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‘You Are Wasting My Time’:
Why Limits on Connectivity are
essential for Economies of Creativity

Peter Murphy

The Anxiety to Connect

I carry a palm-size Personal Digital Assistant in my pocket. It incorporates a mobile phone. Anyone can call me, no matter where I am, anytime of the day or night, from anywhere in the world. My phone number, like my email address, is public. It is on the web. Anyone can look it up in a few seconds. My PDA has a wireless Internet connection. I can download my email wherever I am. My Digital Assistant also has a 2GB memory card and stock office software applications (Word, XL, etc.). I can create, send and receive virtually any standard business document at any time, in any place, for any purpose. I am connected.

This level of connectivity in society is impressive, especially for anyone who (like me) came of age in the pre-digital age. But, like anything else in life, it possible to have too much of a good thing. It is possible to be *too* connected. I am not about to suggest that we switch off the lights. Antediluvian measures like shutting down email are not in any sense persuasive. There is a lot of value in being connected. But connection is not an unalloyed good. Connection can be productive and satisfying. But it can also be unproductive and frustrating.

Connectivity is the life blood of business and professional life. Today customers, audiences, clients, vendors, professionals, and peers all link to us through electronic means. There are many functions that we could not carry out without this electronic mediation. The connectivity that it makes possible also has an emotional resonance. Human beings crave the recognition and reassurance that connection brings.

We see this everyday in the office. Small things are always going wrong in offices. Something doesn't work. Someone can't quite do what is expected of them. In these cases, the instinct is to 'make contact'. Questions are addressed to peers or managers. Often this is done for nothing more than reassurance. Even if we are completely lost, we still want assurance that we are doing the right thing. We may have no idea what the right thing is, for so much about human action is uncertain. This is true even in the highly regulated environments of organizations and institutional work places. We have all observed that, oftentimes, it is the 'rule followers' (those who have very rigid conceptions of behavior) who end up being the most lost in these environments and the most in need of reassurance that what they are doing is right. But, no matter who it is, no

matter whether it is the rule fetishists or the rule flouters, everyone values even the smallest gestures of recognition that come with communicating with others.

Electronic connectivity makes ritual demands for recognition easy to make. Such demands are usually implicit. They are part of the subtext of communication. I write to you not just to inform you of something but in the expectation that you will acknowledge me by writing back to me. I speak in order to be spoken to. Electronic messaging has made such invisible reciprocities easy to enact. This simplicity is a social good. We value the effortlessness of so much of contemporary digital communications—the flick of the wrist and the couple of taps of the finger that has us talking to our friend. But even virtues have their vices. For the caller seeking out a friend, the simplicity of network communications is a virtue. For the friend, being called up is welcome—unless, that is, the friend is stressed or busy or moody, or in any other state where communication is not desired.

The line between loving and hating talking to people can be very thin at times. The ease of contemporary communications amplifies what we love about chatting with others. But it also amplifies what we hate about it. Take, for example, the nervous employee who fires off email after email—constantly ‘checking’ what to do. At a certain point, this communication switches from being productive to being unproductive. In an office, some ‘checking’ makes functional sense. It also makes emotional sense. We check to avoid mistakes. We also check as a ritual way of introducing ourselves if we are new to a work place. But ‘too much’ checking is both dysfunctional and emotionally childish. It crosses an invisible line. It exceeds a necessary limit. This is the limit that others place on us communicating with them. Each of us normally want our fellows to communicate with us but we also protect ourselves against too much of this communication.

Too much communication distracts us from time with our own thoughts. This is the time that we use to order and organize our perception of the world. When that organization is disrupted, the otherwise welcome call or email becomes intrusive—and we become irritable. Even if it is our friend calling, our nerves are wracked. In the digital age, as electronic communications have become pervasive, the probability of a communication suddenly switching from being relaxing to being taxing has multiplied.

