Beyond Competition:

Where are We in the Dialog about Policy for Telecommunications?

David Allen

TABLE OF CONTENTS

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David Allen[**]

> *"The efficient economic agent of traditional theory is essentially a 'superior statistician,' as [Kenneth] Arrow put it, whereas I argued that she also has considerable gifts of...*communication...*that will enable her to affect economic processes."* (p. 158)
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> *"It is now becoming clear why, in spite of our lip service to the dialectic, we find it so hard to acknowledge that* contradictory processes *might actually be at work in society...But after so many failed prophecies, is it not in the interest of social science to embrace [*such contradictions*], be it at some sacrifice to predictive power?"* (p. 139)

<div align="right">

Albert Hirschman
Rival Views of Market Society
1992, my (reverse-)italics

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1 Competition

Where is the current dialog about *competition* in telecommunications?

Competition has become *the* watchword in telecommunications policy, around the world. With AT&T's divestiture a dozen years ago, and the formal advent of competition policy in the US, the notion of competition as the right choice became perhaps the principal US telecommunications export globally. One result has been a set of trials – experiments with competition in telecommunications – across whole societies. Where have these trials so far come out?

Competition in Telecommunications? — National Experiments

• JAPAN: With several active and successful competitors for various parts of its basic network services, and with more than a thousand competitive entrants overall, NTT seems to be in the very thick of competition. Long distance is the pivotal business, and NTT has lost dramatic market share on its most heavily trafficked corridors. In fact however, the Ministry itself has carefully maintained a differential between the long distance rates NTT may offer and those that the New Common Carriers/NCC's offer in Japan. The NCC's have been assured a price advantage. That surely is not competition as conceived neoclassically.

•THE UK: BT, despite a decade of competitor entry into UK telecommunications, continues to command a greater than 90 percent share there. That also is not neoclassical competition.

•THE US, itself: In the aftermath to divestiture, two steadfast and healthy competitors came to share the US long distance market with AT&T, ultimately to compete with it for global partners, even global markets. Long distance prices declined in the US, which was the desideratum that perhaps drove breakup in the first place. But recent research has converged from several different quarters, each analysis demonstrating how US long distance is really a price-umbrella oligopoly, led by AT&T (Huber, Kellogg and Thorne, 1992; Noll, 1993; Taylor and Taylor, 1993). Price declines, in this analysis, have been a function of regulators' fiat, as access charges are shifted from carrier to user, or also are the product of technology cost declines continuing from pre-divestiture days. Recently prices have even risen. This also is not neoclassical competition.

Those are the early-established trials. What of the experiments that have got underway only now?

•AUSTRALIA: The results from Australia are too fresh to be in any way conclusive, but the structure put in place does reflect careful hedging between full competitive freedom for the actors versus explicit and restrictive safeguards.

•NEW ZEALAND: New Zealand is also very new, but already substantial doubts have been raised about the sustainability of competition for telecommunications in New Zealand.

Some newly-industrializing economies are instituting competition for parts of their telecommunications, such as in Chile. These by and large are also too new to yield usable conclusions. But anecdotal reports suggest these cases have encountered difficulties implementing competition, difficulties which directly parallel the experience of the earlier experiments.

Is there no where that competition has succeeded in telecommunications?

•FINLAND: Finland is a case like almost no other in telecommunications, where relative equals face each other. Initial competition has lowered some prices; it has also raised local prices, and residence prices more than for businesses. Here competition appears to operate closer to theory.

According to theory, the main experiments with competition in telecommunications – the largest already a decade into their trials and implanted, by now organically, into some of the world's most powerful and developed economies – are a failure, a *miserable* failure is really the only accurate summary.

Yet if you asked the AT&T executive responsible for long distance services, that person would surely declaim about the heat and rigors of contending with MCI's marketing prowess, or Sprint's thrust into internetworking. Similarly, NTT executives will surely tell you that DDI, and the others in Japan, have pinched NTT's cash flow and put them very much on their toes – look at the steady declines in total number of NTT personnel over these years, they might say, if you should need confirmation. (Or in Germany where competition has hardly arrived, officially anyway: DBP Telekom

officials will recount the number of world-class competitors who have already set up shop on German soil.)

Or: The "word" in Washington telecommunications circles, today, is that there has swelled up a very broad consensus among US policy protagonists – enormously significant since, to date, any rewrite of the outdated '34 Communications Act has been stymied by literally decades of gridlock and failure to reach agreement. What is this "broad consensus," reportedly to be enshrined in the first substantial legislation to issue in 60 years? – namely: full and open competition is the way forward for US telecommunications.

Clearly, our use of the notion *competition* is, at the best, subject to ambiguities. Analysis tells us competition does not exist, but practitioners say they can tell it when they have to live with it. The policy debate, in the protean US, embraces a future of competition when the record says a decade, and more, of trying has not got there. What, indeed, do we *mean* by competition? Can we add substance to our interpretation of the notion and thereby do fuller justice to what now seem to be sharply conflicting uses? (We can ask the parallel question about our use of *market*[1] – if competition is process, market is its structure, the flow and the stock which together give us conceptual grasp.)

How is the notion of *competition* framed in different cultural settings? The perceptual purchase we may get by viewing from alternative perspectives can help to triangulate on confusions. Here I will attempt to encapsulate the view from three, separate cultural vantage points.

