Knowledge-based Value and Intellectual Property

"Behind it all is surely an idea so simple, so beautiful, that when we grasp it – in a decade, a century or a millennium – we will all say to each other, how could it have been otherwise? How could we have been so stupid for so long?" John A Wheeler

Introduction

Since I am not an academic, this is not a rigorous academic paper, but rather a discussion paper written for academics in order perhaps to stimulate research into what I believe to be largely uncharted academic territory.

The paper is based upon the concept of "Open Capital" which, as J K Galbraith said (1) in relation to the creation by private banks of money, is "so simple…. it repels the mind".

"Open Capital" is defined as "a proportional share in the assets and production of an Enterprise for an indeterminate time".

"Enterprise" is defined as 'an entity within which two or more individuals create, accumulate or exchange Value".

"Value" is indefinite or indeterminate: Value is to Economics as Energy and Matter are to Physics and indeed, it could be said that Economics could be described as the Physics of Value. Unfortunately, our current Economics and therefore Politics remain mired in a pre-Copernican anthropocentric paradigm of absolute certainties and "closed" boundaries and definitions.

A "Quantum leap" is needed in Economics to explain the phenomenon of "Open Capital" and to form a basis for what follows we must make a brief detour into Metaphysics.

A Metaphysics Of Value

Robert Pirsig (2) sets out a case that Western civilisation has long been in the thrall of an artificial division between "subject" and "object". He proposed that the primary reality is "Quality" which is both formless and indefinable. It is not a "thing" but an event at which the subject becomes aware of the object and before he distinguishes it: ie a non-intellectual awareness or "pre-intellectual reality".

Quality is the basis of both subject and object. The bad "Quality sensation" one gets from sitting on a hot stove leads to a consciousness both of oneself – the subject – and the stove – the object. He went on to distinguish between "Static" and "Dynamic" Quality, where the static order of one level forms the precondition for the establishment of a "higher" level.

The perspective I offer upon a new form of Economics more nearly related to Reality is based upon treating Value as a form of the "Quality" envisioned by Pirsig.

Another perspective upon Value is that of the writer E.C. Riegel who - in a posthumously published book on monetary matters (3)- defined "Value" as " the Relativity of Desire" again implying indeterminacy.

Taking Pirsig's approach Capital may be viewed as "Static" Value and Money as "Dynamic" Value. "Transactions" are the "events" at which individuals (Subjects) interact with each other or with Capital (both as Objects) to create forms of Value and at which "Value judgments" are made based upon a "Value Unit".

The result of these Value Events /Transactions is to create transaction data. eg A's widget is exchanged - by reference to a particular mutually agreed Value Unit - with B for something of value to A

Note at this point that Economics – of virtually all schools - confuses indeterminate Value with a market– determined Price – a confusion best summarised by Oscar Wilde's definition of a Cynic as "someone who knows the Price of Everything and the Value of Nothing".

Data may be static, such as the written word and magnetic polarities on computer discs; or dynamic, such as the packets of energy passing between databases and defined under the "Internet Protocol".

This Data identifies the relationship between subject individuals and "Valuable" objects:
'Material Value' – such as Land, Commodities, Goods and Services;
'Calorific Value' ie energy derived from oil, gas, and other fuels and sources;

'Intellectual Value' is the key element of a "Knowledge-based Economy" and itself comprises Data in manifestations such as music, video, information, the written word and software which may exist in electronic or tangible forms.

The information in respect of the ownership and use of underlying assets with different forms of "Value" constitutes "Title" – that fundamental "metadata" (known to systems analysts as an "RDF Triple" -"RDF" being "Resource Description Framework") in respect of the subject/relationship/object encapsulated in the concept of "Property".

There are other forms of Value which are not definable by data: who has not paid more than an object is "worth" because it has "sentimental" Value?

In particular we see:

'Emotional Value' – at its most basic, the need to love and to be loved, but extending into the concept of Society;
'Spiritual Value' – who am I? Why am I here? Questions in relation to God and the relationship with the eternal.

We may therefore look at the "transaction" or "value event" in a new light. We may, for instance be prepared to exchange Material Value for the right to watch a film – Intellectual Value – from which we derive Spiritual and/or Emotional Value. As these different types of Value accumulate they form Static Value/ Capital, in Material, Intellectual or other forms.

The creation and circulation of Value essentially requires two key concepts:
(a) the concept of Money;
(b) the concept of Property;

both of which are in fact not Objects but rather Relationships.

