Regulate Access?
Framing the Question[*]

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in Traditional High-cost Areas

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This presentation builds from the core ideas in the following (~six- plus two-page) excerpt.[***]

[If viewing electronically, you can open links to access URL's.]

[*] This excerpt is available at http://www.davidallen.org/papers/excerpt.pdf . Please note that page numbers in the excerpt reflect the original Acrobat file pages.

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[***] The full paper – "The liberal regime in the millennium: Competition policy after Microsoft" – is available for download at http://www.davidallen.org/papers/Liberal Evolution.pdf . The abstract for the full paper is also included here, following the excerpt.

The second leg of our brief journey here considers a model to add the process of collective choice, identified above, so that it is in tension with 'individuals in a marketplace.'

TREK: LEG II
A MODEL – FOR AN EVOLVED LIBERALISM

Our new model, for an evolved liberalism proceeds – at the fundamental level – to:

- Bring forth 'better' conceptions ('technical progress') for a society
- Using the individual/social milieu

Thus there will be two frameworks, or architectures, that underpin this new approach – one is for information, or knowledge; the other is social.

The focus – first – is on evolution of the ideas which make for 'technical progress,' whether those ideas would bring new products, new methods for organizing, or whatever. The edifice, and the edge/envelope, of human knowledge are an intricate mix of the individual and the social. Many leaps of 'progress' depend upon individual inspiration, but that inspiration in turn only springs from the accumulated stockpile, Isaac Newton's 'shoulders of giants.'

The two architectures – one social, the other for information – that together underpin these essential dynamics are in fact intimately parallel, as we shall see. Because this model is dynamic inherently, we will picture both a stock and a flow for each architecture: the stock is the conceptual base from which our understanding proceeds, the flow transports that understanding across time.

Here we will slice across just a representative module of time – one with the essential dynamics – since the purpose for this paper is operationalization of the ideas in prospective new policy, not a full theoretical exposition.

Physical production/distribution of goods and services is of course essential to realize the benefits of innovative ideas. But focusing on the ebb and flow of ideas, themselves, may have its satisfactions. Wars are often fought over ideas as much as over property, religious wars, but even secular conflict – that certainly includes the incessant economic contest, albeit we may be hard pressed to admit and unveil where ideas are the real totem in a seeming economic conflict. Not to mention that ideas are the fount for economic 'progress.'

Without neglecting the physical side – this after all has typically been the whole concern of the economics establishment, the getting and giving of goods and labor – the focus here shifts to the Platonic (and also necessarily Heraclitean …) world of ideas. Later, we glimpse some of the complexities introduced on the physical side, when we try adequately to represent the evolution of information and knowledge, which necessarily is precursor to production.

Turning to the model itself, let's remind ourselves of its main purpose, as bulleted at the head of this leg: we portray how a group reaches and evolves its knowledge frontier – I will call this the 'information product,' to help pin-the-point.[16]

The social side

For an innovation both to be generated and then to be incorporated,[17] a basic cycle must ensue – first innovation, then standardization. This module across time is the basic building block for the first of the two architectures that we consider, the social.[18]

In the innovation half of the cycle, new ideas are generated and tested. But by definition, an innovation breaks the existing standard – here, networks are our subject so that protocol standards are fundamental to operations. A standardization phase follows where the new ideas are sifted, perhaps melded, to identify the best, and a new standard agreed.

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[16] This exposition is also detailed in my "Microsoft vs. Netscape: Policy for dynamic models." A separate paper, with the original inspiration, is from 1992.

[17] Strictly: to be incorporated into a network.

[18] Petros Kavassalis has written several papers that in effect discuss the basic cycle. Phil Agre, to whom I am recently indebted for references to related literature, has also written on the subject. See for instance his, "The law of opposite numbers: Standards dynamics and the global logic of software."

These are the basic events of the cycle – what must transpire socially across the building-block events? For the innovation phase, individuals, operating independently, propose new ideas and try them out in competition with each other. For the turn to standardization, individuals join in a loose hierarchy to assess and choose, perhaps meld, the best ideas through consensus.[19] Since this building block cycle repeats indefinitely, to move the information product ahead, there is ongoing alternation between the fragmentation of individual competition and the coalescence into loose hierarchy for consensus.