Competition — The View from a Given Culture

The first view, the natural starting point is seen often as the Western, neoclassical position – more accurately though, it represents a strain of economics that has been perfected largely in the US. The tenets of methodological individualism call up the crux of the position perhaps most parsimoniously, I will suggest here. According to methodological individualism the unit of analysis should be carefully limited to the individual; certainly no miasma, no "ghost of a collectivity" qualifies as a realistic subject for analysis. So also when we turn to competition – from this perspective – competition is the free interaction of individuals each in pursuit of individual goals, none of whom has power to control another. As soon as power and influence intrude, so that some entity may dominate individuals' actions, competition begins to be squelched and extinguished.

Of course even in the US economics establishment, there is significant range and nuance in views. More to the point, the problem being tackled here is precisely a disagreement and confusion over the basic definition. So necessarily, I am highlighting and characterizing only one position among many – but if that position distills an essence which is useful for comparison and contrast with an even *more* different set of views, then our purpose is advancing.

When I turn to contrasting positions – in the East – I naturally face the same difficulty, but on a much larger scale. The number of views of the matter, there, is large indeed. For the purposes here I will limit the question to views of competition in Japan, since Japan is one well-developed case in question (but then note that the next step along

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[1]In his Preface to the Paperback Edition, p. vi et seq., Hirschman (1992) [quoted to open this paper] also marks how "there always has been a *large variety* of…market societies." (my italics)

this track is to enrich the picture with other key cases across Asia and the Pacific – some similar but some vitally different relative to Japan).

Since I am not Japanese, I face the dilemma of trying fairly to convey fundamentals from a culture where I personally lack inculcation in its mainsprings – but again, that only recapitulates the underlying problem that is in hand. My best sense issues from an amalgam of queries to/talks with friends from industry, the government bureaucracies, and universities in Japan. Appropriate English phrasing, such as managed competition, surely does not do justice to the experience in Japan,[2] inevitably borrowing as it does the Western presumptions which the words carry. Whatever the translation, apparently the experience is a mix of what the essential US economist would see as intense competition together with, at the selfsame time, a sensibility for the welfare of all competitors taken as a group.

Can the experience in Europe, and the culture(s) there, contribute a useful third perspective on our question of *competition*? Europe, too, is a welter of different cultures and approaches to competition. But Europe is most remarkable, in this context anyway, for its steps toward bridging across those very differences. For me the essence is captured by the tensions between DG IV, the competition directorate in Brussels, and practices in individual countries. As the EU moves to establish common practices for competition across Europe, subsidiarity also works to maintain some differences continuing, from ingrained past practice in member states.

These three hip-pocket characterizations of different regional engagements with competition – in the US, Japan, and Europe – would be no more than caricatures, unless they capture essential features which prove useful to compare and contrast. And, a sample of three is surely a bare minimum. Is it enough, does this set a stage where we can begin sorting out the ambiguities which beset our grasp of *competition*? (We should also note: we left the realm bounded just by telecommunications, when we asked about general notions of competition – we may return to telecommunications, after groundwork has been laid at the level of competition itself.)

To try effectively to utilize this stage setting, of contrasts and complements, I am going to reach back to what I see as some fundamentals. For inspiration that is even prior to the usual concerns with scale versus dominance versus access, I will take my cue from the information processing perspective. Specifically, I will here posit two fundamental challenges that I see facing any human, cognitively. Economics is at base, after all, a human science and the operative assumptions about cognitive functioning are really all-determining. The aim, in looking to these fundamentals, is to find a purchase for commensurating among the three thumbnails of competition that have just been sketched from the corners of the triad.

I invite your own assessment of the two basic building blocks which follow.

2 Cognitive Antecedents — Two Fundamental Challenges

The first cognitive challenge might be called "getting beyond oneself, or beyond one's own horizons." Ironically though, while the emphasis seems to be on the "getting beyond," the principal concomitant appears to be solid establishment of a "sense of self, separated and independent."

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[2]And certainly would not make happy Japan's trade negotiators, who now characterize the *US* position in just these terms.

Conceptual Solipsism and Self Definition

The lurid *counter*-cases come all too easily to hand, where the prototype is a dictatorial leader intent on impressing his/her view of the world onto others. History is replete, of course, with political demagogues who take any ruthless measures to stamp out dissenting opinion, who mobilize nationally to proselytize for their viewpoint among the neighboring duchies, frequently through war. Or, religious figures whose entire lives are spent trying to corral a widening horde into accession to a delineated world view. While more than a world view may be at stake in the political leader's war, or in the holy crusade fomented by a religious zealot, the cognitive facets are also compelling, and instructive for our purpose.

In our own personal lives – at least in mine, and I believe certainly in others – the tendency to treat others simply as instrumental to our own goals seems remarkably near the surface most the time. Whether in pursuit of survival basics such as sustenance, shelter, reproduction, or of loftier pleasures, the capacity to see another person as means to the end is almost a natural refrain in the repertoire. Again, more than the cognitive usually will also be at stake each time this occurs. If the job aspirant excitedly chats up a member of the company hierarchy, the "real" job is part of what is at stake. But if the aspirant has mistaken and the other party is actually a rival who can undercut, we see that cognitive clarity is also at stake. *Viewing* the job landscape *with oneself as the frame* may help with target acquisition, but *the cloud generated from hopes and fears for self likely distorts that vision*. The conceptual solipsism of framing everything from one's own view has the most far-reaching impact.[3]

How else to frame? we only have ourselves, right? Surely one of the mysteries is the human ability to contemplate itself – consciousness – so that indeed we *do* have some, (though, in the end, limited) choice of frame. The first cognitive challenge I identify is to escape conceptual solipsism – seeing the job scene, for instance, not just from one's own view but also from other, "detached" perspectives. An unavoidable prerequisite seems to be a well-firmed sense of self, and the reason is fairly evident: an amorphous self, without reasonably defined boundaries, cannot be pinned down in any attempt to establish other frames for perceptual reference. So the first challenge, "to escape the frame of one's own horizons," depends on establishing "a solid sense of self, separated and definite." Separated and definite relative to what and whom? – that takes us to the second challenge.

