Hindu tradition, Hindu Gods are fallible. In the dialogue between the Sage Nakkeerar and Siva, the latter says to the former: 'A mistake in composing poetry remains a mistake, *whether you show your divine eye or not*.').

But I would like to end this section with a remark on the continuing fascination of the accountant's methodology holds for GCH. In a conversation with Jane Gleeson-White, on the role of double-entry bookkeeping in the evolution of capitalism, interestingly discussed in her recent book (Gleeson-White, 2011), I detect a greater adherence to Schumpeter than to Marx, in GCH's vision of the evolution of capitalism – thus justifying the Veblen-Commons award of 2010, sponsored by the Association for Evolutionary Economics of the USA, as if it needed any justification[22]. On the other hand, the introduction of double-entry bookkeeping, without the prior, Fibonacci-inspired adoption of the Hindu-Arabic numerals to record the entries, in company, state and national accounts, would have been a case of the story of Hamlet without the Prince.[23]

§ 3. *The Sleep Walkers* – Setting the Stage for a Changing Vision

> "The 1960s was an exciting decade to be in Cambridge."
> Harcourt (2009), p. 204.

Distribution, *Growth*, *Employment*, *Money* and *Pricing*, the five defining themes of the economics of GCH, are those that were developed in the changing visions of the basic works of those whose pioneering classics provided the soil for the fertile, sympathetic, generous and consistently open-ended[24] theoretical structures he erected – and has left for posterity.

Distribution in its functional aspects, from Ricardo to Sraffa, *Growth* as accumulation due to a judicious choice of techniques, from Smith to Robinson, Employment stimulated by effective demand and due to a rejection of Say's Law, from his great Jesus College predecessor, Malthus,

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[22] In my opinion, GCH deserved this award on his own; it was unfortunate he had to share it. It is analogous to Hicks and Arrow sharing the 1973 Nobel Memorial Prize in Economic Science – they deserved, surely, individual awards.

[23] In my course on *The Evolution of Financial Systems*, where Gleeson-White's book was a significant entry in my recommended reading list, I emphasised this theme, within the context of a Vicovian-Schumpeterian-Braudelian vision of the origins and evolution of a capitalist economy. The kind of evolution I envisaged was very different from any kind of blind adherence to the New Synthesis – that based on the synthesis between Darwinian and Mendelian contributions. Marshall's visions were circumscribed by exclusive reliance on the former, reflected also in the epigraph he chose for his *magnum opus*: *Natura non facit saltum*!

[24] There are no *complete* theories, as GCH emphasized the Robinsoninan precept, conjoined to Keynes' rule that there is a spectrum of *methodologies* to invoke, in theorising for policy as an economist, just as there is the spectrum of *philosophies*, to understand 'man's changing vision of the universe'.

to his Cambridge apostle, Keynes, Money (and Finance[25]), from Marshall and the Cambridge tradition of Pigou, Keynes and Khan, and Pricing in the Kaleckian lineage, were the five building blocks of the economics of GCH. Equilibrium in the short and long periods, expectations (in the sense in which the 'Swedes' of the 1920s and 1930s used anticipations – neither straitjacketed by the strictures of any kind of formal probability theory), returns to scale of many varieties, at many levels of aggregation and an indiscriminate switch between period and continuous analysis at the macroeconomic level and that between algebra and geometry, together with copious arbitrariness on transition dynamics, were those accoutrements to the fundamental five concepts. These accoutrements were the main causes of the paradoxes, perplexities and confusions that plagued a full appreciation of the basics of the five defining themes.

In that 'exciting decade of the 1960s', GCH produced six of his undisputed and pioneering contributions to macroeconomic – and microeconomic, especially with regard to pricing and market forms - analysis – in Harcourt (1963, 1965a, 1966, 1968[26], 1969a and 1976[27]). These six, together with the four classics discussed in the previous section, form the core contributions of GCH to the *changing visions of the economics* that, eventually, became, in his competent and magnanimous ways, *Post Keynesian Economics* (PKE)[28].

