

# SoundEffects



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## **Channels**

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## Abstract

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*What follows is a meditation on a metaphor that continues to provide a way of conceiving our relation to the space of media. It may seem puzzling that I spend as long as I am going to thinking about the prehistory of the idea of the channel in non-communicative contexts. My offer is to try to measure the continuing force of the literality, whatever that may be, of the idea of a channel. Towards the end, I will offer some reflections on the dissolution of the idea of the channel, or of the spatial disposition that has previously constrained what a channel is or can do. I will be saying that the channel depends not upon broadband expression, but on its low bandwidth, on the fact that data must be squeezed through a narrow pipe. My proposition is that decompression of data, the removal of this constraint means a net loss rather than a net gain of information. With no resistance, you can have very high voltage with no amperage. Those of you who want to get quickly to the payload of this piece should scroll through to the last 15 minutes or so. But you can't if you are listening to this, because this talk is itself a narrow pipe. And, if you could, you would get less information, not more, because there would be less noise for it to have overcome.*

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## Always Ducts

As she is crawling through a ventilation shaft on the spaceship in the Star Trek spoof *Galaxy Quest*, Gwen DeMarco, the character played by Sigourney Weaver, mutters 'Ducts. Why is it always ducts?'. With human beings, it seems, it is indeed always ducts. When human beings become sedentary, channels, pipes and ducts serve the purpose of moving things toward and away from them – the earliest settlements are typically by rivers, and the concentration of agriculture prompts the construction of irrigation channels. In his *Sphären* trilogy (1998-2004), Peter Sloterdijk proposes a history based around the development of different kinds of sphere or enclosure. But perhaps there is an equally cogent history which centres on tunnels, shafts and canals, creasings and concentrations, puckerings and vectorings of space.

So characteristic of life does the imposition of straight lines seem, that human beings have tended to see such straight lines as the confirmation of intelligent life. In 1877 the Italian astronomer Giovanni Schiaparelli reported that the planet Mars exhibited features that suggested straight channels, extending for thousands of miles. The translation of his Italian 'canali' into 'canals' encouraged the assumption among many of his English readers that these channels or canals might have been constructed by intelligent beings. Enthusiastically amplifying Schiaparelli's suggestions, the British astronomer Percival Lowell noted their extraordinary straightness and what he called their 'hopeless lack of happy irregularity. They are, each

and all, direct to a degree' (Lowell 1896, 181). Lowell went on to suggest that the canals formed a system:

it is the systematic network of the whole that is most amazing. Each line not only goes with wonderful directness from one point to another, but at this latter spot it contrives to meet, exactly, another line which has come with like directness from quite a different direction. Nor do two only manage thus to rendezvous. Three, four, five, and even seven will similarly fall in on the same spot, – a gregariousness which, to a greater or less extent, finds effective possibility all over the surface of the planet. (Lowell 1896, 185).

An inhabitant of Mars in Camille Flammarion's visionary novel *Uranie* gives this account of the canals:

The inhabitants make use of these overflows for irrigating great stretches of country. They have straightened and enlarged the watercourses and made them like canals, and have constructed a network of immense canals all over the continents. The continents themselves are not bristling all over with Alpine or Himalayan upheavals like those of the terrestrial globe, but are immense plains crossed in all directions by canals, which connect all the seas with one another, and by streams made to resemble canals. (Flammarion 1891, 194)

Canals temporalise space, or rather, turn open, equiprobable time into time with a direction, with before and after. Canals create flow from turbulence or ebullition. The simplest kind of canal is the groove formed by a trickle of water, that may initially be held together only by surface tension and the urging of gravity. This fluid filament may then in course of time be deepened into a watercourse, or a literal current of time. Human cultures entrain themselves with these grooves, imitating, extending and diversifying them with their own constructions, culverts, ducts, shafts, sewers, tubes and tunnels of all kinds. Yes, with us, it is always ducts.