The stamp of self definition, then separation of view from self – hard won – is a first step. But, overall, the cognitive task is a clear view of one's world. The second part of this task, the second challenge might be called "assembling, and re-assembling, the picture, together with others."

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[3]The same story can be told countless ways of course, the more compelling the drive, the more telling the effect. The young swain, coming back from a first date, convinces his partner to a goodnight kiss in what may initiate the mating cycle, a proximate "real" cause. But he likely *also* does so because his *view* sees this woman as a potential mate, when *her* view *may remain completely unaccounted*. (Or, if the genders reverse in this exchange: she succeeds with her heartthrob.) Those later convicted of date rape may have some sense how sorely their vision grew from internal imperative, and not from a realistic assessment of the world around. Or: those sadly re-assembling the pieces after a divorce, now with small children to raise, are in a more complex situation, but may also have reason to re-assess their earlier perceptions.

Communication For Information

Even with clarity relative to oneself, the cognitive job just begins. For the ever-evolving picture that we carry around in our head, we are overwhelmingly dependent on our interactions with others. Without our social interactions, we would not have even language. The experience of the feral child – brought up among animals, without other humans around – speaks profoundly to our dependence on others for the organizing machinery of language. That we take for granted, of course.

Much "information" we gather and use – certainly in the modern world of numerous organized media, overflowing in plenty – is in fact the product of another's efforts. Some information is primitive, input directly from our senses – the sound of the alarm clock in the morning. Beyond that, though: When we search an Internet database, read a newspaper, watch the evening news on television or ask our spouse about the Little League schedule, we may experience the event as "gathering information." In fact, in each case, someone else was there before and stored what we then came along and plucked in our own time, effecting finally the communication between us and them. In a quite basic sense, communication (albeit, sometimes on a "store and forward" basis) is prior to information.

[To return momentarily to telecommunications: We see then that policy planners – first in the US, now around the world – might more constructively be thinking in terms of a National (now Global) *Communications* Infrastructure, rather than of an N*I*I. The *policy* frame of reference will mightily shape the outcome, and communications is the force that underpins access to information.]

The second cognitive challenge I identify is to "exercise the web of communications essential to build and maintain the accurate view." Our job aspirant, after adopting a frame which recognizes the uncertainties of the interview, must rely on those who are familiar with the company, to discover which executives can in fact go to the heart of the job decision. Perhaps the aspirant finds a better fit in the organization because of consultations all around.

We each have an experience of the world not strictly available to anyone else. As such, we have *our* contribution to a larger picture, and we depend on others to allow us *their* contributions for enlargement of *our* view.[4] The result is unavoidably a shared view – our picture, and that of others, is necessarily the product of joint effort. Each person's view will differ from others in some way (necessarily, because of individual experience), but each view will also share with others. Finally, the process is iterative. The picture(s) evolve through repeated flows along the network of communications. These dynamics, though they make the story complex, lie at the heart of understanding this cognitive fundamental, I believe.

Together, the two challenges which everyone faces are, first, clarity for one's own vision through distinct definition of self and, then, building and evolving a both-separate-and-joint picture through repeated exchanges with others. Now – if you have limited taste for psychological construction, you may be chafing, asking what purpose this has served. Well, to keep on track let us recall that competition, and its various interpretations, are the present question.

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[4]If I do not, someone else will here refer to the blind men and the elephant.

3 Communities of Competitors

The position on competition identified as neoclassical above – the strict focus on individual action – surely is responsive to the first of the two cognitive challenges. Choice by individuals, to serve each person separately, parallels the purpose of a defined self seeking a clear view. But that position, attached here to the West and specifically to the US, has got us only "half way to paradise." The position identified as Japanese, however, brings together the seeming-contradictions necessary to meet *both* challenges. There, competition encourages self-definition and clarity of individual view; at the same time, concern for a group underpins the exchange necessary to maintain an evolving separate/joint picture.

Whether that is compelling for you will depend on the force of the "challenges," for you – but it will also depend on how comprehensible you find the idea of combining apparent opposites. How might such a seemingly-contradictory arrangement work (not necessarily how does the Japanese culture work, but at least how *could* one such system work)?

Competition to Consensus — Evolving Ideas

A group – a "community" – actively stay in touch with each other, conveying different impressions of some question in hand. The differences in view *compete* with each other for the picture that is shaped. Through some mechanism (marked, at this point in the narrative, only as a "black box") a *consensus* eventually produces a composite where certain differences are resolved, and shared elements of cognition are confirmed – the shared part of the picture gels. With time, new experience encourages a re-examination, so there is reiteration of the process…and reiteration, indefinitely.[5]

What of the differences not resolved? There is a "nested" structure to the community, so that any individual holds simultaneous membership in concatenated (if not concentric) groups, some more global in character, some more local. The more local – the more "private" – groups permit the maintenance of differences as local variety [with the uniqueness of individual cognition as the ultimate "privacy"]. At the same time, a question goes no higher than the nested level for which it has some relevance – an issue is only as "public" as breadth requires. The ability of any individual to move viewpoint fluidly back and forth, among levels in the "nest," is central to the dynamics of the iterative process; these dynamics are also integral to any sensible description of the structure.