GCH himself considers Harcourt (1965a) his 'favourite theoretical paper'! In an e-mail to me, dated 1 October, 2015, GCH wrote as follows (italics added):

> "I was interested in your ranking of *The Accountant in a Golden Age and the Two-Sector Model* ... I suppose *I lean towards the second because the ideas in it came from me*, whereas HFL had asked me to look into his puzzle with the accounting rate of profit vs the economic rate of profit. I've always felt that I should have asked him and Deane

[25] GCH was 'there', long before the fashionable heterodox tradition of relying on Minsky to have originated that supreme notion of the finance motive, in Keynes. A theorist who 'soiled' his hands in the messy world of company finance, inflation and depreciation, always coupled money *and* finance, money *with* finance – thus another invisible bridge was forged between Keynes and Kalecki, in the economics of GCH.

[26] In a precise analytical sense, this paper is a link between the 'Yogi' and the 'Commissar' of the previous section and the five issues that form the core of this section. In particular, it provides the crucial link between theory and policy.

[27] But this really belongs to the vintage (sic!) GCH productions of the 1960s (Harcourt, 2002, p. 28): 'The article had a long gestation period. I wrote the first draft in1966 … .'

[28] To the best of this author's knowledge, the reference to PKE by GCH was first made in footnote 1 of Harcourt & Kenyon (*ibid*).

> Terrell to be co-authors. I've also been grateful to Ken Wright who went after Kay when Kay criticised the OEP paper – I asked Ken to do so as I did not have the required maths to do so myself.

Of these six, the traumas of publishing three of them – viz, those of 1963, 1966 and 1976 – are documented by GCH in one or another of his many splendoured writings. I want, however, to highlight just one of them – that associated with the important critique of Kaldor's distribution mechanism, in a full employment growth context, first published as Kaldor (1955-56) and Kaldor (1957)[29].

Much of the unfortunate details of the story of the beautiful and thoroughly competent – from a serious 'economics of Keynes' point of view – Harcourt foray into the thorny field of functional distribution of income theory has been told by GCH himself, in his highly readable essay in the Shepherd edited volume (Harcourt, 1995, pp. 73-74). The 'punch line' of the story is when GCH, immediately after presenting the paper at the King's College research student's seminar run by Kaldor, 'remembering going up to one particularly arse-licking graduate student afterwards', (ibid), and picking 'him up by the lapels and [saying]: "Look, son, if you want to grease Kaldor at my expense, at least do your bloody home work first.' I have never thought it good manners to ask GCH to reveal the identity of this particular 'arse-licking graduate student', nor has he, true to his civil nature, volunteered to identify the person. All I wish to add is that this kind of behavior is, I think, more prevalent in our sorry profession now, than it was then – and I am a personal witness to this increasing 'trend'.

GCH ends this particular story by his characteristically magnanimous statement (*ibid*, p. 75):

> "I should add that Nicky and I subsequently became firm friends. You will find an affectionate and appreciative evaluation of him and his work by me in Economica, May 1988.'

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[29] It was in relation to these that Paul Samuelson (1964, p.) first characterized – perhaps chided is a better description – a 'fictitious' being called *Jean-Baptiste* Kaldor. GCH has referred to this fictitious character in many of his writings, where he is critical – as in Keynes (1936) – of any kind of Say's Law (of markets). In Harcourt (1991, p.160) he reminds his readers that Paul Davidson had critically discussed Jean-Baptiste Kaldor's theories of full employment distribution. Davidson (1968, p.259) had, in turn, referred to the priority of Paul Samuelson on this point.

However, he does 'add', in Harcourt (2006, p. 148, Note 1):

> "It took me about 10 years to get our relationship back on an even keel and we ended up friends. Just before he died in 1986 I received an appreciative note from him for my review, .., of his Okun Lectures .., in the Economic Journal … .'

On the technical side, GCH was fundamentally correct in pointing out the inconsistency implied in the pricing process between sectors, within and between periods in Kaldor's model (particularly in Kaldor, 1957). But the period assumption in Kaldor's growth model is fundamentally unfaithful to the stance Keynes took, on this issue. In his letter to Robertson of 20 May 1933 and in the first section of the draft chapter 7 in *The Monetary Theory of Production* – appropriately, from the point of view of GCH – titled 'The Concept of an Accounting Period' (Keynes, 1979, p.26 & pp. 73-76), there is ample evidence that GCH was comprehensively correct in this aspect of his criticism of Kaldor.

