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Abstract

The paper argues that a formal, and fruitful, historical analogy can be drawn between economics and a religious hierarchy, most notably the mediaeval Catholic church. This idea was fully developed in Freeman (2007), 'Heavens Above: what equilibrium means for economics', in Mosini (ed) *Equilibrium in Economics*, London: Routledge.

The paper draws an analogy between the resistance of economics to non-equilibrium formulations, and the resusteance of the Ptolemaics – supported by the church – to Galileo's cosmological philosophy. This resistance, I argued, revolved around the implicit threat of this cosmology to the social and political order, which relied for its morality on the supposition that the heavens were the location of perfect matter, from which were derived the laws and privileges of the feudal order.

The notion that the sun, stars and planets revolved around the earth rested – as Kuhn pointed out - on a concept of 'centre' and a concept of 'rotation' which instantiated, and supported, the social concept that the heavens moved in fixed and perfect spheres. Resistance to placing the earth in the heavens came from two sources. The church, and the order on which it rested, were deeply threatened by the new theory, and could be mobilised against it by Galileo's reactionary opponents on this basis. In addition, the profound paradigm shift required to comprehend the Copernican system ensured that this system was literally 'absurd' and 'incomprehensible' even to serious scholars such as Clavius, the most respected cosmologist of the age.

The paper argues that the equilibrium assumption in economics plays the same role. It incarnates the principle that markets are perfect. Any failure, therefore, must be a result of external circumstances and cannot be generated from inside the market. This principle has therefore insinuated itself, at every level, and in all branches of economics, as the dominant ideology. The 'temporal' alternative – TSSI within Marx's value theory, Kaleckian and Post-Keynesian theory within Keynesianism, and indeed, the original Austrian idea within marginalism, is persistently displaced by a dominant 'equilibrium' form – Bortkiewizcian/Sraffian interpretations in Marx, 'ISLM' Keynesianism, and Walrasian/Marshallian general equilibrium within marginalism. Such views, whilst making formal concessions to 'dynamics' (conceived as comparative statics) and to 'probability' (conceived of as accidental deviation from perfection)

My adoption of a Copernican analogy draws on a parallel which, I think, goes beyond merely outward resemblance: between the intellectual resistance to Copernicus orchestrated via the organised catholic church, and the intellectual resistance to temporalism, orchestrated via the profession of economics.

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The Godless Religion: economics, Equilibrium, and the Copernican Revolution

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The Copernican/Galilean revolution has intrigued me ever since I began to perceive the extent of resistance to temporalism, so I researched it and found that the deeper I went, the more striking the analogy.

Historical analogies are not models, and an overly formal approach can go wide of the mark. The French revolution was a reference point for the Bolsheviks, whom Lenin liked to call 'Jacobins'. Trotsky refers to 'Thermidor' and characterised Stalin as Bonapartist. Lenin did not however propose the Bolsheviks should organise by means of banquets, nor did Trotsky expect Stalin to ride over Europe on horseback.

What historical analogy achieves is to lay bare decisive elements which recur or persist despite the originality of every epoch, which help analyse the present in the light of the past. My adoption of a Copernican analogy draws on a parallel which, I think, goes beyond merely outward resemblance: between the intellectual resistance to Copernicus orchestrated via the organised catholic church, and the intellectual resistance to temporalism, orchestrated via the profession of economics.

Intellectual progress is not linear. Challenges to old ideas frequently, in fact generally, involve a return to older insights. Copernicus did not 'discover' a new truth but recuperated a system formulated by Aristarchus of Samos in 246 BC. This was not just forgotten but consciously suppressed: Cleanthus called for Aristarchus to be burned to death for 'saving the phenomena by displacing the earth from its rightful position at the centre of the universe.'

The safe Ptolemaic alternative was not superseded until thinkers dared contemplate what had *previously* been declared unthinkable. The question is therefore why and how it came about that an earlier, better idea was not merely passed over but consciously extirpated.

Hence the key point: Copernicus and Galileo were not engaged in 'normal' scientific debate (unless the scope of scientific discourse is extended to torture, exile, and excommunication). Resistance to them arose from definite ideological requirements of a society whose organising principle—political order—had to express divine order.

Temporalism in economics, of which (from my point of view) Marx was the definitive and most developed expression, does not encounter 'normal' scientific opposition, unless the scope of scientific discourse is extended to the suppression of an entire body of theory and excommunication of most of its exponents. What has to be grasped is that this resistance likewise arises from a definite ideological requirement, of a society whose organising principle—the market—has to express natural order.