What is "community" (and what is it at each of its nested levels)? Community is only a piece of the picture in each, and every, member's head. As such, it is *inevitably perceived differently from individual to individual* – but that *does not materially diminish the force of its effect on individual behavior*, and ultimately on outcomes for the group. As fundamentally, the definition of community boundary – who is in and who is out – is also subject to the evolutionary process, and may shift as the process works.

How are differences resolved, to reach the periodic consensus – what is the "black box"? Do subjects acquiesce to perceived authority, does a violent strongman prevail, is there a "Quaker meeting" [an admittedly Western image, but invoked to convey more

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[5]Such a repeated sequence is in the same family of shifts that Thomas Kuhn first made evident – I clearly am indebted to him.

complex consensus processes]?[6] What – and especially *how* – differences resolve to a common view, and which of them are maintained as ongoing distinctions, strike me as one of the determining hallmarks of culture. Though this description based on community has been cast in the cloak of an Eastern culture, characteristic balances between competition and consensus are I believe evident in virtually any human endeavor – even, maybe especially, in a supposedly "Wild West" culture such as the US. Reinforcement, or change, in these norms points to evolution of the culture itself.

What are the metrics – the indicia of payoff? *Speed* of iteration through a cycle tells how quickly new conceptions will be available (limited, of course, by capacity to assimilate new experience into usable new consensus). *Size* of the participating community/"nested" sub-community shows who may partake.[7]

This is exclusively the world of thought – what of the world of action, where economic results actually play out? I have chosen from the start to build from the cognitive, in part because that is where the human interplay is so pointedly intricate. But parallels can be drawn for economic events, the data of the discipline, I believe.

In the Real *World*

First: do arguments beyond competition – arguments for group-based, consensual endeavor – also apply in the world of affairs? (Though the arguments are surely fundamental, I will only summarize here, since space has already been devoted to the comparable question "on the Platonic plane.")

The question seems hardly to need asking. Cooperative behavior, the Janus face to competition, must have been central to human outcomes from the time the possibility first dawned. (Evidence from the animal world certainly seems unambiguous, despite the popular notion that evolution means only competition.) Even in cultures ideologically committed to competition, the economic behavior inside firms – the larger part of economic behavior, in other words, by practically any measure – is actually a mix of competition and cooperation. Certainly, the finest technical achievements of man – and the living benefits they may confer – could not have diffused without some of the most intimate cooperation, whether that be in a lab, a factory, a distributor or in the "backyard gossip" forum at the retail and service level.

More interesting perhaps, the increasing complexity[8] that is the legacy of technical evolution positively demands an increase in cooperative behavior, if there is hope to enjoy benefits – at all steps: to conduct the research, to build the machinery (soft or hard), to learn it, service it and evolve it. Initially the industrial revolution may have, for a time, freed individuals somewhat from their direct interdependence on each other, even for survival. But the proliferation of increasingly complicated tools – of every sort

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[6]Do the systems avowedly committed to "hearing all views" in fact work? Consider Japanese politics during the long reign of the LDP, after the war. Could the Socialists, for instance, say that their position was heard in the policy outcomes? Or, did the votes which perennially returned a Socialist delegation to the Diet in fact weigh in the final balances?

[7]I resist the temptation to construct a concrete case as parallel illustration, until we return to telecommunications. But then telecommunications, itself, comes naturally to hand as a "pure" and whole working example.

[8]In the quote I used to open the paper, but modified, Hirschman actually said, "…is it not in the interest of social science to embrace *complexity…*?" (my italics)

– has injected a reversing trend and made closer cooperation also a new necessity. The question is not *whether* cooperation or not, but *how*.

So, now: how does this apply? Again I will not argue specifically, but I believe machinery for the real world of economic events can be drawn parallel that which is just above for the "world of ideas." In this "community" tableau, the focus is on evolution of "technical" ideas which may enhance life (including ideas about the inner life of the human) – in other words, the dynamics are the starting point, not a derivative. Relations are an inextricable mix of competition and cooperation, with an iteration where competition among alternative new ideas is periodically supplanted by some consensus to gain benefit from those ideas – but variety also is maintained across sub-groups.

Rather than a world view with homogenous commodities that enable competition, the focus is on balancing commonalities against differences. Related to this balance, the maintenance of commonalities from the past – "traditions" – provides the security of stability, which serves then as a foundation necessary to enable flexibility and more rapid uptake of new differences in other areas – more "innovations." When competition *is* employed, that is in the world of the different, rather than of the same[9] – principally to test one new idea against another. Again, rather than either competition or cooperation, the mix of the two is inextricable – it is a mistake to try and think in terms of just one or the other, despite their seeming antagonism. And again, the specific cultural mechanisms by which differences characteristically resolve into cooperative consensus – especially, how "spoils are shared" – mark, and distinguish, a society. The ultimate issue is the human capacity for change.

Performance and Fragility — Underpinnings

The likely first response from a Western perspective asks: but how can the bad behavior which typically is to be expected from ganging-up, and dominance, be prevented, if groups are not constrained by competition? Will not individuals allow their perquisites from the group to substitute for old-fashioned quality of performance?

The answer appears to be as compelling as it is simple: In Japan for example, performance is paired absolutely with group membership – a failure to perform is no more thinkable than is dissolution of group affiliation (but if one is threatened, so may be the other). In an historical antecedent, the formation of literally hundreds of thousands of local cooperatives throughout Japan, as the Tokugawa period came to a close and Meiji arrived, were founded on twin equally immovable pillars: trust, and so group membership; and exactitude of commitment, and so performance (Najita, 1994). A culture of personal commitment to excellence can be compelling, too – then the self is pushing for results, not just the heat of another's success.[10] (Personal honor for each individual also powerfully reinforces self-generated performance.) And the complex of cross-cutting obligations, which membership in "nested" groups produces, can work to secure that excellence for a wide constituency.