In Kaldor (1957) there are two common infelicities, mainly because Kaldor was not careful (as usual!). They were not formally taken up by GCH, although he does so implicitly, but discussed in detail by Champernowne (1971, especially the appendix) and McCallum (1969), who both analyse *local stability*[30] and also for the *continuous-time* version of a *period* model, in which the justification in Kaldor was economic – and its inconsistency was, of course, pointed out by GCH. To analyse local stability and claim it has validity for the dynamics of a capitalist system is the customary vice of 'pretty polite techniques'. To not know that even a 'little bit of nonlinearity' – of which all of the referred to Kaldorian models are copiously endowed, and neglected – can destroy any kind of formal equivalence between a continuous and discrete time dynamic model, is inexcusable[31].

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[30] It is more than intriguing that the two titles of the papers by Champernowne and McCallum, in leading journals, contain the words *stability* and *instability*, referring to the same economic model! Does it not indicate that the naïve technical notion of stability is inadequate to encapsulate the rich connotations which it implies in an economic context? As Keynes wrote to Gerald Shove, on 21 April 1936 (Keynes, 1973b, p.2 – replacing 'the influence of expectations and of transitory experience' with 'stability' – or 'instability'):

> "As soon as one is dealing with [stability], one is, in the nature of things, outside the realm of the formally exact."

I suspect that GCH is in agreement with this view of Keynes – as I am!

[31] As my maestro, and GCH's good friend, Richard Goodwin, pointed out, sixty-five years ago (Goodwin, 1950), p. 319:

Finally, I should at least mention the highly innovative 'Keio paper' (Harcourt, 1969).[32] It is a teaching model of Keynesian economics in the grand tradition of Hicks (1937) and Lindahl (1953 - who uses the *geometry* of Goodwin's innovative four-quadrant alternative to the more famous two-quadrant, IS/LM *diagram* – cf. Harcourt, 1985, pp. 415-6)[33]. In the opening paragraph GCH extolls the virtues of the 'algebraic method' over the 'geometric' – 'quadrant approach'. He adds (ibid, p. 87; italics added):

> "The preference for the use of *algebra rather than geometry* arises from the view that the 'quadrant' approach *can mislead students*, who may settle for *mechanical drill*; it may confuse them about the applicability of their results and geometry does not always bring out clearly the limitations of the methodology used. The *dangers are more easily avoided*, it is believed, *when algebra is used*."

These strictures against the geometric method, and in favour of an algebraic method, can easily be reversed, even referring to the pernicious practice of the current frontiers in economic theory[34].

More importantly, GCH is, as always, absolutely candid on his comparative static analysis – essentially based on a judicious use of Marshallian *ceteris paribus* assumptions – and there is no pretense whatsoever of any kind of transition dynamics or its stability (ibid, pp. 87-8; italics in the original):

> "Combining the difficulties of difference equations with those of non-linear theory, we get an animal of a ferocious character and it is wise not to place too much confidence in our conclusions as to behavior."

[32] I shall refer to the version reprinted in Harcourt (2012), as Essay 3.

[33] In a personal letter to me, dated January 2, 1985, the late Bent Hansen wrote me that this particular paper by Lindahl was prepared for a lecture visit to Australia – and it was in preparing this that Lindahl had first read Keynes (1936), fully over a decade and a half after it was first published!

[34] In Harcourt (1985, p.418; italics added) he reports on Goodwin's preference for geometry as follows:

> "[Goodwin] wanted to be the Marshall of the twentieth century by teaching *linear* models entirely in geometry (he still prefers geometry and geometric proofs to algebra)."

I should point out that Goodwin used geometry for nonlinear model analysis and algebra for linear analysis! In an e-mail to me, dated 24 September, 2012, GCH wrote:

> "In my lectures on macro to 3rd year Ugads in 1967 at Adelaide **I used a linear geometric version of Hugh [Hudson's] model,** see Essay 3 of On Skidelsky's Keynes and Other Essays .. ."

> "Nothing is said, formally about the process of getting from one equilibrium position to another or whether the economy will actually do so, and any statement about *changes* as opposed to *differences* requires an act of faith (which is common to all believers but is not always made explicit). That comparative statics results are so alied to process situations is not stressed enough in the text books."

How very true! I only wish my teachers, and the textbooks they chose to teach from – before Goodwin – had stressed this important fact, or atleast advised us to keep a barrel of salt by our sides, when authors pontificated about dynamics and stability. I envy those who were taught Keynesian economics from this particular teaching model.