We can characterise a channel as that which brings about the most complex and emphatic interchanges of what Michel Serres has called the hard and the soft – the material and the immaterial, physical form and abstract information. When a flow indents itself in the form of the channel, the soft dissolves the hard, which then hardens again around the form of the soft, as a course or current. Indeed, the flow, as opposed to simple turbulence, is already a kind of hardening, or rectification of pure movement. Jean-Paul Sartre's evocations of the process whereby the track of the ski first appropriates the open space of the snowfield, then is itself dissolved back into it, evokes this alternation of the hard and the soft. In a river or a pipe, soft content and hard container sinuously and continuously produce and yield place to each other.

Channels cluster and proliferate in living bodies. The burrow is the dwelling-place that is formed as a container by its content. Many creatures form habitations that are casts of their own bodies. A species is a niche in an environment, a selective inhabitation or itinerary through an open space of possible forms. Worms riddle and

aerate the ground and the sand of the beach through movements which continuously recreate their own form, which is the form of an elementary passage. A worm churns the earth both by passing through it, and by passing it through itself. Many simple living creatures equate to the form of a tube, and some have been prompted to see the human body as little more than a decorated alimentary canal. Many theories of the human body have assumed that it depends upon the circulation of fluids, of various kinds – the humour, the spirits, the chi and various other candidates for energy and life force and, rather late in the day, the blood. All of these circulatory theories required networks – often imaginary ones – of passages and channels through which the fluids could move. Galen inaugurated a long and stubbornly-maintained tradition when he claimed that the nerves, the office of which he thought was to distribute the vital spirits between the body and the brain, must be hollow.

Indeed the nerves are pivotal in the understanding of the human body. To give up the idea that the nerves were hollow channels, through which the physical or quasi-physical fluid of the vital spirits moved, was to move from a hard, or material understanding of what the nerves transmit, to soft, or informational understanding. David Hartley's *Observations on Man* (1749) marks the transition, for Hartley was the first to propose systematically that what was transmitted by the nerves was not a kind of matter, but vibrations. A wave does not transmit matter, but form; and the vibrations which explained all sensation for Hartley were just this kind of informational exchange. But vibrations of what? Hartley supposed that the nerves were pervaded by the substance that Newton in his *Optics* had decided to call the ether. It was this, almost infinitely attenuated and superfine substance that transmitted the vibrations in question, and, since the ether was so very fine that it could exist within the pores of bodily tissue, 'the Vibrations hereafter to be described may more easily be conceived to be propagated along solid Capillaments, so uniform in their nature as to be pellucid when singly taken, than along hollow Tubuli' (Hartley 1966 1.17)

Vibrations are organised for Hartley in patterns of association, which account for the operations of memory and the sensations of pleasure and pain. But associations are in a sense self-organising. Hartley speculated that 'our imperfect Languages improve, purify and correct themselves perpetually by themselves, and by other Means, so that we may hope at last to obtain a Language, which shall be an adequate Representation of Ideas, and a pure Chanel of Conveyance for Truth alone' (Hartley 1966 1.321). So vibrations do not need a literal channel, but may in the end carve out a figurative one. Hartley would be proved wrong about the nature of the information transmitted along the nerves, and indeed, more than a century would elapse before the complex electro-chemical operations of the nervous system could begin to be satisfactorily explicated. But Hartley offered the first 'softening' of the nerves with his suggestion that it was not matter but information that was passed along the nerves, which consequently did not need to be conceived as physical channels. The ether that

was central to his explication would become crucial in the imagination of immaterial channels in the early age of electronic media, and perhaps a little still in this later age.

## Tracks of My Tears

The channels and networks of the body are a kind of inscription. The grooves and gulleys of the landscape have been imitated in the impressions made in the first forms of writing, in clay, wax, or earth-like materials. Writing emerges as a soft, symbolic form of this incision. Much literary writing concerns itself with the interplay between hard and soft in incision and inscription. The episodic evocation of the life of a family through a series of snapshot scenes in Thomas Hardy's poem 'During Wind and Rain' moves towards this compounding of hard and soft in its final line:

They change to a high new house,  
He, she, all of them – aye,  
Clocks and carpets and chairs  
On the lawn all day,  
And brightest things that are theirs. . . .  
Ah, no; the years, the years  
Down their carved names the rain-drop ploughs.