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[9]To jump the gun on a look back to the West: Michael Porter's seminal work on corporate competition has as a principal thesis that strategy should differentiate the firm, and thereby *escape* the only competition which neoclassical thinking, strictly interpreted, sees possible (namely, competition among the same, homogenous products). Some then see irony in the title of the book, *Strategy of Competition*.

[10]In *this* world, another's success, rather than a threat to be destroyed and eliminated, is instead a beacon, a call to even greater success by the self.

The cross-cutting obligations are vital. A virulent form of the Western response warns: decisions made by a group will always favor just the group (and so, freeze out others). Well, yes – actually that is the whole idea, to work out balances which *are* broadly acceptable to the group. But the "nested" structure means that smaller groups, ultimately individuals, also have their say, and their place. The "cross-cutting" balance, really among constituencies at different levels, of commonalities and differences, is the structurally integral check-and-balance against abuse. Both part *and* whole have their place, and get their due – no mean trick.[11]

Analogous to the Western neoclassical concern that dominance spoils the competitive ideal, there also seems to be a "spoiler" theorem in the community conception. Since community process is balanced fairly delicately on a shared acceptance for protocols to compete and then agree, a group member can deadlock the proceeding by holding aloof, or otherwise unraveling the tacit path. Just as anti-trust or regulation is conceived to deal with "market failure," so will "shunning" (for the Amish) or "sending to Coventry" (in a British factory) seek to isolate the disruptive element – but none of these remedies, neoclassical or otherwise, proves so satisfactory. Whether outsiders may also act as "spoilers," for the community,[12] will below lead to a pivotal issue.

Eastern ways of thinking seem to underpin – to facilitate – this community conception. Western thinking is schooled to see opposites as contradictory, exclusive of each other; but in Eastern thought, opposites seem to be juxtaposed easily and productively. So cooperation intermixed with competition feels natural. In a related thought model, Buddhism holds as one of its bases a cyclicality – first generation, then recession. That would be encouraging to a naturally dynamic approach with, first, a flowering and competition of ideas; then, consolidation around some amalgam.

This is a most brief outline that meets both cognitive challenges, as well as works in the real world too – one that situates competition and the individual, however contradictorily, in the natural setting of consensus and community process. So far, Western proclivities have been typified around the neoclassical ideal of competition. What does a more sensitive, nuanced view of the West reveal?

4 The Western Economic Frame

The Western concern with methodological individualism surely proves correct – to mistake different individual's conceptions of the community for something transcendent only clouds the understanding. But, now we see how complex is the real task of understanding – somewhat differing views of community have somehow all to be accounted. But we may also sense the power that could be available to a complete analysis. If humans will naturally – unavoidably – conduct their economic lives from the perch of some group membership,[13] power goes to the analysis that so accounts.

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[11]What of those outside the community's *external* border? That *is* a basic issue: see below the discussion about "expanding the community."

[12]In the nineteenth century in the US, when settlers who headed into the west were forced to "circle wagons" against a threatening foe, was it necessary to suspend the more deliberate exchanges in community life?

[13]Some nonetheless see membership as tenuous – they might ask: Is there actual pleasure in group affiliation? or, do we flee into inevitably temporary alliances only under pressure of common external threat? The wagon train, from the footnote before, is depicted as well organized prior to the threat – was

The position staked out in the neoclassical view – defense of the individual, so that individual choice should not be unduly swayed – is hard won, clearly. Overbearing pressure from would be-dominant demagogues[14] was the sober predicate underlying the first cognitive challenge. There *is* good reason to defend individual choice – the reason is imbedded in the human makeup. But having stood the individual upright, the next – I believe, necessary – step is to situate that person in the social sea where everyone does swim.

Where specifically is Western/US economic thinking, inspected in this strong light?[15]

A Reprise

Externalities are the principal outcropping of community,[16] in the neoclassical system of thought. Externalities might, on occasion, be described as the paradigm's Achilles heel – they could also be an invitation to new thinking. The effects of scale – though less commonly conceived in demand, especially those in demand – are at a similar place. To cope with the pervasiveness of differences set against commonalities, there arose monopolistic competition (and its progeny) and then economies of scope. Concerns with agency have given us information asymmetries and moral hazards. From the Eastern perspective, we see a "second order" *symmetry* of information asymmetries – *everyone* has a privileged view, relative to others, on *some* matter. In that approach, it is a *strength*, rather than a flaw, that we can pool our separate contributions to share a jointly more robust picture. Moral hazard *could* refer to the "spoiler" who would disrupt the productive community process. But surely it is the notion of choice articulated by a group that will give Western economists the greatest pause, with a long preliminary struggle already underway.[17]

Though orthodox economists have lately begun to focus specifically on evolutionary processes, their attention has generally got as far as growing complexity. Another set, of heterodox economists, long fixed on economic evolution, are more concerned with network styles of economic organization. The network is surely the Western/US analogue to, and likely the step before full-blown consideration of, community.

Joseph Schumpeter was perhaps the original evolutionary economist. Though he was to change (or at least shift) his mind on some specifics, he established the idea of a dynamic cycle. Among today's heterodox, one senior statesman is Albert Hirschman (already quoted of course). Using notions of "exit" and "voice," he consciously intended to suggest co-existing opposites, with exit representing the side of competition. In fact, I

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the threat of, say, poverty necessary as an earlier impetus, for those pioneers to band together in the first place?