What has accompanied this is an increase in the amount of unnecessary and unproductive communication, both in a functional and emotional sense.¹ Messaging driven by anxiety is a classic instance of this. Its prevalence in the workplace, though, is not simply an effect of technology. Rather electronic technology amplifies deeper social trends. The underlying reality is that modern organizational life tends toward systemic uncertainty. This perhaps was not what was intended by the pioneers of modern organizations. Business firms for example developed in order to reduce the contingency of markets. Yet they never really escaped market-driven change. Moreover the rules that firms created to replace markets often proved themselves to be an unintended source of uncertainty. Divining the meaning of organizational rules and policies became one of the spectator sports of last century's white collar classes. The dream of the twentieth century was organized life where human action would be planned, and certainty would trump contingency. Little of this proved to be true in practice.

Some people cope with uncertainty well, others do not. Those who have difficulty living with uncertainty often see communication as a balm for anxiety. They send out 'messages' looking for reassuring responses. That, of course, is human, all-too-human. Everyone understands human frailty. But what is sometimes less understood is the impact that such communication has on others. This is especially true in the case of electronic communications. Electronic communication developed in the first place as machine-to-machine communication, permitting scientists in laboratories to access data on machines thousands of miles away. There is a sense in which communicants today often fail to clearly distinguish between communicating with another person and posting to a machine. Electronic communication made possible the easy storing and retrieval of a vast amount of data. But the data model translates poorly into human communications. When I email a person, I am not dropping down data on a machine which someone else might or might not access at their convenience. I am sending a communication in which a response is expected. I am making a claim on another person. That is a claim that is supported by social norms. Communication of this kind comes with an ethical tag attached to it. But it is an ethical tag that often has unethical consequences. For if the communication that is sent is unnecessary (an effect, say, of uncontrolled anxiety), and yet it activates the moral expectations that a message sent will be responded to (a nod to a

passerby will be met with a nod in return), then the consequence of this, if it occurs on a large scale, can be quite damaging. Put bluntly, it can amount to the stealing of time.

The Economy of Time

In modern life, as the time lines for all human activities shrink, even though we live longer, the scarcest thing that we have is time. In the nineteenth century, classical economists talked confidently of land, labor and capital being the principal factors of production—their successors added ‘organization’ to this list. Today this picture has radically changed. For one thing, investment capital is much more readily available. This is thanks to the vast wealth created in the last two hundred years, on a scale unprecedented in human history, and the large retail banking systems that followed in the wake of this. The ‘green revolution’ had a similar impact on the scarcity of land. Labor also is less scarce than it was two hundred years ago. The nineteenth-century revolution in ocean-going transport and the resulting waves of global immigration allowed wealthy countries to tap previously inaccessible pools of unskilled labor across the face of the earth. Today information and communication technologies are permitting advanced economies to access skilled labor abroad without anyone moving anywhere.

In the wealthiest countries, the factor of production that is most scarce today is time. Two hundred years ago even the richest societies had a large amount of unused time on their hands. This was true even in those Protestant societies that had begun to develop a methodical relationship to time. Even in these cases, people waited patiently for the cold of winter or the heat of summer to pass. Today, we longer wait patiently. If the document is not on my desk tomorrow, I will loose faith in you. Our sense of trust in our fellows has become interwoven with our expectations of instant response. Partly this is a function of the fact that modern transport communications and modern electronic communications allow us to respond to anything with speed. Yet it is also, perversely, a function of the fact that we have *less* time.

As the pace of time accelerates, the time available to us diminishes. The faster we act, the faster we must act. The result is that we are chronically time deficient, even when we are capital rich and flushed with labor. Thus the time cycle of projects continually shrinks. The medieval European cathedrals were built across centuries. A suburban

housing division today is built in a couple of months. We work much more methodically than our medieval forbears did. The Protestant ethic gave us time discipline and a discomfort with wasting time. But other time qualities have emerged more recently. ‘Now’, ‘in an instant’, ‘nanosecond’ time figure prominently in our present time conception—electronic communication both reflects and amplifies this phenomenon. We find it more difficult to wait. Patience is no longer a virtue.

To fulfill the demands of ‘now’ time, we have to respond fast. To send an email follow up two weeks later seems like a conspicuous failure. The sender can not be on top of things. We apologize for our tardiness. We crave forgiveness. We were sick. Our friend died. Catastrophe struck us. That is why we could not respond. This pace of things creates anxieties. Employees, managers, clients, and peers—everyone worries if they have enough time to finish a project.