I think what also has to be grasped is that in both cases, these organising principles were incarnated in a definite set of ideas: through what Galileo termed a 'World

system' and which Andrew and myself, perhaps stretching Kuhn a point, refer to as a paradigm: a conceptual and ontological framework for thinking about the universe which was at one and the same time a cosmology and a social theory.

Political class struggle transmits itself into this intellectual battle of ideas, which ceases to be a simple struggle between a variety of scientific alternatives; it is turned by the dominant class into a confrontation between two ways of thinking about the world. Within one of these ways of thinking, it is possible to formulate the idea that the existing order is transitory and limited, and within the other, it is not. Although in themselves, each World View is merely a theory and of equal potential validity, and although one cannot deduce that a simultaneist is necessarily a reactionary, or a Copernican a revolutionary, nevertheless the scientific discussion is overlaid, conditioned by, and in the last instance determined by, the political class struggle, in that the dominant classes intervene by definite material means to secure the success of the theory that most effectively secures the continuity of their rule: the church in mediaeval times, the profession of economics today.

What then has to be grasped is how the World View lends itself to such usage; its internal logic, or ideologic, has to be understood in and for itself.

The resistance to Copernicus/Aristarchus, like the opposition to temporalism, did not (pace Brecht) reduce to simple-minded irrationalism or obscurantism; to the contrary the church was the birthplace, and Aristotle the father, of modern deductive logic, just as mathematical economics reaches its high point in systems of competitive or Sraffian General Equilibrium.

Within this paradigm there was a varied and open cosmological debate; but it was a prison, at one and the same time intellectual and material. One decisive idea was literally unthinkable; the idea of a order without rulers. The Ptolemaics inhabited a ruled universe. Everything that existed was the expression of a purpose. By *definition*, to the Ptolemaic way of thinking, the heavens were the direct visible expression of divine rule, and the idea that the earth was some aimless wanderer in their midst was just ridiculous, stupid, absurd.

Likewise within simultaneist ontologies, notwithstanding their great variety, one decisive idea is literally unthinkable: that the market might fail to reproduce itself. All essential magnitudes are *by definition* the outcome of a perfectly-reproducing market. It becomes impossible for anyone that employs this ontology to formulate ideas about the forces through which the market calls its own existence into question. The equilibrium of a simultaneist market might be disrupted by bad governance. But the idea of a market that does not even have an equilibrium is ridiculous, stupid, absurd.

Thus when Fred speaks of prices of production as 'centres of gravity' (with great unconscious irony, given the Copernican debate) it never even occurs to him that this term can mean two entirely different things, according to the way one thinks, or that Marx might have meant, with these same words, an idea different to his own. He simply identifies the phrase, as if no other idea were possible, with 'long-run equilibrium'.

Yet only two years ago he debated a paper, still sitting on the web-site, which exhaustively demonstrates the alternative, shows that it is quantitatively distinct, establishes that it is textually utterly compatible with everything Marx wrote, and proves that if Marx had employed the concept which Fred attributes to him, it would

have been logically impossible not only for the profit rate to fall but even for any two profit rates to diverge from each other.

Even Marx's own category of super-profit, never mind his theory of crisis, finds no logical expression within the concept that Fred imposes on him. Yet insofar as he even considers the possibility that Marx might have had another concept, he considers it only to discount it as a youthful abberation. Like all simultaneist thinkers, he simply proceeds as if the words had only one possible meaning which must necessarily be Marx's: 'long-run equilibrium', just as Clavius in Galileo's time proceeded as if the word 'earth' had only one meaning: 'centre of the universe'.

The problem of science within the church is thus not just the churchman, but the prisoners of the thinking which the church was built to propagate.

The irreducible political and social function of economics, like the late Mediaeval church, is despite the diversity of its debates to make it conceptually impossible to formulate the idea that the existing order is transitory. Its job is to make the things which happens to exist now appear as if they must exist for ever. It must render opposition futile; it must make it seem that, no matter how diverse or how different one's ideas are, they always lead back to the same point, never outside to the unknown.

Thus the very possibility that globalisation, for example, might fail of its own limitations cannot be expressed within simultaneist theory, or if it is expressed, only in the last instance by endogenising what is actually exogenous, such as government policy.

Globalisation then appears *inevitable*; the only choices are acceptance or futility. The profession of economics functions so as to instil a spiritual horror of political dissent, not as in Mediaeval times by directly suppressing it but by suffocating its intellectual life-force; by making it appear contrary to the natural order of things.