[14]Though Max Weber may not have intended it precisely this way, his charismatic leader whose vision is routinized into a bureaucracy depicts exactly the transition envisioned in the first challenge (and also, it must be recognized, the transition from good new idea to consensual standard!)

[15]There is of course a tradition, extending from Marx, that excoriates capitalism for its destruction of community ties. The question here, though, is not discontinuities in thought, but the prospect for continuities.

[16]Any serious discussion of community, from the West, must acknowledge antecedents such as Durkheim, or Tœnnies and his gemeinschaft and gesellschaft.

[17]Marked perhaps at the one side by Kenneth Arrow's *Social Choice and Individual Values* (1951), and at the other by Amartya Sen's "Rational Fools" (1977 – Sen is of course Indian, working in the West).

believe the two ideas, together, also nicely set up the dynamics around transiting the boundary between "inside" and "outside" a group.
Whither Creativity?

Where do the new ideas, the spurs to competition, come from? Though not addressed previously, both these styles of thought, from East and from West, depend on some flow of new experience or new thinking to fuel prospects for a better life. The West may openly celebrate novelty, but the new is no less in evidence, say, in Japan. The community conception is built, in fact, from competition among new ideas.

Creativity, it is commonly observed, is a special gift of individualistic cultures, such as in the US or the UK. Do individualistic cultures have a superior capacity to generate innovation, when compared with the community conception? – the prospect does not seem too farfetched. Some would even say that, after innovations are created, the more community-oriented economies are better at adapting and commercializing them.

Until this point, the thrust underlying, here, has sought synergy for the Western framework when brought together with the community conception. Implicitly though, that entails an expansion of community, a fairly dramatic expansion. Large societies with rather different sets of rules for resolving, and maintaining, differences – protocols for competition, on the one hand, and communities of competitors, on the other – would "open their [cultural] borders" to find new, now common cultural ground with each other. As put previously, the "individual would find its place in the social sea." What – then – is the fate of creativity? Is it possible, in a "joint culture," to spur creativity *and* to effect common purposes? – or, is the most sparkling creativity a "spoiler" that necessarily abjures community? The question is pivotal to the conclusions that can be drawn here.

And, as we try to look both East and West, expanding community becomes the pivot between the two views (before we can then turn back to telecommunications).

5 When Community Expands

Europe, as observed earlier, is today's living laboratory for the expansion of community – the widening of the sense for what is inside as against what is out. The European experience suggests the process is exactly the tug-and-pull that is now familiar, between reaching new common ground and maintaining differences. The almost innumerable pan-European agreements that have been effected, along with local variations still continued, are testimony. Compared with "normal" [non-expanding] operation though, there is a key difference: what is now at stake are the protocols of the process itself.

Those same rules may evolve day-to-day also, but in expansion they themselves become the grist for any competition/consensus machinery, since different whole sets are now colliding. With the rules themselves at stake, there *are no* accepted guides for what will be kept and what will be melded. The going is gingerly, at best.

Why people continue to "push out," expanding the boundary, is a question not asked so often, but basic. The would be-hegemonic demagogue does account for important eras in history. But the balance of the record leads us back to the question asked earlier – what underlies the "urge to merge"? Many nation states have traversed the same amalgamation, joining together what then became the component elements of the new state. Europe is just the most recent and visible case. Perhaps the ties are less

strong, however, the wider the loop that is thrown. Devolutions – recently the USSR, or Yugoslavia – make clear that forces also move in both directions.

Is the community conception viable, in a world where different groups' different sets of rules truly collide – where they cannot "agree to disagree"? That seems to be the question, and in an increasing number of fora around the world. A tentative answer seems to be:

Collision or Expansion?

The social nature of the human means that virtually all people operate by reference to a set of decision norms iteratively shared with others – "community" is unavoidable (the exception, the vanishingly small number of true hermits serving to highlight the universality of the principal case). Technology – communication and transportation, especially – have nudged and pushed together communities which might otherwise stand more alone. But also there is something else in the human (if not well-explored intellectually) which reaches out, and without which the technical nudge would largely be ineffective (perhaps triggered by the technology, but the human element nonetheless is determining).

In a world of *communities* interacting, the idea of externalities, rather than acting mainly as a "patch" for the conceptual system, has instead a useful role. Whether a rule is internal or only external to a given community becomes vital. The stability of a community's evolutionary trajectory, though not a simple equilibrium, becomes central to any analysis of how two communities may interact together, particularly the prospect for a mutual expansion. The Western/US case of "competition only"[18] becomes a special case of the general set.[19] To agree on "competition only," apparently the community has tacitly (or otherwise) also agreed to forego some of the more intricate satisfactions which would require cooperation, perhaps in part out of desires to guard zealously the sanctity of the individual, perhaps to spur even greater creativity as discussed already.

The prospects? – to reiterate the obvious: Failures to reach new common ground for two clashing sets of rules may beget the classic wars to silence murderously "the other side," whatever the weapons and the battlefield. *Now* we can ask about viability for the community conception: to take the horrors of genocide as the extreme case, are whole communities lost? or, does the "style" of the community often live on, to re-assert itself another day? The alternative prospect – the alternative to violence as the resort – the prospect for mutual expansion is more hopeful, but it does also seem to come in many shades of gray.