This is not just the classic anxiety of the age of the Protestant ethic. The old anxiety was ‘am I methodical enough to organize all of the parts of the project to bring it to a successful conclusion?’ Discipline and careful planning was the answer to the worry of whether each party to the project could contribute their part ‘on time’. Time in general makes human beings uneasy. Time is the repository of contingency, of what might be, which includes what might go wrong. The newer kind of anxiety, though, is less fixated on methodical approaches to master contingency. Increasingly we replace regulatory method with responsive reflex.

This is the effect of a new kind of institutional power. In most advanced economies in the last two centuries, procedures replaced command structures. Impersonal policy and managerial rules eclipsed patrimonial and loyalty systems. Today a further shift is occurring. Responses to queries are becoming as important technique for managing contingency, or kidding ourselves that we do control contingency, as older kinds of methodical planning. In contemporary organizations requests for information and demands for reporting escalate remorselessly. Planning is now often interpolated in those reporting processes. Requests for information invariably contain powerful assumptions about how we are to proceed.

This kind of ‘infarchy’ or rule by reporting has been intensified by information technologies. The better the communication technology is, the more scope there is for

reporting. Those who most emphatically inhabit the world of infarchy are the contemporary knowledge classes. These are the technical and professional classes that constitute a large and growing proportion of the workforce in the most advanced economies.

The spiraling demands of infarchy help us understand a paradoxical phenomenon observable in the last forty years. The wealth of the major economies has grown substantially. The knowledge classes have done well. And yet the real working time of these classes has also grown. In the nineteenth century, the affluent were time rich. Even mid-ranked British civil servants had time in their afternoons to write novels if so inclined. Today professional and technical classes are time poor, while the traditional working classes, now a small proportion of the workforce, have become time rich. They are the leisure classes of the twenty-first century.

In a 2006 study for the Federal Reserve Bank of Boston, Mark Aguiar and Erik Hurst report that in the United States since 1965 the working hours of males have declined from 42-51 hours to the current 36-40 hours, a gain in leisure time of 6-11 hours per week.² About ten percent of the working population, a segment composed mainly of poorly educated and low income workers, has gained an additional 14 hours per week in leisure time.³ Highly educated and high income workers on the other hand have experienced much smaller gains in leisure time.⁴ In 1965, less educated men and highly educated men spent the same number of average hours per week in market work and in leisure (52 hours and 104 hours respectively). In the intervening period, however, total market work fell by 14.3 hours per week for less educated men compared with 8.7 hours per week for highly educated men. The divergence between the two groups has been particularly marked since 1993, which marked the beginning of mass participation in computer-mediated network communications.

Increase in relative working time among the affluent is in part an effect of increased connectivity. I say 'in part' because the opposite is also true. It might seem contradictory to say, but part of the reason for time scarcity in capital rich societies is the need for the creative core of the workforce to *disconnect*. The most successful modern economies are caught in an interesting tension between intensive demands to connect and a less visible but no less important logic that drives executive, professional and technical

staff into forms of retreat away from the demands generated by the frenetic drive to communicate that characterizes network societies. Both retreat *and* connection consume large amounts of time.

Connectivity not only ‘takes’ time but it also prompts the theft of time. The professional-technical workforce resists this theft by ‘burrowing’ strategies designed to protect their time from being consumed by voracious claims on their attention. The drivers of this dynamic are many-fold. On one level, it is a function of the professional-technical workforce being accessible 24/7. This is not merely a technological phenomenon. It is also social psychological in its nature. People have difficulty switching off their mobile phones or shutting down their email. This is a psychological reflex. If someone is trying to communicate with us, we find this hard to ignore, even in a message-saturated world. This reflex is buried deeply. It is the mother’s response to the crying infant. We are pre-programmed to respond. In a world that places a high functional value on response times, this programming is reinforced. The anger of the consumer trapped in a queue is visceral. In the distant past, individuals thought nothing of waiting for days. For traditional societies, waiting was the social norm. Only the high-ranked did not expect to wait. In advanced economies, the opposite now applies. To wait is insufferable. To make a person wait is a denial of service. If you want to upset me, make me wait.