The lachrymal rain-drop trickles down the course of the names carved on the tombstone, but yet seems to be effecting the corrugation for the first, painful time, stone melting to skin and skin scarified to stone. The word 'tears' is not used, but is half-heard in the yearning phrase 'the years, the years', which petrify the weeping in the form of engraved dates.

Hardy's final line refers us back to the common topos of tears as the creator of channels. Lear curses his inhospitable daughter Goneril with the wish that she will have a splenetic child, who will 'stamp wrinkles in her brow of youth,/With cadent tears fret channels in her cheeks'. John Donne's 'A Valediction Concerning Weeping' establishes another kind of interchange between the hard and the soft:

Let me pour forth  
My tears before thy face, whilst I stay here,  
For thy face coins them, and thy stamp they bear,  
And by this mintage they are something worth.

The idea that the tears are minted by the perhaps cruel lover momentarily hardens their liquidity into coins. But the images borne by coins, though impressed on them, are in fact just reflections, rather than seals. As coins they become another kind of currency, the soft or metaphorical flow of values in a financial system. The metaphor of tears as currency is perhaps also in part a figuring of the possibilities of metaphor itself, considered itself as a kind of coining, or capitalising upon signs.

Smokey Robinson's *Tracks of My Tears* provides a much more recent variation on lachrymal channelling and the incision/inscription pairing. 'If you look closer it's easy to trace/The tracks of my tears'. The dry melancholy of the externalised tear-ducts here compound, not with the lines on the page tear-channels, but the grooves of the record, petrified, but able, like the tracks of the singers' tears, to be replayed. This is popular culture's version of Rilke's 'Primal Sound', the story in which he imagines being able to play the sutures of a brain. Michel Serres has improvised upon this idea of a universal communication of tongue and groove, in which channels become codes:

That the stylus cuts the wax, the ink stains the papyrus or paper, the palette colours the canvas, the chisel sculpts the marble, these objective, or rather interobjective facts condition human writing, the arts and our symbolic behaviour ... The descending masses of glaciers form and push moraines before them, which are not only the result but also the witness to this movement. When forces act, we call them causes, on a high energy scale; but, lower in the scale, they leave marks. You see the moraine either as an effect or as a fossilised trace. Things are not at all reducible to causes, but they also present codes ... Hard things display a soft side; material, of course, they engram and programme themselves like software. There is software [logiciel] in the material [matériel] ... The wind forms blades in the sea like lines on a page; the current traces its passage along the talweg and the glacier in a valley; the axle projects on the sundial the exact latitude of the place; the stylus scars the wax and the tip of the diamond inscribes its trace on the glass. Let us not pretend that we alone write. (Serres 2003, 72-3, 337-8)

Ourselves channellings of time, we create our habitations in the image of our own bodies, as complex labyrinths of passages.

## Against Agoraphobia

What is a channel? A channel is defined by Claude Shannon as 'the medium used to transmit the signal from the transmitting to the receiving point' (Shannon 1998: 447). It can be physical – as in the case of a cable, or the air – or virtual; the discovery that a physical wire was able to carry many circuits or channels simultaneously was essential for the development of modern communications. Where a physical channel reduces and concentrates space, the multiplication of channels expands it internally. A channel may sometimes be identical with a medium, though in fact a medium is more often to be considered as a set of conventions rather than a set of physical constraints; the medium of dance employs human bodies as its channel, but the medium of dance really refers to the encoded language of dance – its repertoire of gestures and conventions. Nowadays, the work done by the word 'channel' may more often be done with the term 'platform'.