Money as Dynamic Value

Few people understand Money: John Law (5):was perhaps the first, in 1705:

“Money is the Measure by which Goods are Valued, the Value by which goods are Exchanged, and in which Contracts are made payable”.

“Every thing receives a Value from its use, and the Value is raised, according to its Quality, Quantity and Demand”.

“Money is not the Value for which Goods are exchanged, but the Value by which they are Exchanged”:

The following quote, again by E C Riegel (3), is a good summary.

“The purpose of Money is to facilitate barter by splitting the transaction into two parts, the acceptor of Money reserving the power to requisition Value from any trader at any time. The method of Money is to employ a concept of Value in terms of a Value Unit dissociated from any object. The monetary unit is any adopted value, which value is the basis relative to which other values may be expressed.”

The monetary process is a dynamic one involving the creation and recording of debt/credit obligations between individuals and the later fulfilment of these obligations.

Riegel speculated that Money exists only in the transitory instant of Exchange of Value: in other words that Money exists only in motion.

This transitory monetary “Value Event”/ Transaction involves the creation of “Credit”: so in exchange for something of Value to me (of whatever type) I will assume an obligation to provide something of equivalent Value at a future point in time.

These obligations may be recorded on transferable documents, electronically or even merely retained mentally. The sum total of all obligations as recorded in the accounting universe of all sets of accounting records essentially comprises a “ledger of ledgers” or “Master Ledger” as Riegel put it. Another way of viewing it is as a “Cloud” of “Accounts Receivable” and “Accounts Payable”.

This massive database of “Credit”/obligations is not Money, but temporary “Capital” (often known as “Working Capital”). It is Static Value – which only becomes “Money”/ Dynamic Value when exchanged in the transitory Monetary process. Rather than the “clearing” of these obligations by a mutually owned and operated exchange and offset system we utilise Banks as intermediaries to carry out the “Clearing” function for us.

In this electronic age what we think of as Money is in fact not tangible “cash” but rather for the most part (97% of Money in circulation) the flow of data between databases of obligations maintained by Credit Institutions (ie Banks and Building Societies).

The role of Credit Institutions such as Banks in current Money creation is little understood. Banks literally "loan" Money into existence. In exchange for an obligation by an Individual to provide to Banks something of Value in the future (ie an IOU or claim upon Value) as described above Banks merely issue a reciprocal IOU.

These Bank-issued IOU's which we are accustomed to use as our Money are therefore not a claim upon Value, but rather a claim upon a claim upon Value. A "double negative" giving rise to what is essentially a "false positive".

The true source of Credit is the Individual, not the intermediary Bank, and Banks therefore levy upon Borrowers a return – in the form of Interest - upon Money they create arbitrarily and which is for the most part not based upon Value at all.

In summary, Money need not be– as it currently is – an "Object" circulating in the form of a Bank-created IOU but should instead be a relationship involving a dynamic process of Value creation and exchange by reference to a "Value Unit".

Property

We are accustomed to think of Property as an Object. But as Jeremy Bentham pointed out (4), this is not in fact the case:

"It is to be observed, that in common speech, in the phrase the object of a man's property, the words the object of are commonly left out; and by an ellipsis, which, violent as it is, is now become more familiar than the phrase at length, they have made that part of it which consists of the words a man's property perform the office of the whole."

In other words, "Property" is in fact a relationship consisting of the bundle of rights of "ownership" and "use" of productive assets.

Capital as Static Value

Capital represents the static accumulation of Value and exists in exactly the same types as the underlying forms of Value identified above. Some forms of Capital are "productive" by which it is meant that when an individual interacts with it in a "Value Event/ Transaction" he may create and accumulate further Value: so as I type this paper using Microsoft's "Intellectual Capital" (word processing software) I am generating further "intellectual value".

Note here that it is not a question of either the individual (Labour) or Capital being "productive" since both the output of an Individual and of Capital assets have a Value in Exchange. It is the relationship between Capital and Labour which is productive.

The basis of the Value of Intellectual Capital is the "property" or "copyright" accorded to me by mandatory legal protocols (statutes) and which may or may not give rise to further Value in transactions with other individuals.

As outlined above, a part of the financial system – the monetary system - is based not upon Value but rather upon temporary legal claims ("Debts") over Value asserted by

Credit Institutions.

This may be described as “Deficit-based” finance and where (as is usual) it is secured by a claim over assets owned by the borrower it is “asset-backed”.