§4. *The Gladiators* – Australians and Cantabridgians

> "I returned to Cambridge in 1982 to try to carry out one last research project – to document the intellectual history of those we may loosely think of as Keynes's pupils. I call it 'Joan Robinson and her circle', for I want to use her contributions as the focal point around which to put the writings of Kahn, Kalecki, Kaldor, Sraffa, Pasinetti and other gifted people most of whom worked at Cambridge in the Cambridge tradition before and after Keynes's death… ."
> Harcourt, 1992, p. 9.

And in this endeavor 'to carry out one last research project' – as in all his other research projects – GCH was, indeed is, eminently successful. To the six named above, one could easily add, 'as other gifted people', David Champernowne, Robin Matthews, Richard Goodwin, Richard Stone, James Meade, Frank Hahn, W.E. G. Salter, Hugh Hudson, Tom Asimakopoulos, John Cornwall, and many others.

Pride of place must, of course, be accorded Joan Robinson (Harcourt & Kerr, 2009), whose theories, methods and visions were brilliantly and as comprehensively – as any one mortal could study this complex, brilliant, scholar – dissected, analysed and re-assembled for relatively easy comprehension, by GCH. In all this there is one diagram that, surely, takes pride of place and, in more ways than can be imagined, for example, by Frank Hahn[35]: the so-called *banana diagram*

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[35] Frank Hahn's views on Joan Robinson, neoclassical economics and method, as enunciated in the 'notorious' Feiwell (1989) volume, Hahn (1989), are misleading (on Joan Robinson), incorrect (on neoclassical economics) and ignorant (on many economic and mathematical issues). For example, his assertion that 'Linear programming, as we all know, is neoclassical economics', is complete nonsense, to express myself in the rude Hahn-mode, rather than in the

(Robinson, 1962, figure on p. 48; Harcourt & Kerr, 2009, figure 8. 1, p. 130)[36]. It is a depiction of almost all the characteristics that define most strands of Post Keynesian Economics. Above all, it encapsulates a notion of expectations – what the Swedes like Lindahl and Myrdal called 'anticipations' – which does not rely on any formalization in terms of conventional probability theories[37] – even logical and subjective ones, including Shackle's innovative ideas of it, based on 'potential surprise'.

I believe the whole story of the Keynes-Kalecki-Robinson based PKE of GCH can be told in terms of a suitably genralised 'banana diagram' – including one of the pet topics of GCH: the problem of the trend and cycle[38]. One possible genralisation is indicated in the figure below, but I think the 'full' dynamics implied in it would be what is called a homoclinic tangle in terms of modern dynamical systems theory. The 'impredcative', self-referential, dynamics would imply 'loops', curves that 'cross' themselves, and this kind of dynamics is alien even to frontier PKE research. But the whole of chapter II of Robinson (1962) lays out the foundations of GCH-type PKE.

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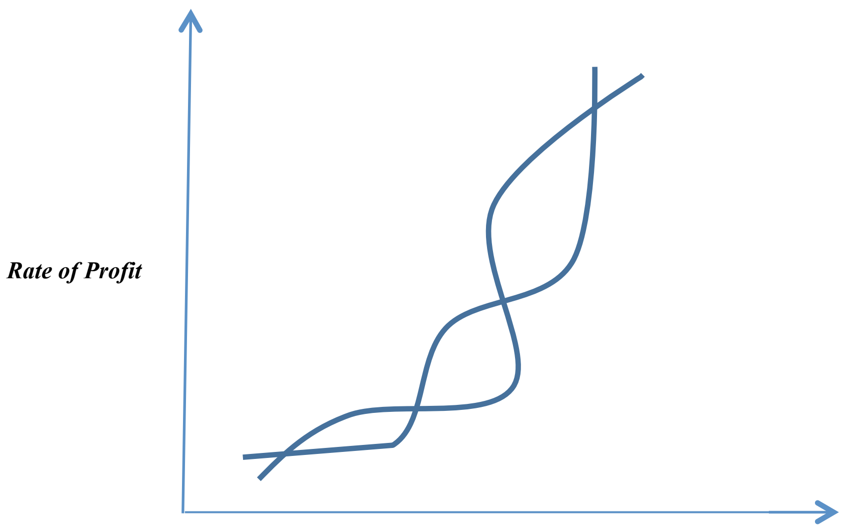
courteous GCH-mode. Hahn either does not understand the nature and scope of linear programming – in 1989 – or he does not know neoclassical economics or, more likely, both! Linear programming, in 1989, was not what it was at the time of Kantarovich or Dantzig; it was not even what it was at the time of the celebrated, pedagogical DOSSO.