We may note, however, the tendency of channels to move towards the condition of media, in accordance with the principle articulated by Serres that the hard moves toward the soft – matter moves towards form, form towards information. The tendency has been for the channel to become taken up into the form of the message, or, putting it the other way round, perhaps, for the message to become able more and more to bore out its own channel. We can see this in particular in the use of the word ‘tube’ to signify a certain kind of content, usually streamed video. This usage probably predates Senator Ted Stevens’s homely and delightedly-derided remark in 2006 that ‘the Internet is not something that you just dump something on. It’s not a big truck. It’s a series of tubes. And if you don’t understand, those tubes can be filled and if they are filled, when you put your message in, it gets in line and it’s going to be delayed by anyone that puts into that tube enormous amounts of material, enormous amounts of material’. Stevens was attempting to describe the physical constraints of the internet, and his remark formed the basis for Andrew Blum’s book about the physical architecture of the internet, *Tubes: A Journey to the Center of the Internet* (2012). But in fact the internet is increasingly organised in terms of virtual channels of related materials that, though they may not run along any physical channel, are nevertheless still called ‘tubes’. This locution suggests the capacity of a particular class of message to form its own channel. The ancestor of all this is no doubt Youtube, set up in 2005, but it borrows from the references to TV as ‘the tube’ which date from late 1950s. Now the internet has been honeycombed by tubes of every kind – art tubes, music tubes, ‘Spiritube’ and, infinitely more developed than any other taxonomic system, of course, porntubes. Youtube itself is split into channels, many of which are simply anthologies or paperclippings of existing videos.

We may say that the idea of the channel tends always towards the immanent. Channels that begin by being external containers or itineraries for messages tend to become the means by which those messages self-organise and self-identify into generic streams. A channel becomes the endogenous principle of self-resembling of a flow of information; the content begins to contain itself, to resound or redound upon itself – the literal meaning of redundancy.

Channels serve to domesticate the otherwise unvisualisable space of communications – which are both open, apparently without material support, and dense, in that many different kinds of message, medium and channel cohabit in the same space. The idea of the tube gives a syntax and orientation to the otherwise inapprehensible topology of communications. The topology of the tube or channel has a particular virtue in mediating the idea of pervasion, or what C.H. Hinton, the late nineteenth-century populariser of the idea of the fourth dimension, called ‘throughth’. The sci-fi metaphor of the wormhole inherits this orientating function, in its approximation within a finite and exclusive space of three dimensions (in which no physical body can occupy the same space as another) to the saturated and

internally expansive space of four or more dimensions, in which different channels may cross and cohabit. In order to carve out more physical channels, one needs to expand outwards into space; in order to create more informational channels, one may just as easily tunnel inwards into space, populating it more densely with currents.

In his book *The Ether of Space*, Oliver Lodge quoted Lord Salisbury as saying that 'aether is little more than a nominative case of the verb to undulate' (Lodge 1909, 113). But the different rates at which that vibration take place were spatialised as different regions, through the idea of 'frequency bands' or 'wavebands'. The idea of matter vibrating at different frequencies quickly became a standard part of the explanation, by late nineteenth-century spiritualists and theosophists, of how beings inhabiting different planes of existence could cohabit and communicate.

The ether carries the idea of a kind of communicative infinity, of a space without any constraint on the capacity for sensations to communicate. James Clerk Maxwell makes something like this point in 1873 in his essay 'Action at a Distance':

The vast interplanetary and interstellar regions will no longer be regarded as waste places in the universe, which the Creator has not seen fit to fill with the symbols of the manifold order of His kingdom. We shall find them to be already full of this wonderful medium; so full, that no human power can remove it from the smallest portion of space, or produce the slightest flaw in its infinite continuity. It extends unbroken from star to star; and when a molecule of hydrogen vibrates in the dog-star, the medium receives the impulses of these vibrations; and after carrying them in its immense bosom for three years, delivers them in due course, regular order, and full tale, into the spectroscop of Mr. Huggins, at Tulse Hill. (Maxwell 1890, 2.322)