The other part of the financial system – the Capital markets – are based upon absolute and permanent legal claims of “ownership” of productive assets which may be described as “Asset-based” Finance. This has typically used the statutory legal “wrapper” of the Joint Stock Limited Liability Company.

Financial Capital therefore consists of two types:
“Debt” - obligations of finite/temporary duration but with no participation in the assets or revenues of the borrowing enterprise other than a rate of Interest;
“Equity” – absolute and permanent ownership/participation (without obligation) in assets and revenues of the enterprise.

It is the absolute (ie without obligation) and infinite nature of “Equity” that leads to the discontinuity between Debt and Equity in the existing system of Global Capitalism which is at the heart of our current problems as a Society.

The Enterprise

Three forms of Enterprise are identified:

(a) the ‘Charitable’ Enterprise – where Material, Calorific or Intellectual Value is exchanged for the Spiritual and Emotional Value of giving;
(b) the ‘Social’ Enterprise – a ‘Public’ Enterprise open to all, where Material, Calorific and Intellectual Value are exchanged in agreed proportions;
(c) the ‘Commercial’ Enterprise – a ‘closed’ or ‘Private’ Enterprise where Material, Calorific and Intellectual Value are exchanged between a limited number of individuals but may be retained or distributed in whatever way the Members agree.

Early enterprises were partnerships and unincorporated associations. However, the need for institutions which outlived the lives of the Members led to the development of the Corporate body with a continuing legal existence independent of its Members. In the UK the earliest Corporates were created by Royal Charter – a possibility which exists to this day.

The key development in the history of Capitalism was the creation of the ‘Joint Stock’ Company with shares of a ‘Nominal’ or ‘Par’ value, typically £1.00. The UK Industrial Revolution was fuelled by Capital raised through Joint Stock Companies largely created by Act of Parliament.

From 1844 onwards, the creation of Companies through registration under Companies Statutes further streamlined the process and over the next 150 years the (controversial at the time) addition of limitation of liability led to the Public Limited Liability Company. Such “Closed” Shares of “fixed” value constitute an absolute and permanent claim over the assets and revenues of the Enterprise to the exclusion of all other “stakeholders” such as Suppliers, Customers, Staff, and Debt Financiers.

There is a discontinuity or fault-line within this ‘Closed’ Corporate. It has the characteristics of what biologists call a ‘semi-permeable membrane’ in the way that it allows Economic Value to be extracted from other stakeholders but not to pass the other way.

Furthermore, there is a particular conflict – the “Principal/Agent” problem - between the interests of the Shareholder Owners and their Agents, the Directors and management. The greater part of Companies legislation is addressed at regulating this conflict.

So while Capitalism may not, as its critics aver, be 'broken' – Capital most certainly is and always has been - through the discontinuity between 'Fixed' Capital in the form of shares ie Equity; and 'Working' Capital in the form of debt finance, credit from suppliers, pre-payments by customers and obligations to staff and management.

In particular if we consider Financial Capital alone we see two opposing claims to the same assets and revenues: in other words a fundamental and irreconcilable conflict between Equity and Debt.

Due to this discontinuity between permanent Capital and Capital of defined duration the exchange of Economic Value in a Closed Corporate is restricted and true sharing of risk and reward is simply not possible.

The UK Limited Liability Partnership ("LLP")

From 1844 onwards in the UK it has been mandatory for partnerships with more than 20 partners to be incorporated – the result being Corporate Partnerships with unlimited liability. In 1907, it became possible for Partners to limit their partnership individually rather than collectively within a UK partnership at the cost of being unable to participate in the management of the partnership.

This model routinely continues in the USA where it is the normal structure for professional partnerships. In the late 1990's UK professional partnerships, faced with the prospect of individual bankruptcy as a result of litigation against the firm, successfully lobbied for protection, which arrived in the shape of the Limited Liability Partnerships Act 2000 and came into effect on 6 April 2001. Since then over 9,000 UK LLP's have been incorporated, for the most part from conversions of partnerships previously with unlimited liability.

The UK LLP is supremely simple and remarkably flexible. All that is needed is a simple 'Member Agreement' – a legal protocol which sets out any matters (such as Aims and Objectives, governance, membership rules) that Members agree should be included. This Agreement need not even be in writing, since in the absence of a written agreement elements of Partnership Law apply by way of default.

Members of a Partnership have both a collective and an individual ("Joint and Several") responsibility. However, the LLP is not legally a Partnership but is instead a Corporate body with a continuing legal existence independent of its Members.