Consider the dynamics schematically.

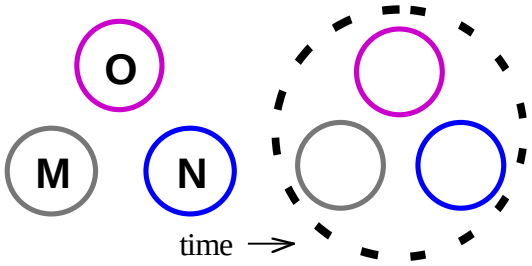

Figure 1 – The cycle, innovation *to* standardization

Imagine a three-firm industry, say Microsoft, Netscape and another firm. During the innovation phase, the firms act independently, proposing new ideas and testing them in the best spirit of competition with each other – they hark to the tradition of the Internet Engineering Task Force/IETF that calls for "… running code," ie proposed innovative ideas need to be tried as running software. In the turn to the standardization phase, behavior reverses. The firms shed their competitive stances; join in a loose hierarchy to assess the trials; pick, perhaps meld, the best ideas; and finally reach consensus on a new standard – we get to the other half of the full IETF rallying cry, "*rough consensus* and running code." The innovation has been both generated and incorporated – it can now run on the full network. As the cycle repeats indefinitely, the firms slip back and forth repeatedly, between fragmentation and coalescence.

What are the implications for traditional structure and conduct? For conduct, industry participants are expected to shift their behavior, repeatedly, between competition and consensus. In the former, they are trying to put forward their best, against their fellow; in the latter, they take a place in a loose hierarchy and strive, rather than for individual gain, to reach – together – a best collective choice. For structure, the industry oscillates like an accordion, the musical instrument – first fragmented into its atoms, next coalesced into loose hierarchy, repeatedly.

A place for such a process of collective choice is the need identified in the first leg.

[19] For those concerned about 'picking winners,' please note that there is a period of competition over ideas. But something *has* been eliminated – namely the failure to reach consensus on a standard, when needed. If we were in this better world the US, rather than blinded by its 'competition only' ideology, might not be so far behind in wireless, where it has trenchantly refused to agree on standards over far too many years.

Is it reasonable to expect that people will actually swing back and forth between competition and consensus? Maybe the better question is whether it was ever reasonable to expect competition, and competition by itself exclusively. Consider each of our daily lives: We each, for a given dimension of our life, live in a world of tighter and wider 'circles of affiliation.' At work, for example, there is membership in the immediate work group, then perhaps a corporate division, then the company itself, even the industry – wider and tighter circles. Moment to moment, a given person will swing from participation in one of these circles, to participation in another – first competing perhaps with the work group across the hall, then in a next moment joining with it in some common task. This seemingly complex dance is built into the human psyche – any model of economic (human) behavior ignores it at peril.

Some will of course question whether there is 'incentive' to reach collective conclusions, to succor group welfare. We are fond of noting human selfishness and self-service. It bears repeating that we, as a scholarly profession, seem to have way overdone it, in emphasizing greed. Only a moment's reflection will confirm that consideration, and concern and action, for one's affiliated memberships/groups are inextricably part of every day's flow, alongside equally strong competitive behavior. Indeed, and profoundly, no man is an island.

Perhaps the point is not comfortable, until we fix on what is the glue that holds the process together. We do not come into the world fully 'programmed' for such a dance. Informal social protocols, learned from the earliest age and shared across a group – even if they are continually evolving, also – seem to be the essential force. Though we may tend to put much stock by written, formal rules, those surely have much less sway over outcomes than do the informal social protocols shared.[20]

If we need examples that the seemingly complex two-step, between innovation and standardization, competition and consensus, is real, we can look to the IETF.[21] Its adroit implementation of the basic cycle has given us one of the most prolific runs in the annals of innovation, as we see revealed in the 'Net and web. More, the ideas are beginning to be articulated openly in what has become the Open Source movement. Linux is the prominent standard-bearer. With the embrace of Linux by some of the largest actors in the industry, such as IBM, Intel, Hewlett Packard and NEC,[22] the ideas of open source – and so eventually, explicit understanding of the two-step cycle – begin to be institutionalized.[23]

The information side

What of the information product, which is the whole purpose of the social gyrations we have just traversed? The information side is perhaps even more interesting.

