

RECONCILING HUMAN SYSTEMS WITH EMERGENT KNOWLEDGE: WORK AND VALUE TODAY

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Abstract

The aim of this paper is to draw on Marx's grounding of value in social labour so as to create operational space for emergent knowledge to bear on functioning of human systems in the digital age. In particular, it is to address the prospect of 'digitally enhanced serfdom' framed by neoliberal - enforced division of labour which is driving techno-scientific complexification away from the service to 'liberation by independent reason'. It will be argued that the necessary condition for redeeming ideals of the Enlightenment without depriving humanity of the benefits offered by emergent technologies is a long overdue methodological turn in educational, training, and management programmes. This is about equipping individuals with novel attitudes to and ownership of experience and work with competences reaching beyond the traditional notion of expertise, about raising the task of problem solving to the level of perpetual problem formulation peculiar to the open, multi-disciplinary spaces of the current *vita activa*. Only then is it possible to bridge the gap between the emergent knowledge and its social outcomes, with a view to restoring value as a measure of actualization of fullest human potential for all.

Keywords: Human systems and emergent knowledge, Competence and Curriculum Development, Work, Value, and Citizenship

1. The Fate of Liberation by Reason

When value is grounded in social labour, labour becomes an onto-epistemic concept. Marx's scheme makes it possible to appreciate value in terms of a generic relationship between work and all aspects of life. It is this methodological turn that makes Marx's legacy relevant even today.

Just like Ricardo before him, Marx sought objectivity in his concept of value. He thought he found it by regarding the process of material exchange very much like the dialectics driving Hegelian History. Then humans can transcend the commoditisation of their labour and remain free to advance human systems and personal intellectual capital.

2. Work, Value, and Citizenship in the Space of Digital Finitudes

In the course of the 20th century sciences e.g. [1] as well as industry and human organisations across the whole spectrum of human endeavour had been divided into a multitude of streams of disparate speed and character (e.g. [2], [3], [4], [5]). This led to an entirely novel and critically fragmented division of labour, and to the break up of modern public space. This break up, combined with rapid increase in speed and density of interactions that turned the action space into an open system away from equilibrium, makes a mockery of any predictive model unless a competent reduction to quasi-closed subsystems can be achieved in a form amenable to quantitative modelling. This is what students of complexity do e.g. [6]. A measure of complexity is given by the ratio of the

number independent parameters needed to define the system to the number of elements constituting it. Accordingly, a very complicated system may still be of low complexity; for example most of the physical properties of a sample of crystalline silicon containing millions of atoms can be modelled with a dozen or so parameters. Many systems of high complexity (for example the human body) can be reduced to sub-systems amenable to modelling offering solutions supported by a transparent empirical data base and limits of applicability (e.g. blood circulation). This is the clue to Newton's and Marx's success though of course neither was very likely to have thought of it this way; indeed, it was a good approximation to regard mid 19th century capitalism as a quasi-closed system. It follows that Newton's and Marx's is an approximate model of motion and economics, resp.; though not all motion we know of can be described by Newton's laws, that does not make them less useful, only subject to well established limits of applicability. When such a reduction to subsystems is not feasible, the problem is studied by re-enacting its behaviour via iterative procedures. There is no 'solution' though there are scenarios with conditions of applicability. All this has been fully taken on board by many (e.g. weather forecasting, stock exchange dynamics). Yet, in the hysterical climate of faltering neo-liberalism, 'complexity' might look to the uninitiated chiefly as a fancy tool of liveried servants of dirty money aimed at discrediting 'leftish ideas' such as socialist planning (e.g. [7], p.70, [8], p. 335). There are no doubt many too anxious to please their masters (see examples in [2], [9] and elsewhere). But that only amplifies the call for a transparent empirical evaluation fit to dispose of doctrinaire impositions. It has been pointed out that today the kind of capitalism studied by Marx represents only a small part of the productive process (e.g. [3], [10], and refs. therein). The neo-liberal regime of casino economics reacted to the rise of complexity by reducing value to price, to John Maynard Keynes' beauty contest generally known as the market. Human activities, work, are separated from the means of recognising and understanding the social content of new forms of