For the first time anywhere we therefore have an "Open" corporate entity with a collective responsibility (to the extent the members agree) but without an individual responsibility

The 'Open' Corporate

This 'Open' Corporate has two extremely powerful attributes. Firstly: the fact that any stakeholder (and not just investors) may become a Member of a UK LLP simply through signing a suitably drafted Member Agreement: this puts the 'Open' in the Open Corporate and allows suitably drafted agreements to align stakeholders' interests.

The second is the concept of "Open" Capital itself as defined above. Proportional shares (such as one half, three fifths, five millionths) in an Enterprise constitute an infinitely divisible, flexible and scaleable form of Capital capable of distributing or accumulating Value organically as the Enterprise itself accumulates Value or chooses to distribute it.

Both of these attributes combine to enable a new form of "enterprise model" for the ownership and use of assets through the way in which the rights of ownership and use of knowledge may be encapsulated and shared within the legal "wrapper" of an Open corporate.

Moreover, because it is possible for those who direct and manage to share in the revenues they jointly create, there is no longer a "Principal/Agency" conflict.

The Community Partnership

If we apply an Open Corporate to a "commons" such as Land or Knowledge the result is a new form of indefinite property right, neither "Public, nor "Private" – through a "Community Partnership" - which has the following Members:
(a) "Trustee" or "Custodian" who "owns" the asset in perpetuity, but obtains no benefit from it;
(b) "Investor" or "Capital Member" who invests money or "money's worth";
(c) "Occupier" or "Capital User" Member who has rights of use of the asset.

The Occupier shares with the Capital Member either the production of the asset or the revenues from the sale of the production. This is essentially a form of "Co-ownership" between the Community, Capital providers and Capital users. If a Capital user pays more than the agreed "Capital Rental", then he automatically becomes an Investor.

Note that Property (eg Freehold land) would never be sold again once within Community Partnership ownership, although Occupier members and Investor members may change over time in accordance with the relevant agreement.

Knowledge and the Community Partnership

There are essentially two "enterprise models" for research and development in our current Knowledge-based economy:
(a) an "open" model with knowledge freely accessible and with research and development funded by government or by the voluntary/academic/charitable sectors;
(b) a "closed" or proprietary model where intellectual property is owned by Private sector corporations and development is funded by Equity and Debt finance.

Perhaps the best example of this is the software sector where there has been the proprietary model exemplified by Microsoft, with the new alternative of the "Open Source" movement being exemplified by the Linux operating system.

In the former, the "Creative Commons" is essentially "enclosed" using the legal protocols of "copyright" law: in the latter an alternative legal protocol – the "copy-left" licence – ensures that anyone using software created under this licence may do so only if he undertakes to make any amendments or additions that he makes to it freely available under the same terms.

This Copy-left licence makes it difficult (as was intended) to profit from Open Source software and tends to limit its production to those willing and able to give their time and knowledge to the Community by working voluntarily.

By using an "Open Corporate" we may open up the possibility of a simple new alternative which is both Closed and Open at the same time: so an LLP "owning" software may be:
"Closed" in that only members of the LLP may use the software; and
"Open" in that anyone consenting to the LLP agreement may be a member.

Furthermore, since the LLP agreement will provide an agreed revenue-sharing arrangement, then if the software is made available free, there will be zero revenue to be shared. It therefore becomes possible for "Capital Partners" to finance software development by investing in future revenues – if there are any.

Economy 3.0 – the Knowledge-based Economy

Economy 1.0 describes the global economy as it existed for thousands of years. Commerce was decentralised but disconnected, and individuals transacted with each other directly.

"Market Presence" was physical and the economy was a barter economy, with money existing as an Object in tangible form, and credit, where it existed, being generally a bilateral arrangement between buyer and seller.

Economy 2.0 describes the global economy as it is now. Commerce is centralised, but connected, and Market Presence is generally via intermediaries.

Money exists as an Object either as bank notes or as electronic bank-created IOU's and the monetary system is based upon banking intermediaries configured around Central Banks.

Enterprises compete with each other, while Profits and Losses are recorded in "Double Entry" accounting systems.

Economy 3.0 describes the knowledge-based economy of the future. Commerce will be decentralised but connected, with individual directly connected "peer to peer" and Market Presence being a virtual "Network presence".