It is precisely this omnipresence and uniformity of the ether that the idea of the waveband or channel seeks to reduce. If there is intoxication in the idea of a medium that would allow communication from any point to any other point without impediment, it can also provoke a kind of giddy agoraphobia. Maxwell's metaphor permits us to imagine some single and private channel running from Sirius to Tulse Hill, when the light will in fact be propagating in all directions. Indeed, the overriding problem for the physicists of radio and even telephone communication was how to constrain the radiations which were being exploited. If all channels generate noise, a channel that is identical with the cosmos must be maximally noisy, and therefore minimally communicative. Information may only propagate if the propagation is constrained or filtered. Mesmerism was one of the earliest attempts to channel the phantasmal pseudo-stuff of the ether. The mesmerist, imagining himself a reservoir of animal magnetism, was believed to be capable of damming and diverting the etheric fluid, stimulating vitalising effluxes where there was stagnant torpor and restoring equilibrium where imbalance existed. The figure of the mesmerist devel-

oped at the same time as that of the conductor, whose airy gestures he shared. They were both imaginary striators of the otherwise queasily smooth space of the ether.

As many have observed, the preoccupation with the powers of spiritual mediumship paralleled the multiplication of forms of technologically mediated forms of communication. The prestige attached to the one thought to be able to channel spiritual forces simultaneously expresses and recoils against the new expansion of the field of communications. Faced with the throng of entities and energies, the medium was at once passively receptive to external influences and active in her work as filter and selective amplifier. She turned a vertiginously open field of possibility into a dramaturgic structure. Like the mesmerist, the medium acted as a 'coherer', to borrow the term that Kipling borrowed in his story 'Wireless', to characterise the action of a spirit medium, fixing the indifferent, anonymous, inchoate, omnidirectional flux of energies and impulses.

William Thomson, Lord Kelvin, proposed that matter itself might be the result of irregularities in the ether that he called 'ether-knots', and that he explained with the model of smoke rings, suggested by a smoke-ring machine produced by his friend P.G. Tait. This encouraged others to see matter as the result of a kind of channeling of information. C.H. Hinton proposed that the very organisation of matter could be explained on the hypothesis that the ether might be corrugated with grooves or channels:

Let us imagine that, instead of the aether being a smooth sheet serving simply as a support, it is definitely marked and grooved.

Let us imagine these grooves and channels to be very minute, but to be definite and permanent.

Then, let us suppose that, instead of the matter which slides in the aether having attractions and repulsions of its own, that it is quite inert, and has only the properties of inertia.

That is to say, taking a disk or a plane world as a specimen, the whole disk is sliding on the aether in virtue of a certain momentum which it has, and certain portions of its matter fit into the grooves in the aether, and move along those grooves.

The size of the portions is determined by the size of the grooves. And let us call those portions of matter which occupy the breadth of a groove, atoms. Then it is evident that the disk sliding along over the aether, its atoms will move according to the arrangement of the grooves over which the disk slides. If the grooves at any one particular place come close together, there will be a condensation of matter at that place when the disk passes over it; and if the grooves separate, there will be a rarefaction of matter. (Hinton 1888, 61-2)

The nineteenth century was of course the great age of tunnels, in which urban infrastructure migrated underground, in the form of underground railways, sewers and

gas and electricity pipes. The Channel Tunnel had been hotly discussed for more than a century before it was finally constructed, the idea tending to be revived after the end of wars. It was assumed by many at the beginning of the twentieth century that the straits of the Bosphorus and of Gibraltar would also be connected by tunnels, and there were also discussions of a tunnel across the Irish Sea (Anon 1899, Anon1919). By then, the tunnelling fever of the late nineteenth century was already giving way to the ethereal tunnellings of electronic impulses, accompanied by air travel.

The idea of the channel was caught up in modern concerns with exposure and privacy, as embodied in the idea of broadcast on the one hand, and the privacy of the one-to-one telephone wire on the other. The groove-idea drills deeply into questions of time and free action, as in the limerick attributed to Maurice E. Hare:

There once was a man who said "Damn!  
It is borne in upon me I am  
An engine that moves  
In predestinate grooves;  
I'm not even a bus, I'm a tram."