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[20] For an obvious illustration, consider the Mafia crime family. Death may not be too severe a consequence, to uphold the informal code to which each member subscribes, against formal law. While this is an example that begins 'outside the law,' daily experience is strewn with corroborating, if less spectacular, parallels.

[21] We can also look to the myriad industry 'Forums' – for instance the 'ATM Forum.' But that example is just one among many, and it seems that some new 'Forum' springs up wherever there is need for a new standardization effort.

[22] These four are announcing a new joint 'lab' for Linux. http://news.excite.com/news/ap/000830/00/linux-lab

[23] Sociology of course (and for that matter socio-economics) concerns itself directly with the social side, certainly the bureaucratic behavior of hierarchies. I am partial to Michel Crozier, his The bureaucratic phenomenon.

The information product is a choice, the end result of the sequence of events, rather than something threaded through the sequence itself. Because the choice changes, the information product is dynamic, too. But to diagram it schematically, a pair of contrasting slices – to compare opposite possibilities for a given moment in time – are useful.

Figure 2 – Information product:
Open layering vs Vertical integration (for ideas)

Among all the choices the group confronts as it chooses a new standard (most of the choices are of course peculiar to the technology), typically there is one choice fundamental to and shared across technologies.

- Will the set, of *ideas,* be vertically integrated? A leading example is the both-hardware-and-software vertical integration of the Apple Macintosh design.

or

- Will the design be horizontally layered? An example here is the open Intel-standard hardware platform for PC's.

Open layering opens more opportunities for the introduction of variety and so innovation. That must be balanced against vertical integration (for ideas) which typically brings higher performance to the given technology.[24, 25]

So the Intel-standard hardware platform – our 'open layered' case – has brokered, effectively, the introduction of numerous innovations there. For the contrasting example, consider the case *without* vertical integration, where performance degrades. Java, as a cross-platform layer, is a useful example. Java must insert an intermediating layer of software to be cross-platform, so that performance invariably degrades to some extent.

As the group chooses various aspects of an information product at the end of our basic cycle, one fundamental choice must fix the point where the design will fall, on the dimension

[24] Re the Microsoft suit: Judge Thomas Penfield Jackson's ruling against Microsoft's bundling of its browser, vertically, into design for the OS seems to give too little consideration for the performance aspects of such a design choice. If the ruling followed the analysis here, the vertically integrated design – the information architecture – would be separated from Microsoft's conduct – in the social architecture. Microsoft's use of the design to destroy Netscape would be condemned and sanctioned. But the choice of vertical vs open layering, that is integration or not of the browser, would be acknowledged as a choice subject to community deliberation.

[25] Whether there may be parallels with, and implications for, the social side – in the trade between variety and performance – will be the subject of another paper.

between open layering and vertical integration.[26] Despite currently fashionable views that open layering is inherently better, in fact there is a basic tradeoff necessary to be *chosen*, between performance as against opportunity for later variety.

For many, as just said, the notion – that information product is a choice, it is not foreordained – is radical. The 'radical' fact becomes clear only when the social and the information sides can be deconstructed, one from the other, as here. While notions of 'openness' do accede to a superior position on the social side, that is not the case with the information product. It is time to allay confusion in the discussion about open standards, accordingly.

Architectures

We have depicted *flows* for both the social side and the information product – we started with flows to underline that this model is inherently dynamic. To make evident the architecture for each, we must now posit that which our minds seek as a base, to follow changing flows: the *stocks*.

As said initially, the social and the information architectures are intimately parallel. That becomes clear with the stocks. The stock that structures architecture for *both* the social dynamic and its information product is a looser or tighter hierarchy, with variety nested at lower levels. For the social side, that is the concatenated communities and sub-communities into which the group fragments and alternately rejoins. For the information product, that is the looser or tighter logical structure, with greater or lesser variety enabled.[27] (To prevent confusion, it is worth being clear about the 'looser/tighter hierarchy,' common to the stock for both, as just described: it is a choice for the information product, while it is descriptive of alternate states in the regularly repeated shifts on the social side.[28])

The complexity – but also the power – enters with commonality at higher levels while variety, and so differences, persist within concatenations. Variety is the trace left by prior innovation but which did not have to be resolved into a standard.