This for me is the force of the analogy. If it is a valid analogy, and in my view the evidence for that is substantial and mounting, then there is a practical conclusion: it is not possible to pursue a career in economics as if one were taking part in 'normal science' or as if economics were a science at all or even an environment within which science can thrive. A scientific development of Political Economy can only exist under capitalism, just like Copernicanism under late catholicism, in and through a militant struggle, involving great dedication and personal sacrifice, against everything which the profession of economics treats as 'normal', 'reasonable', 'acceptable' and in consequence against its entire structure of selection, graduation, appointment, peer review, publication, promotion, tenure and recognition, against its domination of the social sciences, against its positivism, against any claim to exercise authority over people's lives.

The historical point to be understood is that like the church, economics is not just a branch of knowledge. It is a material structure, a branch of the division of labour, exerting material pressure, with a definite ideological function that is relayed from the funding mechanism via the selection structure. Its graduates are its novitiates, its Professors its priests, its Nobel Laureates its Cardinals, its textbooks its catechism, its schools are its monasteries.

Through these structures, economics refines the notion of the market as a natural order, and weeds out or neuters all that challenges this notion. Just like the church, no matter how 'nice' the people within it, at every point where it faces an intellectual

choice that jeopardises its function and hence material existence, it does not take that choice; instead it ruthlessly extirpates the forces leading towards that choice.

The question is not at all, therefore, whether either Marx, Copernicus, or TSSers have 'revolutionised' thinking by discovering something new. It is where the boundary lies between religious praxis which submits all evidence to the test of conceptual structure, and scientific praxis which submits all theoretical alternatives to the test of the evidence.

This leads me to what is historically original about the present epoch.

The peculiarity of economics is that it poses as science. It appears to invert, and indeed even caricatures, the struggle between Galileo and the church, casting itself as absolute reason and its opponents as absolute unreason. To oppose it is therefore to be branded as irrational, obscurantist, dogmatic, fundamentalist.

I think it has to do this, because it must portray the market not as a divine order but as a natural one. What has to be grasped is that this appearance, like so many things under capitalism, is an inversion of reality; the true role of economic reasoning is to transform nature into a source of authority; and it is in this respect that it is no different from, and no better than, the church.

Economics portrays itself as a science, but functions as a religion. It defends itself against science by claiming special status as a branch of social research, and against social research by claiming special status as a science. Yet it yields to criticism from neither. It is self-sustaining, self-governing, accountable in fact only to its funders.

The next problem is to understand how this is achieved intellectually. To make nature into a source of authority, it must appear unchallengeable. The ideology that corresponds to this is that of positivism. This, I think, is where the simultaneist World View lends itself to a very specific praxis which appears scientific because it is logical, but is actually profoundly anti-scientific because its function is to avoid any confrontation between alternative conceptual structures.

The simultaneist World View is implicitly dogmatic. It yields only one rate of profit, one set of prices, one set of values, one natural rate of unemployment, one 'correct' rate of interest and so on, these magnitudes being those through which the market can reproduce itself. Nothing else can be considered except as 'disequilibrium', a momentary departure from the underlying 'reality'—the perfect market.

It therefore finds a *theory* that excludes equilibrium logically inadmissible, because to the mind of a simultaneist, this would mean constructing a theory of the real by starting from the unreal. In the history of economic thought, as is well-documented by others than ourselves, such theories (not only TSS but temporal theories in general) are invariably 'discounted on logical grounds' or politely dropped not because they are wrong but because economics cannot understand them; that is, they are suppressed.

But this is the anti-scientific core of the whole procedure. The minute one drops or discounts a theory which *might* explain the facts, on no other grounds than that one cannot make sense of it, one has stepped over the boundary that separates science from dogma. Economics, along with its simultaneist World View, is a well-oiled machine to stand guard over this boundary. On the wrong side

I think we now sit on a cusp in which new forces generated outside economics, as they do every few decades, are again questioning the legitimacy of this praxis - the

French students, the anticapitalist movement, the resurgence of heterodoxy. At the previous points in history where this happened, personified in the thinking of Marx and of Keynes, economics successfully suppressed the new insights by a combination of two measures. On the one hand, it produced a 'sanitised' equilibrium reading of the new ideas. On the other, it prepared an ideological offensive rooted in the critique, not of the thinkers themselves but of the contradictions in this sanitised version that it successfully identified with them.