An unattributed reply to this limerick read:

"Young man you should stay your complaint,  
For the grooves that you call a constraint  
Are there to contrive  
That you learn to survive  
Trams arrive, buses may or they mayn't."

<http://www.massline.org/PhilosDog/P/Predestination.htm>

## Word-Ways

The idea of channels passed across early into thinking about literature. Between 1912 and 1915, J.P. Dent, the publishers of the Everyman editions, produced an 8 volume series under the editorship of Oliphant Smeaton collectively entitled *The Channels of English Literature*. It is not quite clear what the word channel is meant to signify here. Some of the volumes, like those on *English Lyric Poetry* and *English Drama*, are generic. Others, like *English Philosophers and Schools of Philosophy* and *English Historians and Schools of History*, suggest a much broader conception of literature than would be established after the formation of English as a distinct university discipline during the 1920s. Reflection on the nature of channels suggested new ways of thinking about aspects of language in its relation to the physical world.

Writers have often been interested by the relations between the material and immaterial channellings of words. Ambrose Bierce's 'The Word-Way in Panama'

imagines a ‘deep sluggish stream’ of garbled language disgorged into the Gulf of Mexico in a turbid, faecal stream. Bierce’s proximate target is the rhetoric of American politicians which he imagines being jumbled together without coherence or grammar:

Ah! ‘twas a famous spectacle indeed,  
 This wordy welter! – verbs that disagreed  
 With nominatives; prepositions all  
 Too weak to hold the objective case in thrall;  
 Adverbs and adjectives departed quite  
 From parent-words and in a woful plight  
 Of orphanage; conjunctions, interjections  
 With truly anarchistic predilections;  
 And pronouns which – a gutter-blooded swarm! –  
 Denied their antecedents in their form! (Bierce 1909, 4.96-7)

Despite the lack of syntax, the channel nevertheless wears a channel to the sea. Bierce himself was an active participant in the world of mass media, as prolific newspaper columnist (the column is perhaps another version of the imaginary architecture of the channel), and yet waged war on cant, opacity and verbal noise. The idea of the sewer – embodied in the phrase the ‘gutter press’ – connects both with the Panama canal and with the trench that Odysseus digs in Book XI of the underworld and fills with wine and milk to summon the shades from the underworld to speak to him. Bierce alludes openly to the latter:

“No more my heart the dismal din sustained”  
 (See Homer – Pope’s translation) for it strained  
 My senses – this uncouth, infragrant, hoarse  
 “Fine flow of language” from its Northern source. (Bierce 1909 4. 97)

In a later satirical sketch, Bierce would have a character refer to President Roosevelt as ‘him who dug the great canal by talking/’Twere long to wait unless your tongue were made/By miracle divine into a spade’ (Bierce 1909, 12.240).

Joyce’s *Ulysses*, published in the year that the BBC began broadcasting, suggests an advance awareness of the idea of experience distributed across different copresent but distinguishable channels. Leopold Bloom recommends to Stephen Dedalus ‘literary labour not merely for the kudos of the thing. Writing for the newspapers which is the readiest channel nowadays. That’s work too. Important work’. The Ithaca chapter literalises the idea of the various flows through which matter and thought are conducted, including the pipes through which the water is conveyed to Bloom’s tap, and the ‘industrial channels’ through which ‘vast wealth’ is obtainable in his fantasy, and the ‘various channels of internal sensibility’ through which his sensations are diffused.

A.R. Ammons's *Tape for the Turn of the Year* is a book-length poem that announces its own ambition in its opening words:

today I  
decided to write  
a long  
thin  
poem (Ammons 1965, 1)

Ammons explains that he has resolved to type out his poem on a roll of adding-machine tape that he bought from a local store and has threaded through his typewriter. The poem that results is a series of meditations on the weather, winter colds, birdsong, family shopping expeditions and, most of all, the evolution of form – Ammons was a biology teacher before becoming a Professor of English at Cornell. The steadily diminishing roll of tape makes an entrance into the poem at intervals, even as its columnar form, percolating down the page, never more than four or five words wide, reminds us of the constraints it imposes. Ammons tells us that the roll rests in an ashtray and unrolls steadily into the wastebasket:

the nest I've pro-  
vided  
for this  
song to wind into is  
the wastebasket: that's  
symbolic: the roll, tho,  
unwinds from the  
glazed bottom of an  
ashtray: I don't  
know what to make  
of that:  
phoenix? (Ammons 1965, 29)