In real world terms, what are these two architectures?

Concatenated communities have been illustrated above with circles of affiliation – but communities and sub-communities are so embedded in everyday experience as hardly to need an example. Community becomes the unit of analysis here. It is community where the primary force, the glue – the implicit, shared protocols – are forged and re-forged.

The rise of application service providers/ASP's on the web makes an example for information product. Particularly for small and medium-size businesses/SMB's, ASP's make an otherwise difficult service available. Enterprise resource planning/ERP (eg SAP or PeopleSoft) may otherwise be out of reach for the typical SMB, for instance. But an ASP packages ERP in a feasible form.

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[26] The reality that this choice is often, in practice, left to a default of the 'chaotic mode' in no way alters the analysis.

[27] To paraphrase, slightly, my "Microsoft vs. Netscape," referenced earlier, page 119.

[28] 'Loose hierarchy' in the standardization phase corresponds here to tighter connection among the concatenated sub-communities.

The point for illustrating tighter or looser hierarchy – in information product – with concomitantly less or more opening for variety/innovation, arises from the degree of flexibility the ASP service affords. A large firm, which can hire its own software developers, may implement ERP more precisely tailored to its own circumstances. Hence there is greater variety in implementation of the ERP. But the ERP available to a smaller firm through an ASP will necessarily limit the variety available – while the tighter design for the information product put forward by an ASP means better performance for its SMB customers, particularly in that ERP is available at all to this class of customer.

Finally, does the new model have any observations for the world of physical production and distribution, without which we would not realize the benefits of innovative new ideas? The neoclassical frame stands. Partly, it even simplifies. Now the messiness of variety[29] is offloaded onto this brave new world of dynamic analysis. The standard analysis even becomes 'true' – rather than mocked as a fantasy, only for the textbooks – since competition largely engages over commodity production. But partly though, the complexity only mounts, since the analysis must localize to each concatenated sub-community, with its particular 'variation on the theme.' This of course is just a glimpse.

The view from a hilltop

Another way to put concatenated hierarchy is to speak in terms of interplay between part and whole. That has been our concern from the start, notably the individual set in community. When animated by freedom to choose for the individual and at the same time structured by shared protocols for community hierarchy, part and whole bring us the salubrious tension where chaos and order are twinned. Though perhaps a seeming paradox together, Plato's fixed world of ideas brings analyzable order to a perch from which we might exploit change; while Heraclitus' river into which man can never step twice flows the innovations of beneficial chaos and change, refractory to analysis, past our door. The ongoing tension between this order and chaos gives us a positive grasp to map events, they point us to normative policy as well.

By denying key industry features for joint effort, the Microsoft suit has raised questions about anti-trust as the principal safeguard, at a time when the perils of concentration mount. We have sketched a model which would extend traditional liberalism, to set individual choice in its community context. With the objective to advance the knowledge frontier, competition may spur innovation while, in temporal succession, consensus allows to incorporate change usefully. The analysis may have taken on complexity, but also power.

We, largely implicitly, have been talking about network industries, where standards force a consensus. Do these ideas apply beyond, to traditional businesses? Traditionalists likely hope not. But since the same community dynamics apply directly to the markets for standard supply and demand, Pandora's box may unavoidably be open … That is a debate for later.

With a new model in hand for an evolved liberal regime, what are the implications for policy? Since we have identified the difficulties with anti-trust, is there something to bolster it or to put in its place? The policy implications take us down the final leg of our trek.

[29] Eg, Chamberlin's monopolistic competition, or Hotelling's 'circle.'

For the excerpt:

Though the full paper addresses policies other than access, the following two pages introduce policy in the context of the approach here.