order driving development; life is being reduced to some mindless 'digitally enhanced serfdom' of consumption for the sake of consumption. Should this seem an exaggeration, a glance at reports about 'digitally enhanced' grading of citizenship in China may suffice to quell any such complaint! Recent history shows that no amount of 'good will' or 'revolutionary fervour' – and certainly no amount of top-down impositions - can replace the power of consensual decision making based on fullest grasp of the social content of products of creativity and sweat; the decision making by citizens convinced that the independence making it possible for them to do what they are good at, in a shared public space, is the ultimate measure of value. We may have already acquired at least in principle the means to express value generation, as socially mediated processes, in terms of perpetually renegotiated 'socially necessary' quanta of energy, in units of personal independence and social stability normalised to the place-ness in question. With this socially accredited, personal ownership of value comes bottom up ownership of social responsibility; only that can make it possible radically to restructure social norms today. It was also this ownership that the practices of 'East European socialism' failed to deliver - in spite of giving everyone free education and health service, and the right to work!

3. The Methodological Challenge

There is a well established agenda of work practices based on quantitative, transparent empirical modelling that makes it possible to make significant advances in understanding the many-fold production dynamics of today and in expressing it in units of labour and organisation (e.g. Nowotny, 2015). Yet there are many - even among eminent philosophers - whose attitudes make such an approach questionable. While anyone who ever tasted such modelling soon discovered that the empirical (the 'materiality'), and therefore the measurability of anything - from lifting bricks to writing computer codes and running financial markets - is a process constituted by bodily outcomes with disparate spatial and temporal path-

ways, collisions, and dissipations ([11], [7], e.g. p.252), at the centre of their outlook they posited various constructs of ‘non-material’ labour to suit speculative schemes designed to produce desired ends. It would appear to be yet another offspring of a long, spectacular history of thought familiar from textbooks full of ‘universal’ variables and absolutes. It means that one of the most challenging tasks facing us today is to instil into work practices the way of seeing decisions as selections whose outcome depends on limits of applicability of the chosen variable spanning what is always necessarily only a finite domain of interest. It is not about turning everyone into a walking encyclopaedia but about a change in attitude in connecting things before us, about appreciating Michel Foucault’s [12] “order of things” of today. Conceptual, creative, and yes, ‘speculative’ thought is still much needed - though in a very different methodological framework! Given the immense increase in the number, variety, and speed of design and re-design, the demand for a new class of ‘knowledge workers’ endowed with a heightened conceptual creativity will be insatiable (e.g. [13], [14], [4] ! For there are many ways of describing finite systems - by definition open to a variety of approximate treatments. Conceptual innovations in problem formulation and methodology leading to a winning choice of workable ‘finitude’ will always be much valued!

4. What is to be done?

There are accomplished examples of the power of empirical, quantitative modelling, as well as of its limits, in different fields of social studies, i.e. outside physical sciences and technology where it has become a norm e.g. [14], [15]. Since only a finite spatio-temporal and thematic domain can be modelled that way, what something ‘is’ as it enters the modelling is expressed in terms of input-output parameters chosen to reflect only how it is registered in its given function, i.e. not in its totality as an ‘organism’. In this ‘dynamic ontology’ regime the causal drivers lie hidden from the view offered by input-output variables. At present, only a very select group can at least in

theory bridge the gap between the level of input-output level of production account ready-made for the workforce and that of the structural order imported into production from the ‘lab and cloister’ – the very ‘order’ ultimately determining relevant social outcomes. Also, assessment of any productive activity must now reflect closely not only the contingent flow of manifold ‘supply and demand’ but also the ‘risk’ brought into the act by dependence on other players and on competence in its execution. This ‘risk’ factor no longer stands merely for ups and downs affecting the “relative surplus value” and sales; the sum of such interactions constitute Hannah Arendt’s *vita activa* [16] – elsewhere figuring in association with the Common or Citizenship (e.g. [2], [3] and [17], [10], and refs. therein). The choices and decisions made in the course of such actualisation of ‘knowing and being’ determine - more than any top-down ruling by a ‘centre of authority’- the norms for what is or is not socially acceptable, what is the expert and what the public domain, good and bad, etc. Today functionality of such decisions depends much on the actor’s grasp of and competent access to the limits of applicability of defining parameters of new forms of order and ordered structures. This ‘finitude’ makes such structures open on a global stage to perpetual re-design and re-networking by front line sciences and by the social structures instrumental in bringing them about or set up in their wake. These driving forces cut across traditional subject boundaries. They lie well outside of the range of human senses, of bodily powers, even outside an above the average command of knowledge and communication; they rapidly acquire a life of their own! Apart from a few notable exceptions, this challenge is not matched by availability of relevant instruction in education and management concerning competent recognition and use of new, ‘hidden from view’ pathways of power and thought (see e.g. Eshun, 2003, [18], [19], [20], [21], and refs. therein). As a result, the playing field of today is left almost entirely to runaway complexification of life, caught in ‘cunning matter’ e.g. [5], and subjected to the terror of complexity-enforced division of labour. This calls for a fresh research