Individuals will co-operate with each other those who do not co-operate through mechanisms such as the "Open" Corporate will be at a disadvantage to those who do. Accounting systems will consist of shared "transaction and title repositories".

The logic of the Internet is dis-intermediation. As John Gilmore said:

"The Internet interprets Censorship as Damage and routes around it…."

In particular, this logic applies to Banks as credit intermediaries: the mere existence of "peer-to-peer" lending mechanisms such as www.zopa.com demonstrates this empirically.

In the same way that the technical protocol XML has linked together disparate hardware and software so it is that the "Open Corporate" provides the potential for consensual cross-border legal protocols rendering borders and national jurisdictions essentially redundant.

We will have moved from an Economy centred upon individuals (subjects) via an Economy based upon Money and Capital (as Objects)- to an Economy based upon data and metadata recording relationships. - the "Knowledge-based" Economy.

Open Capital, Economics and Politics

The concept of the Capital Partnership gives rise to a new form of Financial Capital of indeterminate duration. It enables the "capitalisation" of assets and the "monetisation" of revenue streams in an entirely new way.

Moreover, it leads to a continuity between Capital as Static Value and Money as Dynamic Value which has never before been possible due to the dichotomy between the absolute/infinite and the absolute/finite durations of the competing claims over assets – "Equity" and "Debt" - which constitute the existing legal constructs of Financial Capital.

The assumptions of conventional Economics are based upon definitions of Value and concepts of absolute certainties and the rationality of the Individual which do not exist in the "real world".

The opening up of Economics to new thinking based upon reality rather than a closed dialectical loop could lead to a similar wave of research and progress in "Quantum" Economics to the advances which were made last century in Physics.

Moreover, the application of a co-operative networked information-sharing enterprise model incorporating "shared transaction repositories" and pervasive information sharing - as opposed to obsolete "Double Entry" Book—keeping and proprietary information retention - could lead to creation of Value an order of magnitude greater than that possible using current closed and "linear" structures.

Numerous parallels between Economics and other disciplines remain to be explored, if a Metaphysics of Value is used as the basic description of Reality.

Conclusion: Abolition of Labour, Private Property and the State?

Marx argued in his early works (6) that the "Abolition of Labour" – if and when achieved – would lead to, inter alia, the Abolition of the State, and the Abolition of Private Property.

Marx was however proceeding on the basis of Metaphysical assumptions that:

(a) Property rights are Absolutes, being either permanent ownership or temporary use for a defined term;

(b) Value is generated only by Labour, and that Capital is not "productive" – an anthropocentric assumption.

These assumptions also underpin the dominant neo-liberal Economics.

We have already seen that the application of an Open Corporate in the form of a Community Partnership to the ownership and use of assets essentially creates a new form of Property right: neither Public nor Private but a synthesis incorporating an "indefinite" property right of "indeterminate" duration.

The relationship between Members of an "Open Corporate" such as the LLP is not one of employment of Labour. In a "Capital Partnership" Capital does not employ Labour or vice versa.

Moreover, there is no "Profit" and no "Loss" within an "Open Corporate", merely the creation, exchange and accumulation of Economic Value in accordance with an agreement consensually arrived at and not imposed by one Member on another.

But perhaps the most interesting concept is that a Community Partnership constituted as an "Open Corporate" may create the possibility of a "State" which is not distinct from its Members.

Individual Citizen Members of a "Community Partnership" may consensually agree to a collective responsibility within the framework of a CP agreement but would not have the individual or "several" responsibility for other members of a traditional Partnership.

Alternatively, an Open Corporate is not an organisational form but a framework within which sovereign individuals may collectively and co-operatively "Self-Organise".

The outcome is the potential for a Society which is based neither upon the existence of a State (ie a Hierarchy) nor the absence of a State (ie an Anarchy) but is instead a "Synarchy" - a State consisting of a networked myriad "Partnership of Partnerships" in which all individuals are Members.

(1) "Money: Whence it came, where it went" (1975) - J.K. Galbraith
(2) "Zen and the Art of Motorcycle Maintenance" (1974): "Lila: an Enquiry into Morals" (1990) - Robert Pirsig.
(3) "Flight from Inflation: the Monetary Alternative" - E.C. Riegel.
(4) "An Introduction to the Principles of Morals and Legislations" (1789) - Jeremy Bentham (Chapter XVI Para 33).
(5) "Money and Trade Considered With a Proposal for Supplying the Nation with Money" (1705) - John Law.
(6) "The German Ideology" (1845/6) - Marx & Engels.

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