TREK: LEG III
NEW POLICY – THE LIBERAL REGIME EVOLVED

Policy, in this new model, is a function of community process. But modernity has long driven some – certainly those we consider to be the advanced societies – beyond much semblance of the community envisioned here. Community does not scale well. Population growth, and particularly the advent of transportation and communication capabilities that connect us with faraway places, each contribute. As a consequence both our daily routines and our living/working geography take us beyond the sort of nuclear geographic clusters which naturally encourage community and its process.[30]

In the place of personal-bonds-with-reciprocity and dialog-for-consensus – the currency and political process, respectively, in a village – we get first money, then eventually voting.[31] These things are not going away, nor would we be pleased to see them disappear. But their reality brings focus to the central requirement for policy: how to implement community process in a world that has left community behind.

That will be the – repeated – principal theme as we try to consider policy in specific areas.

As important, policy in this new model takes on a character different from today's typical use of the term. The prime force for this new style of policy is the informal protocols shared and evolved in a community. Pivotally, these informal rules arise through the working of dialog in the group, a community process rooted in informal exchanges around the group's membership; this process both applies and evolves informal protocols. When we speak of policy in this new context, we mean both informal rule and process – an organic force that embodies and powers a markedly vital 'policy.'

This represents a 'new day,' compared with formal rules, and specialist bodies to promulgate them. Rather than disembodied rules issued by faceless specialists, where the rules themselves take on primacy – protocols wedded to the service of individual/group welfare, as proposed and settled among peers, and identified as 'one's own,' take the center. 'Policy' is a live affair: change is proposed from any quarter, when there is need, and through the deliberative process the community sets about evolving the implicit rule, 'owning' the process along the way and subsequently the new rule.

The contrast with formality and specialist is in high relief. Policy-in-community is a marked departure from today's world, where policy rules are the rarified province of specialist agencies, lawyers, the judiciary, academics, and legislative committee staffs. Today the rules take on a life of their own, while the process is – at the very best – difficult to access for the industry, or consumer, worker bee.

Both the individual and the social hierarchy, from the model, are of course at work in the community process. As described throughout, the individual proposes from the peer level; then

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[30] Population aggregation, and early transportation, were features of feudal times as well of course, if in much lesser scale. They seem likely to have changed 'village life,' parallel to recent centuries, if less perhaps by coming before cognitive evolution to a more multi-centric view of economic endeavor. Is there a causal relation, in one direction or another, between such evolution and population growth/technologies?

[31] Especially here, but throughout, the parallels with, as well as differences from, Douglass North's analysis are obvious. See for instance his Institutions, institutional change and economic performance.

the hierarchy, in which the individual plays his/her part, disposes. As said, our biggest task is to ask how the brave new world may be implemented in concrete, vital form – when societies have already moved to a complexity which would smother such operation of nuclear community.

In the spirit of this new world, the discussion of specific policy here will propose outlines of possible approaches, so flagging the need for new dialog and inviting other proposals or comment – in the IETF's terms, a draft preparatory to an RFC.

Side trip

A recent surprise brought home nicely the stark difference between social systems based in formality and those rooted in informal exchange. I was taken aback to learn of a pointed mindlessness – the term seems jarringly suited – in the judicial wars between incumbents and entrants in US local telecoms. Some text had inadvertently been left out of a Supreme Court finding. So entrants, for the time being, are prevented from taking what virtually all participants agree are reasonable steps. In particular, they are hamstrung to some extent as they organize their cages where equipment is collocated in local telco switching offices. In a world not so rigidly wed to formalities, there long ago would have been a general, if informal, agreement to add in the missing text and get on with it.

At the same time reverence for formal systems,[32] like with competition and freedom for the individual, has a compelling background. It grows out of the same collective solipsism, I believe. Despots wreak their discomfort precisely by preying upon, and turning to their own, non-group ends, the community protocols which would favor group over outsiders. (The despot may be petty, such as the neighborhood bully, or larger than life, be that a Suharto, or a Milosevic, or a Gates, or you name your favorite/most hated.[33]) They would (and do) return to collective solipsism, in favor of themselves of course, by so diverting the process.

Formal systems are intended to be inoculation against self-serving ("capricious") choice by a would-be despot. Just as with other liberal-ideology-so-far, hard-won gains against such deprivation must be protected – but also extended now, to allow re-entry for the best of human social/community mechanisms.