Even seconds today count as a long time in rich societies. One new measure of social advancement is the speed of web connectivity. The faster the download, the better it is. This is driven by expectations of response. In the first place, we expect fast response from the machines, the servers that provide the information that we want. In the second place, perhaps less visible, but even more potent, we expect fast responses from those we communicate with. ‘Why didn’t you answer my email?’ is a sure sign that one of our peers or clients, an employee or boss, is not happy with us. We have ignored this person. We have denied our communicant recognition.

Yet despite our desire for recognition, we also know that it is rarely forthcoming. We suspect that the smile and the handshake of the old-fashioned salesman is a myth. We are skeptical that we can get what we want. So we are likely to be happier these days dealing with machines: shopping online means that we can purchase our new camera

without having to deal with a sales clerk. As long as the vendor's server is fast and reliable, human-to-machine interaction is better for many purposes. Machines want programmed responses from us ('click one of the items on the pull-down menu') but if the information design is good, we are at least spared too much mucking around. We trade off personal recognition for machine speed. We don't think that Amazon.com welcoming us by name is really recognition—but at least we don't have to wait to be served. We can move at our own desired pace: *fast*.

The prevailing norm in the world of speed is that delay is unacceptable. Or if there is a delay, the supervening expectation of those who are delayed is to be told *why* there is a delay. Dissatisfaction escalates rapidly when the following question takes shape: 'why is this infernal organization not informing me of the reasons why there is a delay?' But that only begs the question of why delay in itself is such a bug bear to us? One answer is that 'your delay is costing me time'. Time is (now) a scarce factor of production. Those who are short of it, guard it jealously. So much so, it reaches the point where if you are wasting my time, you are stealing it as well. Time has become not only a key economic factor but a moral one as well.

Waste is an economic idea. Theft is a moral and legal concept. In the contemporary economy of time, waste (which is in your self interest to stop) turns into theft (which is you having an impact on someone else). If you waste your capital on buying fancy pleasure boats that is your business. I don't care. Nature will take its course, and you will eventually go out of business. But I do care if you are wasting not just your assets but my time as well. Such behavior on your part implies an interesting paradox that you can waste what belongs to me. How capricious of you!

Yet is this true? Can you really waste what belongs to me? The answer to this question rests to some extent on the ambiguity of the word 'belongs'. Does time 'belong' to me? Is time 'mine' and 'thine'? Can I *own* time? There is not a simple or unequivocal answer to this. Time is part of the human commons. If it can be possessed then it is a kind of common property, which everyone has a stake in. I can be efficient or not with my own time. I can organize and deploy it well or badly. Yet the efficient expenditure of my time also depends on others being efficient with their time and not forcing me to 'wait in line'. So, yes, it is possible if paradoxical that you can waste what belongs to me.

The Time Economy of Inventive Thinking

In any society that has a lot of time on its hands, this paradox is neither visible nor important. In a knowledge economy, the obverse is true. The economy of time comes to the fore. This is because of the further and deeper paradox of these economies. Knowledge economies prosper because they are ‘clever’. This simply means that they are good at inventing efficient processes. These processes save energy, time, and money. The arts and the sciences both contribute to this. But the thinking required to conceive of ideas that translate into the economies and efficiencies, as well as the elegancies and beauties, of successful societies is time intensive. You need to spend a lot of time in order to save even more time.

Time is a scarce factor of production in knowledge economies in part because thinking ‘takes’ time. It would not be true to say that thinking ‘steals’ time or that it ‘wastes’ time, though some people would disagree with this. Indeed a common charge raised against those who do think is that they are wasting everyone else’s time. In this view, thinking is a form of idling—which in a way it is. Thinking has its active thunderbolt like moments. Quickness of wit, after all, is a characteristic of intelligence, but then so is persistence. As it turns out, persistence (which implies a kind of slowness) is even more characteristic of intelligence than is being quick witted.

Any work that solves problems, develops strategies, creates breakthroughs, invents new methods, coins new concepts and the like requires prolonged concentration. Flashes of inspiration do happen, but not before an extended rumination on the issue at hand. Such reflection takes time. It draws on the common social fund of time. Societies and organizations have to ‘make’ time for it. Making time is a cost. Often this time seems to have no obvious pay off. Thinking therefore appears to be a waste of time.