[36] The I curve – a 'parabola' – in Robinson 'represents the rate of accumulation as a function of the rate of profit that induces it; it becomes the 'Animal spirits' function in Harcourt & Kerr. The A 'curve' in Robinson is a straight line, becoming a parabolic arc in Harcourt & Kerr; it 'represents the expected rate of profit on investment as a function of the rate of accumulation that generates it', in Robinson. True to the story of the interaction between the Yogi and the Commissar, Harcourt & Kerr show an interaction between actual and realized – really, therefore ex-post and ex-ante – values of the rate of profit and the rate of growth.

[37] The most original and knowledgeable review of Keynes (1921) was by Émile Borel (1924) who easily recognized the formal underpinnings of what came to known as Keynes' 'beauty contest paradox' was what Poincare called 'non-predicative definition in the theory of sets' (ibid, p. 58). This is one other way of characterizing a self-referential statement and no formal theory of probability can deal with it, except algorithmic information theory. It is this formalization that the Post Keynesian Economists need, to make sense of 'animal spirits' – and Joan Robinson did so, albeit implicitly. She was an intrinsic mathematician, like Sraffa – but a non-orthodox one, again like Sraffa. Goodwin was the only one I am aware of who bracketed the two in this way (Goodwin, 1989, p.916).

[38] I am afraid I do not agree to GCH bracketing Goodwin and Kalecki on this; they worked with quite different models and, in fact, Hugh Hudson was more Goodwinian on this issue.



A 'generalized' JR-GCH Banana Diagram

(cf., also Harcourt-Kerr, 2009, ch. 9, esp. figure 8.1 & Robinson, 1962, p. 48)

This, I think, is one example of how geometry can encapsulate the thoughts and ideas of scholars like Keynes and Joan Robinson, Harcourt and Kalecki, Wicksell and Myrdal, and many others whose prose was more Forsterian than Bourbakian.

One final point: I believe, almost passionately, that Mabel Timlin was the original Post Keynesian Economist. Her geometry, in Timlin (1942) was impeccably accurate – perhaps because that geometer par excellence, H.S.M. Coxeter[39] was her 'draughtsman'! GCH is, I think, in agreement with this view.

§5. Conclusion

> "… I was rather taken aback by Murray [Kempp's] too bleak a picture of Cambridge Ph.Ds (Oz-types) in the 1950s. May I try to put the record straight?....

[39] It was Coxeter who taught Escher the geometry of loops, self-intersecting curves that generate 'paradoxes'- of the kind that should be common in the PKE underpinned by the economics of chapter 12 of Keynes (1936). On the other hand, Matthews (1984, 210, footnote 2) points out:

> "Chapter 12 was apparently written less carefully and in a more light-hearted spirit than most of the *General Theory*. It was not subjected to the scrutiny of the group of younger colleagues assembled by Keynes to help him (information from Richard Kahn)."

> I don't think it is true to say … that the Australian contingent all regretted going to Cambridge; and it is certainly not true that none of us (except me) got our Ph.Ds. .. Most of us returned to Cambridge on leave, often on several occasions. ….
> We were most of the time a happy band and, I submit, not too bad a vintage. So Murray [Kemp] should either stick to theory or get his facts right."
> Harcourt, 2006, pp. 146, 147-8[40].

GCH has elevated the noble art of reviewing and of writing review articles to new heights of scholarship and enlightenment (Repapis, 2014[41]). It is impossible to write of GCH's contribution to economics without mentioning the role of reviews and review articles in this endeavor. Fortunately, the excellent piece by Repapis (op.cit) makes any need for an effort by me, at least with respect to the reviews, redundant. On the other hand, time and space[42] constraints make it virtually impossible to analyse the enormous contribution to economics made by GCH via the writing of review articles.