With this question-as-tentative-answer, policy has surely become a more complicated subject. And we have moved from trying to sort out confusions about competition alone, to policy as a broader matter. Have we been positive/descriptive, or have we been normative in this quest? To ask about competition and policy is, in the first place, normative. But along the way we had to be as accurately descriptive as possible – in this case, to try and ferret out the individual in its social milieu. Most importantly, the

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[18]Western views of trade policy already find a new context, in the community conception, and its "nested" economic structure. Now, in the expansion which joins groups together, the "trade bloc" takes on new meaning. The bloc is expression of the new group *when it operates as a whole* (but only then). The implications overall for trade are an area that will also likely feel inimical to the Western sensibility.
[19]Analysis of potential merger between two *companies in* the "competition only" world is, of course, a case of the *general* set, with two cultures embarked on a prospective expansion.

normative conclusions are *self-defining* – norms that are the evolutionary product of community function. So, this paper has necessarily been both positive and normative, when taken in this special sense.

With the focus broadened from competition to policy, as we turn back to telecommunications – what are the implications? What might be the future framework for our dialog about telecommunications *policy*?

6 Telecommunications: Framework/s for Policy

Telecommunications, it turns out,[20] demonstrates the cycle between competition and consensus quite precisely. Competing technical innovations will, by definition, not interconnect exactly; only a consensus which eventually melds together the various innovative proposals can create the network, seamless to the flow. (And the cycle re-initiates when the *next* innovations also will not interconnect with the standard which eventually establishes, from the first round and its consensus.)

More profoundly, the tools of communications – the network and its many associated media – become integral to the human web of communication, which sits at the base of the community's reiterations and its unfolding forward. The protocols by which the community debates and then parcels between agreement and diversity – the rules of the "black box" – ride upon the web of communications. Community process itself, in other words, is at stake when we make choices about policy for the network.

It is people who do the communicating, not the tools – but the network and its users will co-evolve together.[21] The modes and patterns by which people connect to each other will shape and mold – sometimes subtly, sometimes not so – as their tools for conversing take new form (intertwined also, of course, with new possibilities in transportation). And typically the network progressively shapes, to account for the community's experience with the system. So our policy choices for the evolution of the telecommunications system ramify to the capacity of the community, itself, to operate – ultimately the network and our understanding of the community itself will co-evolve.

To look specifically to framework for future dialog: What is the policy view of telecommunications which might come from a "community of competitors," as outlined above?

Telecommunications in a "Community of Competitors" — A Policy Framework

Competition and consensus — Innovation and standardization

In a "community of competitors," network evolution is a repeated cycle between a competition among innovations and consensus around a new standard.[22] The capacity to

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[20]Telecommunications is, after all, a construction in the real world of means to connect some community which exists essentially in thought – so that the usually nontangible is then given some evidence in the corporeal.

[21]See Mazlish (1993) for a general treatment of co-evolution between people and their tools.

[22]Notice that this is not the same as the currently popular dictum, "standardize to enable competition" – in fact it is, in logical terms, the *direct opposite*. The competition here is not among homogenous commodities but rather it is aimed to surface exactly the opposite, that is different ideas and different implementations. Rather than anticipating homogenous substitutes, this expects continuing variety to be enabled within any standard.

reach consensus has policy billing that parallels the ferocity of competition; and consensus and competition inextricably intermix, particularly since different technologies will be at different points in their development. With technologies also interrelated, also expect cycles within cycles, and correlatively local variety within standards.

The market for the network, like the market for any new technology, can only emerge as the technology and its users mold – co-evolve – to fit each other. The market does not exist but emerges, evolves. Because a network serves some whole community, adoption of *network* technology depends on transiting a threshold, a critical mass[23] [what in the West would be ascribed to network externalities].

In a process of *social* innovation, users negotiate a cycle that parallels the alternated regimes on the supply side. Because of the threshold, users cannot even conduct *their* experiment with a network until the supply side has installed a critical mass of sufficient size for some community.[24] (The providers in supply also cross a "softer" form of the threshold.) The canonical form of user variety is the demand for private networks.[25] The "nested"/private communities are the basic building blocks.[26]

Dynamics of industry structure

Industry structure is integral to the conception. The appropriate structure is "nested" – a global network likely requires the complexity of at least three major levels, with internal subdivision. But "nesting" has meaning only when taken dynamically. When consensus is required, the layered components operate more monolithically, up to the layer affected; when competition is required to experiment with new possibilities, the pieces fragment. A musical accordion is not an inappropriate image – tracked across time, the pieces come together, then move away from each other; come together, then… An individual component in the "nest" must both define itself distinctly, for separation, *and* be able to link effectively with the other components, for consensual effort – concerns for *both* part and whole are explicitly articulated.[27]

Universality is then a simple idea. Universality is the connection of a given community (the membership at one of the concatenated levels) via some standard capability, that is, as codified at a specific cycle in technical development. Universality has meaning only for a given group and a particular technical moment. If we become serious about a global system for a global community – if community actually enlarges that dramatically – then universality at the global level becomes a distant goal, with many millions still a day's walk from any node on the electronic network.

(Does this complete the story? – by no means. For instance mechanics such as pricing have not been touched here; the cases that *do* appear to be commodities [so that

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[23]As described in the critical mass literature. My own work is an example; there are several other authors also.

[24]France Télécom's Minitel shrewdly built geographical region by geographical region, but nonetheless it faced billions of francs in investment for what could start only as an *experiment* at the national level.

[25]There is some tendency to confound moves toward privacy with the fragmentation necessary during experimentation (the discussion of a "network of networks" tends not to make the distinction, for instance). There is a relationship between privacy and fragmentation for experimentation, but the distinction is also fundamental.

[26]For a more complete discussion of the basic cycle, see Allen (1991).