The time of invention is paradoxical. Inventiveness, be it conceptual or practical, reduces the time that we spend doing something. We figure out ways of doing what we do more artfully, more gracefully, more seamlessly and more economically. But inventive thinking is not quick. The time we spend in reflection is prolonged. It is not at all evident that there are any technological short cuts that can speed up the process of thought. No kind of ‘brain storming’ or ‘concept mapping’ software performs operations

that resemble anything like the human mind. None of these programs rise above the level of gimmicks.

This is not to deny that there are some viable kinds of artificial intelligence. It is easy to foresee that one day soon electronic filing will be done by robotic intelligent software agents. They will do a better job than I do with my electronic filing. In principle any activity that has a formula-pattern can be mimicked by intelligent software agents. But it is inventive thinking that discovers and forms those patterns in the first place. It is not clear that software could ever mimic this creative or formative kind of intelligence. At the very least, before this is possible, if it ever is, we would need to know much more about the operations of the human imagination and its intuitive structures.

Gifted CEOs, brilliant generals, legendary statesmen, mercurial inventors—all can make ‘leaps’ of imagination that, in some cases, are staggering. They make connections—cognitive connections—that are not just unprecedented but many of them are even very unlikely. But what has been recognized over the past century is that there are also some societies that are very good at encouraging imaginative leaps of this kind. These same societies are also responsible for the large part of wealth creation, both historically and recently.⁵ These societies invent new kinds of work, new products, new technologies and new ways of financing business. Underpinning this is the advancement of the arts and the sciences.

All of this in turn places great demands on the social imagination. The core of knowledge economies is built around an ability to mobilize imaginative capabilities and to make unprecedented cognitive connections. These capacities are not just individual. How far thought goes, how deeply, how richly, how adventurously it extends depends on the society. Mostly it does not extend far. But in some cases it extends very far indeed. Cognitive connectivity, the imaginative capacity to put together things that no one has hitherto thought of combining, stands in sharp contrast to that other kind of connectivity—the connectivity of the network society. One demands responsiveness, the other cuts responsiveness short.

Thinking is a solitary activity. No one ever white boarded a great concept. We communicate the results of thinking, but thinking shuns the public spot light. It does this for a very important reason. It needs to be insulated from distraction. Most

communication is a form of distraction. The responses called forth from others detract from inventive thinking. To think creatively we have to be free from emails, phone calls, text messages, and the like. We need to be incommunicado.⁶

The American artist Bob Dylan once gave a very good explanation as to why this is so. He observed that he was mortified to even think that he was a celebrity. ‘I’m not one, and I never want to be one. I lead a very insular existence. It’s different onstage, because those people look at me as a performer. By being a celebrity, you lose your anonymity. It short-circuits your creative powers when people come up and interrupt your train of thought. They consider you completely approachable. And you can’t be rude to people, so basically you shut yourself down. I know I do. I shut myself down when people want to come up and want to shake my hand or want to talk. That’s just dead time.’⁷

Freedom from the white noise of communication was once called contemplation. That sounds a very old-fashioned word but it is an important one in a world of pervasive chatter. A 2004 University of California Irvine study calculated that the typical information worker today is interrupted or interrupts themselves on average every eleven minutes. This is either because of an incoming email, phone call or tap on the shoulder or because of halting a task to do the same to others.⁸ A study by the information-technology research firm Basex calculated that interruptions now average of 2.1 hours of every working day, or 28 per cent of an average person’s working time.⁹

If you are continually distracted in this manner, or if you open your office door to anyone, anytime, then you will ensure that whatever creative powers you have will be short-circuited. If you are completely approachable, even if you believe that such openness makes you a ‘good guy’ around the office, then whatever time you think you have for inventive thinking is dead time. Creativity requires that we shut ourselves down. We have to draw the shutters firmly closed. Not forever—we are not hermits. But for a sustained time that is a lot longer than eleven minutes. This is because inventive thinking is a prolonged activity of the mind. It relies on the capacity to temporarily disconnect ourselves from the world. And in this lies the irony of our present condition.