Yet, it would be grossly unfair not to acknowledge the finesse and panache with which GCH portrayed the works of Kaldor (1983, 1996) and implicitly also Kaldor (1970)[43] via Harcourt (1986) and (Harcourt (1997); Kahn (1975, 1977, 1978, 1984); Austin Robinson (Harcourt, 1997a), David Champernowne (Harcourt, 2001a), Skidelsky (Harcourt & Turnell, 2005),

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[40] My own 'generation' of outstanding Australian economic Ph.D students – all of whom completed (sic!) their doctorates in much shorter time than I did – were Roy Green, Chris Gregory, Murray Milgate and David Vines, all of whom gone on to distinguished academic careers, in Australia, Ireland and England. There were other Australians, of my vintage, non-economists, who were as outstanding as the above economists – Adrian Wilson, for example, in philosophy and the history of medicine.
[41] In the otherwise admirable paper by Repapis (*op.cit*), there is the curiously incorrect assertion that (*ibid*, p. 1518):

> "Famously, Alfred Marshall in his Principles avoided putting diagrams .. in the main text … "

This is an incorrect assertion, at least as far as the sixth and eighth editions of the Principles are concerned – the only two editions I have read. The first diagram appears, for example in the eighth edition, already on p. 64 (although this is Fig 2; on the other hand, Fig 1, appears on p. 511).
[42] The epigraph in Robinson (1962) is the Bergsonian quote: 'Time is a device to prevent everything from happening at once.' Dharma Kumari is reputed to have added: 'And space is a device to prevent everything from happening in Cambridge!' My time and space constraints have caught up with me (*pace* GCH!).
[43] When Sen (1980) asked Kaldor for his opinion on which were, in his – i.e., Kaldor's – opinion the best Journals for economists, the answer had been immediate and unequivocal: the *Cambridge Journal of Economics* and the *Oxford Economic Papers*!

Pasinetti (Harcourt, 2009), Goodwin (Harcourt, 1985), the work on measurement *with* theory at the DAE (Harcourt & Kitson, 1993), Schumpeter and evolutionary economics (via Harcourt, 2004, 2011), Salter (Harcourt, 1962), the theory of the firm and returns to scale (Blankenburg & Harcourt, 2007), and many more.

In all this reviewing GCH has maintained the civility and courteousness that has been the hallmark of his writings – except just two! These exceptions are the rather 'irritated' reviews of Feiwel (1989, edited) and the one on Heilbroner and Milberg (Harcourt, 1997c) – and I agree wholeheartedly with these 'exceptions'. Both of these works deserve to be criticised in the way GCH has done.

On the other hand I am not sure there is enough justification to question Skidelsky's stance on Etienne Mantoux, as Harcourt & Turnell (*op.cit*) do. Etienne Mantoux was basically hostile to Keynes (cf. Mantoux, 1937) and his calculations (in Mantoux, 1945) were, to say the least questionable, from any theoretical and measurement point of view. On the reverse side, I wonder whether GCH is too well mannered to criticize Stiglitz (Harcourt, 1997b) or Laidler (Harcourt, 2000). In the case of Stiglitz, his monomaniacal devotion to asymmetric information blinds him to the more basic short comings of the two fundamental theorems of welfare economics. As for Laidler, chapter 2 of the book reviewed by GCH is basically based on a variety of secondary literature and sources who were incompetent or uninformed on the topics on which they chose to pronounce – and on which Laidler relied.

But it is too much to ask GCH to be aware of all the mathematical underpinnings of the two fundamental theorems of welfare economics, especially since he does not even take them too seriously. It is certainly absurd to expect GCH to be aware of Laidler's blind reliance on secondary Swedish sources, especially since – to the best of my knowledge – GCH does not read or write that (or any other) Scandinavian language.

In **The Little Drummer Girl**, John le Carré constructs the following conversation between Joseph and the Drummer Girl (ch. 5; italics added):

> "'And after dinner, as your personal Mephistopheles, I shall take you up a high hill, and show you *the second best* place in the world. You agree? A mystery tour.' 'I want the *best*', she said, drinking her scotch. 'And *I never award first prizes*', he replied, placidly."

GCH has learned, after a lifetime of fighting the good fights, to be satisfied with the 'second best'. The quest for justice and fairness, the mitigation of inequalities and discrimination, the fights on behalf of the less privileged and minorities, the trade-off between equity and efficiency, the sanctification of the market as against a dogmatic reliance on centralization, on all these – and many other policy issues, he has learned to be patient with the obdurate and the arrogance of orthodoxy.

A Note on the References

All of the listed references – and more – have been used in the preparation of this manuscript, even if not all of the individual items are cited, explicitly, in the body of the text.

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