agenda aimed at redeeming directional thought grounded in the reality of our cultural heritage and presence – still very much veiled by centuries of masterly speculative impositions - by recasting it into ‘genealogical lines’ of ‘digital finitudes’ generated and legitimated by the empirical, quantitative methodologies characteristic of the 21st century’s ‘meta-modernity’. It will open the way for a radical re-appraisal of the human content of work and value and offer the opportunity to develop a meaningful social quasi-equilibrium. A spectre is again haunting Europe – indeed this planet! This time it is a spectre of ‘digitally-enhanced’ serfdom. And this time the spectral forces are ‘classless’ - be it in their spectacularly selective ways of attack! For no amount of hot dollars can buy them off! Marx was probably the first thinker to argue that industry, production in the broadest sense of the term, is the ‘reality’ of science, and of independent reason in general; as such it is also a bearer of its cultural contradictions. The task of bridging the gap between the drivers of development launched by emergent techno-science and the functioning of human systems must then be a fundamental challenge to the post-mechanical age. There are many striking manifestations of this gap. For example, if George Friedman and Meredith Lebard appreciated what was happening, around 1990 at, say, the IBM T.J. Watson Institute, DARPA, AT&T Bell Labs and elsewhere - such as the movement of trillions of dollars ‘from hardware to software’ - the grotesque predictions in *The Coming War with Japan* of 1991 (and in many similar expert studies of that period!) could never have been published. More recently, we had the Iraq war, the Crash of 2008, the Arab Spring, and so on. It was also the disenfranchising of individuals at all levels of the work process – an inevitable consequence of such a gap - that was one of the key reasons for the depth of the collapse of the post-war socialist experiments; needless to add, the disenfranchising produced by today’s ‘post-Fordist’ work practices plays a key role in destabilising Western democracies! In his *Specters of Marx*, Jacques [22] opens with Hamlet’s timeless lines (“the time is out of joint”) and uses them as a

point of departure for a brilliant elaboration designed to bring out the deepest meaning of value in human affairs. It provides a foundational discursive space for the much cited passage from *The German Ideology* where Marx offers his vision of emancipated humanity, of what the living ownership of one’s physical and intellectual capital might look like: “...to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise, just as I have a mind, without ever becoming a hunter, fisherman, shepherd or critic.” The necessary condition for this ideal to begin to come true is to give individuals as early in their life as possible a chance to ground his or her judgement - and the uptake of top down political and ‘technical’ (specialist) instruction - in a personal, bottom up, object based and project-mediated, “genealogical-archaeological” [23] manner of experiencing the fullness of life, of the making and choosing and symbolising. A workable curriculum designed with a view to addressing this agenda in the context of the British educational system - or rather in spite of it - has been developed in the course of the last two decades and successfully implemented, with encouraging results across a wide range of ability, from school to post-graduate levels [24], [20], [21]. It is an outstanding intellectual challenge for educationalists and leaders of all human organisations to provide any individual with a seed for building up confident competence in acquiring and utilising their skills - at his or hers reach of specialist skill and knowledge - with an appreciation of contexts and synergies required for effective functioning in the open action spaces framed by ‘digital finitudes’.

5. Postscript

At the height of another collapse of the established order under the overload of meaning this order had itself generated, Jan Amos Comenius (Comenius) offered in his *Orbis Pictus* (1658, trans. as *The Visible World in Pictures*) a pragmatic method of leading young minds out of the runaway obscurity of speculative constructs produced by Schoolmen and aristocrats. His aim was

to reconnect thought with the social and material reality of the present - and make it available to all... Would not updating a few idioms in his book make it quite topical today?

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