At one point, Ammons records on the tape the tape's absconding, when he goes on a family trip and decides to wind it off and take it with him for safe-keeping:

my poem went for a ride  
today: I  
backguttled it all  
the way out  
of the typewriter,  
rewinding the roll.  
stuck it in a paper  
bag, then in the  
glove compartment:  
we all went to York, Pa.  
to visit relatives:  
I was reluctant to give

the day to myself & not  
 to the poem: but  
 the thing I couldn't  
 do was separate us:  
 what if the house caught  
 fire while I was gone?  
 unh, unh: took it with me (Ammons 1965, 70-1)

Ammons's tape is a version of the many different kinds of spools, spirals and tracks on which words and forms have been inscribed – the manuscript scroll, the phonograph, the polygraph, the seismograph, the piano roll, the grooves of the gramophone disc, the loops of the film reel and tape-recorder, the double helix – 'run my poem through/your life & it will/exist in you/like a protein/molecule' (Ammons 1965, 64). It mutates into 'a silky pouring of/semen' (Ammons 1965, 64), into the pouring of rain into gutters. The poem plays variations on the idea of flow and form, flow contained by form, form constituted by flow:

the going in & out  
 of shape, substance running  
 through shapes of itself,  
 itself the running:  
 the container & the  
 contained are  
 somewhere  
 contained by the  
 universal noncontainer (Ammons 1965, 105-6)

The poem emphasises throughout its fragile thinness, of which we are given a constant visual reminder, and the strange thickness that it condenses through its sheer persistingness. At one point Ammons allows himself the fantasy of a negentropic resurrection of the depleted tape:

if I had a flute: wdn't  
 if be fine  
 to see this long thin  
 poem  
 rise out of the waste-  
 basket:  
 the charmed erection,  
 stiffening, uncoiling? (Ammons 1965. 41-2)

The poem even identifies itself with the image of a tree metabolised through the guts of a maggot into paper:

you've heard the larva  
 chew

in the wood?  
 grit, grit, grit,  
 metronomic?  
 tell me – after  
 wood's passage through  
 guts,  
 who will recall the tree? (Ammons 1965, 103-4)

The poem is able to twist its form into so many other streams and channels precisely because of its willed thinness – the decision that it will be spooled out of an arbitrary and narrow constraint. Only this compression allows the laminations of metaphorical identification with other streams and tracks.

Sound provides the basis for the mixing of channels in the seventh in the sequence of Seamus Heaney's *Glanmore Sonnets*. The sonnet plays variations on the sound-space of the *Shipping Forecast*, which, for generations of listeners to BBC radio, has formed an amalgam between the waves of the North Sea and the radio waves that both mingle with and traverse them:

Dogger, Rockall, Malin, Irish Sea:  
 Green, swift upsurges, North Atlantic flux  
 Conjured by that strong gale-warming voice,  
 Collapse into a sibilant penumbra.  
 Midnight and closedown. Sirens of the tundra,  
 Of eel-road, seal-road, keel-road, whale-road, raise  
 Their wind-compounded keel behind the baize  
 And drive the trawlers to the lee of Wicklow.  
 L'Etoile, Le Guillemot, La Belle Hélène  
 Nursed their bright names this morning in the bay  
 That toiled like mortar. It was marvellous  
 And actual, I said out loud, 'A haven,'  
 The word deepening, clearing, like the sky  
 Elsewhere on Minches, Cromarty, The Faroes.