This is where, I think, TSS can be situated. The core notion of TSS(I), considered in its most limited sense as nothing more than a theoretical interpretation of Marx, is no more nor less than the following; in order to test Marx's ideas (or anyone else's, for that matter) one must first establish what they actually are. That is all. These ideas may be wrong, and they may be right, but it is utterly illegitimate and anti-scientific, as economics has done for the last century, to discount Marx by establishing the inconsistency of things Marx never said. That is why it is a necessary corrective, a precondition for scientific Political Economy, to instil a completely different approach, one in which the purpose of logic is not to test Marx, or any other thinker, but to clarify the true structure of their thinking.

The issue is therefore not at all whether Marx or readings of Marx are definitively true - only history can establish that - but whether they are *distinct*. A praxis that permits them to be tested against the evidence requires that each such theory, and each such interpretation, be studied for what it is and not portrayed as something else. A requirement of testing different theories properly is that each such theory really is presented in its own conceptual terms, including Marx's own theory. If there are different interpretations of a theory then these in turn have to be presented as distinct and understood in their own terms.

But this is precisely what Economics refuses to do. Instead it purports to test rival theories by *re-interpreting them* in a single doctrinal framework—physicalist simultaneism—which it legislates to be positive truth. The historical analogy with Brahe is thus not, I think, Ricardo as Julian proposes, but Bortkiewicz, and all subsequent twentieth-century Marxism, most of which amounts to squaring the circle by reproducing Marx's conclusions with Walrasian concepts; to get the planets going around the sun without uncomfortably displacing the earth from the centre of the universe.

The touchstone of science in the light of this historical analogy is neither the substitution of deductive logic (which religion pursues with fervour matched only by a Sraffian in full flow) for theoretical clarity, nor the substitution of gentlemanly conduct (which the Antebellum South perfected while lynching was at its frenzied peak) for systematic engagement between alternative views of reality. It is the ruthless pursuit of ***clarity***; the identification of what is truly different between rival explanations, *without* seeking to use these differences as a basis for exclusion. Thus *pluralism* - genuine, scientific pluralism - coupled with evidential contestation - is the core of the required practice.

Being an economist is a choice. One can choose not to do it, just as one can choose not to research nuclear fission. Einstein once said, had he known, he would have made watches. If one chooses to be an economist, there are attendant responsibilities; anyone who wants to resist what economics does, or sanctions the doing of, cannot confine themselves to intellectually stimulating discussions, publishing heterodox papers in obscure or even respectable journals, polite discussions with fellow

dissidents on flame-free lists, or tenure career tracks which recognise 'teaching heterodoxy' as a valid activity. Of course these are valid activities. But even the most radical priest cannot overturn the church's essential function, which is to render opposition intellectually powerless, unless s/he goes for the jugular and denies—and militantly struggles to displace—the church's right to that power. The decisive issue is that *economics is not a science*; and not merely is it not a science, it is a religion.

An economist cannot merely act like 'any other' intellectual precisely because of this fact. Economics is a social institution whose function is to perpetuate a conceptual structure within which the existing order appears as natural, eternal and inevitable. To function scientifically as an economist one must function as a permanent subversive, a militant, a public and implacable foe of the institution that pays one's wages, of all praxis that perpetuates its role, a champion of all the ideas it scorns and a defender of all the people it tramples on. One must promulgate a different way of arriving at truth; the way of Copernicus and Galileo.

Selected citations

Clavius on Copernicus

"If the position of Copernicus involved no falsities or absurdities there would be great doubt as to which of the two opinions – whether the Ptolemaic or the Copernican – should better be followed as appropriate for defending this kind of phenomena. But in fact many absurdities and errors are contained in the Copernican position – as that the earth is not at the centre of the firmament and is moved by a threefold motion (which I can hardly understand, because according to philosophers one simple body ought to have one motion) and moreover that the sun stands at the centre of the world and lacks any motion. All of which conflicts with the common teaching of philosophers and astronomers and also seem to contradict what the Scriptures teach." (From Clavius' commentary on Sacrobosco's Sphaera, cited in Lattis (1994:249))

Kuhn (1961)

"Consider, for another example, the men who called Copernicus mad because he proclaimed that the earth moved. They were not either just wrong or quite wrong. Part of what they meant by 'earth' was fixed position. Their earth, at least, could not be moved. Correspondingly, Copernicus' innovation was not simply to move the earth. Rather, it was a whole new way of regarding the problems of physics and astronomy, one that necessarily changed the meaning of both 'earth' and 'motion.' Without those changes the concept of a moving earth was mad." (Kuhn 1961:149-150)

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