Knowledge economies and their infarchies have made connectivity pervasive. Network computing was the great inventive moment of the information society. But, in

order to be creative, the inventive core of this society has to disconnect itself from its own network connections. It has to do this in order to have time to think. Connection brings benefits but so does disconnection. The art of a successful knowledge economy means being to connect and disconnect simultaneously.

Today I am taking my PDA with me. But tomorrow I will leave it at home. Tomorrow I am disconnecting. I am going to shut myself down.

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Notes

¹ ‘Distractions in the office that cause workers to lose concentration cost UK businesses some £139 billion a year, a survey has estimated. A survey, by office equipment manufacturer Brother, found employers lost up to two hours from their working day because of noisy colleagues, mobile phones going off and e-mails arriving.’ Nic Paton, ‘Distractions cost businesses £139bn’, *Management Issues*, January 10 2005. <http://www.management-issues.com/2006/8/24/research/distractions-cost-businesses-UKP139bn.asp>

² Mark Aguiar and Erik Hurst, ‘Measuring Trends in Leisure: The Allocation of Time over Five Decades’, *Working Paper* Number 06-2, Federal Reserve Bank of Boston, January 2006. <http://www.bos.frb.org/economic/wp/wp2006/wp0602.pdf>

³ For women, the gain is 4-6 hours per week.

⁴ Aguiar and Hurst, op. cit., pp. 23-26.

⁵ Peter Murphy, ‘The Art of Systems: The Cognitive-Aesthetic Culture of Portal Cities and the Development of Meta-Cultural Advanced Knowledge Economies’ in David J. Pauleen (ed.) *Cross-Cultural Perspectives on Knowledge Management* (Westport, CT: Greenwood, 2007), pp. 35-63.

⁶ Steve Lohr in the *New York Times* in 2007 reported on recent research on cognitive distraction: ‘The human brain, with its hundred billion neurons and hundreds of trillions of synaptic connections, is a cognitive powerhouse in many ways. “But a core limitation is an inability to concentrate on two things at once,” said René Marois, a neuroscientist and director of the Human Information Processing Laboratory at Vanderbilt University. Mr. Marois and three other Vanderbilt researchers reported in an article last December in the journal *Neuron* that they used magnetic resonance imaging to pinpoint the bottleneck in the brain and to measure how much efficiency is lost when trying to handle two tasks at once. Study participants were given two tasks and were asked to respond to sounds and images. The first was to press the correct key on a computer keyboard after hearing one of eight sounds. The other task was to speak the correct vowel after seeing one of eight images. The researchers said that they did not see a delay if the participants were given the tasks one at a time. But the researchers found that response to the second task was delayed by up to a second when the study participants were given the two tasks at about the same time... In a recent study, a group of Microsoft workers took, on average, 15 minutes to return to serious mental tasks, like writing reports or computer code, after responding to incoming e-mail or instant messages. They strayed off to reply to other messages or browse news, sports or entertainment Web sites. “I was surprised by how easily people were distracted and how long it took them to get back to the task,” said Eric Horvitz, a Microsoft research scientist and co-author, with Shamsi Iqbal of the University of Illinois, of a paper on the study that will be presented next month. “If it’s this bad at Microsoft,” Mr. Horvitz added, “it has to be bad at other companies, too”.’ Steve Lohr, ‘Slow Down, Brave Multitasker, and Don’t Read This in Traffic’, *New York Times* March 25, 2007.

⁷ Edna Gunderson, ‘At the heart of Dylan’ in *Younger Than That Now: The Collected Interviews With Bob Dylan* (New York: Thunders Mouth Press, 2004), p. 289.

⁸ Victor M. González and Gloria Mark, ‘Constant, Constant, Multi-tasking Crazy: Managing Multiple Working Spheres’ in Elizabeth Dykstra-Erickson and Manfred Tscheligi (eds) *Proceedings of ACM CHI 2004 Conference on Human Factors in Computing Systems* (Vienna, Austria, 2004), pp.113-120. <http://interruptions.net/literature/Gonzalez-CHI04-p113-gonzalez.pdf>

⁹ Jonathan Spira and Joshua Feintuch, *The Cost of Not Paying Attention: How Interruptions Impact Knowledge Worker Productivity* (New York: Basex, September 2005).