The poem offers a confluence of three different channels or poetic accents – the roundelay of the shipping districts (Dogger, Rockall, Malin, Irish Sea, Minches, Cromarty), the sequence of Old English kennings for the sea as an aggregation of tracks or ways, and the French trawlers in harbour. The channels drive a path of audibility through the 'sibilant penumbra' of static between the stations, even as, like all channels, they are themselves compounded in part of the noise they keep at bay.

The intrigue and enchantment of work like these three poems by Bierce, Ammons and Heaney derives largely from the friction of media, the productive interfering of channels with each other. But these poems assume a media ecology in which channels, even, perhaps especially when they are blended, still represent a narrowing or

concentration of possibilities against a more open and equiprobable background. In this, they assume a world in which media are less than total, and in which the information channelled through media is still rare. (Information, Serres has reminded us, simply is the rare itself.)

But the anomalous crossing of channels evoked by Bierce, Ammons and Heaney has become a general condition. Ours is a multitrack, intermedial, channel-hopping, cross-station world. The relation between the channel and the space it previously corrugated has inverted. Now, space is saturated by channels, to the point where it has become smooth and uniform, rather than striated. The river that pushes and insists its way through mountain, forest and desert, sometimes leaping across gaps in its course in a gushing cataract, wastes its impetus in the swampy tangle of the delta. The selective articulation of space gives way to a saturation of space by articulations. The striation of space has lost its power to concentrate and differentiate in a period in which striation has become a uniformly dense cannelloni.

Channels have become porous and fissiparous, and are losing their power to concentrate and cohere. There is no need for a TV channel when the separate items can all be separately located and bookmarked. A culture formed around the concentrating force of channels has become a culture of interferences, as everything follows out its own idiosyncratic path of swerves, forkings and intersections. Messages are no longer bound to their channels, no longer emerge from their own definitional forms of impediment, but skid frictionlessly from pseudo-channel to pseudo-channel. Or, better perhaps, every itinerary functions as its own channel, forming the path it takes as it goes along, like a train that lays down in front of its wheels the track on which it travels. A channel, a medium, a format, gives possibility by imposing limits to be overcome, noise to be integrated. When channels lose their materiality, they lose this frictional noise. But the noise purged from each individual channel passes across to the field of canalisation itself, which becomes maximally noisy.

We are approaching a maximal or plenipotentiary plethora, not only of electromagnetic space, but also of the spaces of attention. Compelled to choose, or choose not to choose, between channels, skipping, skidding or lingering as it may be, I become myself little more than a mobile reception channel, a mediator of mediations.

Channels must contain, and to do this they must constrain. But our channels, including the channels we ourselves increasingly are, are made to be leaky, resonant, open to influence and interference. This accounts for the lowering observation that is increasingly to be made that the more apparently riddled and lacerated our media space becomes, the more uniform those channels become. Hence the strange law, that somebody who habitually watches three channels will almost certainly encounter more diverse material than someone who watches fifty-three. Channels that had the virtue of rarity because they narrowed and subtracted from the open

space of possibility now expand to encompass the entire space of communication and awareness. A landscape that is made of nothing but roads is as trackless as a wilderness without any. The charisma and novelty of the inter-, the intercontinental, the intermedial, the interdisciplinary, which depended on its minority, dim when the whole of communications exists in and as what lies between. Michel Serres has praised the syntax of the maze, which aims to fill space rather than to negate it by speed and direct itinerary, pointing to its role in amplifying sensitivity, in structures like the human ear (Serres 2008, 143). But to confer these advantages, the maze must operate in some particular region, rather than constituting the whole of space. In order to channel, channels must exist in and operate upon space rather than being it. Communication that is ubiquitous communicates nothing except that ubiquity.

I do not propose this as a critique, a matter either for regret or remedy. It is as it is, and is likely to thicken and curdle for some considerable time yet. It is wholly implausible that anything that academic commentators might say, or even anything that owners of media might seek to do, would make much difference to this contemporary condition, which is much more like an addiction than a decision. There is only one thing that could reconfigure the mediascape, which is the only thing that ever has, and that is our growing boredom with it, boredom being the infallible detector of declining levels of information.

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