The genetic makeup that drives sociality and community in people will not, in any event, be denied. Again, our main problem is how to enable such nuclear capability amid a level of social complexity that has left it behind.

… back to the trek

Let's briefly look into three areas of policy that are particularly salient today for the 'Net and web, where this trek began. We start of course with anti-trust, then turn more briefly to intellectual property rights and finally privacy. How may these policy areas be approached with the new model?

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[32] Going under the rubrics of 'rule of law,' 'transparency for process,' or 'independence for a regulator,' in campaigns to spread the ideology around the world. The issue is not whether there will be a rule of law – but whether the law will be formal and so enjoy less personal commitment, if any, from the governed; or be the rule of informal protocol which springs from, quickens and guides the psyche, when formalities are in any event generally subordinated.

[33] Just below, we put such 'spoilers' in their own dubious spotlight.

For the excerpt:

The references for the full paper:

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PLEASE NOTE THAT MATERIAL WITH A URL CAN BE ACCESSED DIRECTLY, BY OPENING THE LINK, IF YOU ARE VIEWING THIS ELECTRONICALLY.

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For the excerpt:

The abstract for the full paper:

The Liberal Regime in the Millennium

Competition Policy after Microsoft[*]

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— ABSTRACT —

The Microsoft anti-trust trial in the US has brought to the fore – implicitly, but nonetheless – the most serious challenge, so far, to competition policy and hence to liberalization. This paper proposes a positive, if major, step beyond, to consolidate and extend our gains, based on widened understanding of industry mechanisms. The focus is on operationalization of a core set of new ideas previously set out.

The anti-trust law, under which Microsoft has been sued, dates from the turn of the century, now a century ago. Critics, even in some cases opponents of Microsoft, complain that the doctrine was construed for 'smokestack industries,' beginning from oil and rail, and ill fits present-day high technology. Particularly, critics object that though the policy might have fit a static market, today's rapid evolution of technology requires something different. Thoughtful scholars who look beyond neoclassicism – knowing that even oil and rail on occasion exhibit dynamism, beyond neoclassicism's limiting statics – the vision of these scholars may long have peered beyond anti-trust and seen a need for a basically different approach. However, little has so far been made of the opportunity the trial affords, to think about positive steps, to move beyond traditional anti-trust doctrine.

As the core safeguard, to assure a level playing field with full and fair competition, anti-trust is the barrier against transgressing behavior, the principal guarantor that competition policy may deliver as promised. To rattle those foundations, under competition policy, makes a profound impact. At stake in the questions about anti-trust is the entire policy edifice of competition and liberalization, the engine that drives Western reforms now delivered around the world through the likes of the IMF and WTO.

Not just in the US, concerns about Microsoft hegemony have arisen, periodically, in a number of countries. Though the trial emanates from the US, its troubling questions will now reverberate in other ears. The impact is to leave an open question about the suitable path ahead for policy that has so far been sacrosanct – indeed, the case puts on trial, itself, the policy

[NB: Open links to access URL's.]

[*] Paper available for download at http://www.davidallen.org/papers/Liberal Evolution.pdf and http://www.davidallen.org/papers/Liberal Evolution A4.pdf .

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[***] The Eighth International Joseph A. Schumpeter Society Conference – The Millennium Conference, "Change, development and transformation: Transdisciplinary perspectives on the innovation process," 28th June - 1st July 2000, Manchester, UK. http://les1.man.ac.uk/cric/Schumpeter/default.htm .

foundation under Western liberal reform of world economics, though now increasingly diffused and implanted.

Building from new understanding of industry mechanisms, this paper considers a positive, if major, step beyond current policy for liberalization. Dynamics are the core from which this step springs (and may prove applicable to what are usually thought to be more traditional industries). The new model builds from my previous work which so far has posited just the main ideas. This paper is particularly concerned with operationalization of such a new model. The analysis takes cases from the Internet as basis for inference; with the both collision and convergence of computing with telecommunications, the model applies directly to the emerging new combined network – whether it applies more widely will be one of the livelier debates.