[27]For a detail discussion of this dynamic structure, see Allen (1994).

there is true excludability], such as reseller offerings, have not been covered. Nonetheless, the case overall is unmistakable.)

In the Western case – this time particularly the US – what are the continuities, or the exceptions?

Western/US Parallels/Contrasts in Telecommunications?

Individualism has been famously on display in US telecommunications, but in recent decades less so the capacity for consensus. For instance in ISDN, when Bellcore finally announced a national ISDN, two RBOC's found themselves unable to join the standard, at least for some time – and this when ISDN had been nationally available in countries from both Asia and Europe for several years. Or in a different way: The recent collapse of large mergers – originally mooted to converge telephone and cable and so break ground for a new "superhighway" – raises sober questions about the US ability to deliver the consensual interconnection that its grand vision would promise. These are just two more conspicuous cases of the US hesitation with consensus, despite its vaunted capacity to produce exciting new ideas.

At the same time, there appears to be a "heterodoxy" also at work in US telecommunications. Internet developers have nurtured a "gift" culture which rapidly assembles consensus for an evolving set of standards. The HDTV Grand Alliance was itself an historic consensus among what had been, to that moment, fierce competitors. Vice President Gore's call that the US telecommunications private sector should assure connection for education and medicine, though a naked return to cross-subsidy on a massive scale, has been adopted explicitly to serve community goals – and the industry has openly embraced the call.

Examples from computing typify the US dilemma, particularly since compared to telecommunications, computing does not have strictly to interconnect. The Open Doc movement, for "document-centered computing," is such a case. A group of companies have moved to make software applications modular, in the sense that a module from one developer would seamlessly interface with another. So a user of a word processing program could call up the graphics package that s/he thought best, though it may not have been written by the developer of the word processing program. This is precisely the "variety-enabled-within-a-standard" which sits at the heart of the conception above. But success depends upon convincing dominating Microsoft to integrate its parallel approach, Object Linking and Embedding, into the effort – standards are "open" only to the extent that there is true consensus.

Europe, perhaps partly as the product of its historical circumstance, has practically enshrined competition and consensus as two thrusts for its telecommunications policy. Though the two may coexist uneasily, competition is intended for instance to bring down cross-border rates, while consensus is necessary to move beyond the bewildering quilt of separate national systems. Sweden, along with other Nordic/Scandinavian countries, has demonstrated how other means besides competition may be effective to deal with the problems of monolithic, dominant organizations in telecommunications. (And globally, structure has begun to move toward three-level "nesting," but with no indication yet that the necessary dynamics are appreciated.)

Such, I believe, are rough outlines for a future dialog about policy in telecommunications. In the prospective framework, regimes alternate between competition and consensus, for the evolution of network and community between

innovation and standards, with a dynamic "nested" industry structure. Though key ideas have arisen from experience in the East, both thought and practice in the US have opened to the possibilities and Europe seems actively to pursue a working model, if still largely unaware that it does so.

The practitioners in the business have now found a place for their observation that, by their own lights, they live daily with competition in telecommunications – their experience of competition is central to this dialog (when, anyway, the competitors are each in pursuit of some new, better method). This dialog is indeed beyond competition, all the while it situates competition as one of its mainsprings.

7 Economics of Communications

Much of this paper has flowed from an information processing perspective on people. Does that simply confirm the information processing view that now is traditional to an economics of information? I think, instead, it propels us beyond. Yes, individual human processing of information is basic to the scenario – but I believe that the scene described here is different in kind from the now-standard picture. Outcomes depend upon (tacitly) shared decision rules which are applied and evolved in iterative communications, communications which in a fundamental sense are prior to the availability of usable information.[28] I believe that encourages us to an economics of communications.

Surely an economics of communications incorporates information (and surely it will be even more complicated). The intent is to move to a more accurate picture and a better world. Whether that would actually be so – both whether more accurate and whether an improvement – will now have to be discussed, debated. Is not that the process – iterative exchange about some new idea – we commit ourselves to?

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[28]I am indebted to Marcellus Snow, Professor of Economics, the University of Hawai'i at Manoa, for sprightly discussion of this question, and indeed for discussion of some of the broader topics in this paper. Meheroo Jussawalla, Senior Fellow, the East-West Center, Honolulu, has steadfastly maintained an atmosphere that encourages committing the ideas to paper in the first place. I, however, am responsible for the conclusions here.

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Telecommunication (from Latin communicatio, referring to the social process of information exchange, and the Greek prefix tele-, meaning distance) is the transmission of information by various types of technologies over wire, radio, optical or other electromagnetic systems. It has its origin in the desire of humans for communication over a distance greater than that feasible with the human voice, but with a similar scale of expediency; thus, slow systems (such as postal mail) are excluded from the field. Beyond the pipe: Ecosystem members will reposition existing business models and launch new digital services, to move beyond connectivity to a new world of cross-industry competition and collaboration. Redefining customer engagement: Telecommunications operators will redefine their approach to customer engagement, as customer expectations, shaped by outstanding service in other sectors, cross traditional industry boundaries. Innovation in these areas will put telecommunications in a stronger position to profit from the next wave of digitalization, while also securing the benefits of digital transformation for other industries and society. The Digital Transformation Initiative will be publishing its report into digitalization in telecommunications later this year. Telecommunications Policy is concerned with the changing roles of telecommunications in the economy and society. It provides a forum for research and debate amongst academics, policymakers, regulators, industry managers, consultants and other professionals. Its orientation is multidisciplinary and international, encompassing issues of both theory and practice.