The managerial grip

- Brief historicizing reflection on the role of technology in organising for creativity

Daniel Hjorth, Copenhagen Business School, Denmark, dh.mpp@cbs.dk
and Nottingham Business School, Nottingham Trent University, UK

> "…as long as we limit ourselves to viewing technology from the perspective of instrumentality, we will not understand its true nature and will remain held in the illusion of mastering it. Only if we instead understand the instrumental as a mode of causality will technology then be revealed for what it is, which is to say as a destining of revealing." (Heidegger's *The Question Concerning Technology*, 1977: 337)

Opening: Technology and management

The unrivalled 'author' of the most effectively applied behaviourism in contexts of organisation, since late modernism, must be managerialism as governmental rationality. Chris Grey (1996) offers a broad description of managerialism as the idea that there are no limits to what is manageable and that everything should be managed. Ingersoll and Adams' study of the managerial metamyth, is summarised in Stanley Deetz's critique of 'corporate colonisation' (1992: 223) as saying: 1) that "…all work processes can and should be rationalized, that is, broken into their constitutive parts and so thoroughly understood that they can be completely controlled, 2) the means for attaining organizational objectives deserves maximum attention, with the result that the objectives quickly be subordinated to the means, even to the extent that the objectives become lost or forgotten, and 3) efficiency and predictability are more important than any other consideration." (Ingersoll and Adams, 1986: 366).

Already here we find what later in this paper will be describe as a digital

approach to the management of everyday organisational life. This approach is based on the idea that work can and should be broken down into constitutive parts, and that those parts are compatible and adjustable in the systemic whole that calls for tight management. The assumption, thus, includes the idea that those parts are to be found or else are missing. Bits are to be managed, recorded and stored as bytes, calculated through algorithms, controlled via the laws of mathematics. Managing is controlling the execution of such 'software'.

Present-day softwarisation and algorithmisation of organisations further strengthens this 'digitalist' approach by assuming that the coding of information into software that executes the thus programmed in exact and predictable ways is extendable into the actual decision making and management of work. The sales argument of 'Business Intelligence & Analytics' software is often that it brings 'powerful insight to your fingertips.' The assumption is that by some isomorphic imagination you are invited to think that running the business will be like running your software, and, having the correctly processed data means insight is the output. Insight that, according to Oxford Dictionary, means an accurate and deep understanding. In today's innovation-focused organisation such understanding needs to be focused on the organisational conditions for creativity. Can the digital age in information processing increase our capacity to enhance those conditions? As if a science operating under mathematical laws is involved in the same way both inside and outside of the computer. As if algorithms are applicable in both environments. With the genealogist's curiosity we ask: Where did that assumption come from?

F.W. Taylor do state in his 1911 paper – *Principles of Scientific Management* – that the paper's third aim is: "To prove that the best management is a true science, resting upon clearly defined laws, rules, and principles, as a foundation. And further to show that the fundamental principles of scientific management are applicable to all kinds of human activities, from our simplest individual acts to the work of our great corporations…" (p. 2). As a consequence, he also notes: "It is true that with scientific management the workman is not allowed to use whatever implements and methods he sees fit in the daily practice of his work. (Ibid., p. 62) I believe that what we read here is an early entry of a digital approach to management. The analogue – making judgments on the basis

of tacit knowledge, or the 'see fit' that indicate an aesthetic consideration - starts to disappear from the management of work with the introduction of scientific management. The digital perspective on organisations – one and zero as only options - has thus only been strengthened with the gradual introduction of software aided management systems (look at the growth of companies such as SAP). But more importantly, Taylor made management itself into a technology. Management is grasped by the supreme goals – economic efficiency and social control – and is asked to grasp the organization in the same manner. This, however, is increasingly done via the aid that technology provides. Management is itself changed from a direct handling of people and things, into the handling of technology that handles people and things. It becomes, as Foucault pointed out, a style of government that conducts itself so as to conduct the conduct of others (Foucault, 1991: 48). In this article I am thus drawn into a focus on management as a technology that increasingly uses technology (information processing such) to manage.

Whereas Taylor moved control from the direct relationship with the authoritative manager to the machine and transferred authority over to the tempo of the machine (Donzelot, 1988), we find in Simon's (1945) *Administrative Behaviour* a prophetic praise for what the computer will be able to do for decision making optimization in future organisations (p. 299). Simon establishes an affinity between decision making and the '.exe'-file of the computer program. Advanced ICT-systems are increasingly replacing judgment with algorithms, meaning analysis and decision is more and more automated. More precisely, more of the information assumed to be needed for making a decision is already processed, as if deciding could free itself from that directedness invested in the preparation. SAP (largest business software company) promises: "Achieve better business results by fully empowering, engaging, and developing your talent – with human capital management (HCM) software from SAP SuccessFactors." (www.go.sap.com, accessed May 9th, 2016). Again, Herbert Simon pointed this out in a visionary note: "In the post-industrial society, the central problem is not how to organize to produce efficiently […] but how to organize to make decisions – that is, to process information." (Simon, 1945: 292). He then suggests this is what computers and information systems will do for us. It reads like the business

plan for SAP when it was founded back in 1972 (now at 77.000 employees and €21 billion in revenue).

The question this article investigates is how today's digitalization, softwareization and algorithmization of the organization might also mean that the playful and affective is squeezed out. If so, does this have implications for creativity and entrepreneurship? The idea is that the analogue (as opposed to the digital, knowing these are not completely separate) might hold a multiplicity, in its vagueness, which calls upon imagination in order to make sense. It takes adaptive, responsive neurological nets to generate as reply something that is not pre-coded. Imagination, Massumi (2002: 134) writes, "…is the mode of thought most precisely suited to the differentiating vagueness of the virtual." The virtual being the swarming of potentialities for what the world might become, real but abstract, and necessarily limited to a specific functional context when actualized (or created). Do we loose the analogue, and thus the source of imagination, virtuality and creation, when our organisations are digitalized? Or is it technology as such, made part of managing through Taylor, that represents the challenge?

Technology is then understood as a way of handling the openness of relationships, the relational (moving); a handling that seeks to control and for which the digital (as prophesized by Simon) remains an attractive promise (of closedness, zero noise, predictability, accuracy, and thus efficiency). The question, in other terms, is whether the price of digital efficiency and minimization of noise is the generative vagueness of the analogue? The latter can never disappear, since it is always in excess over the digital. It 'perceptually fringes' (Massumi, 2002: 143) says, and he adds; 'the analogue is always a fold ahead', meaning it does not stop at the 'digital limit' (there can only be 1 or 0) without anticipating what moving further might entail. Imagination will always imagine what's behind the corner. Affect registers such vagueness as an intensification (fear, excitement, thrill); an anticipation that makes change, movement, becoming, and newness incipient.

Historicising the managerial grip on the human

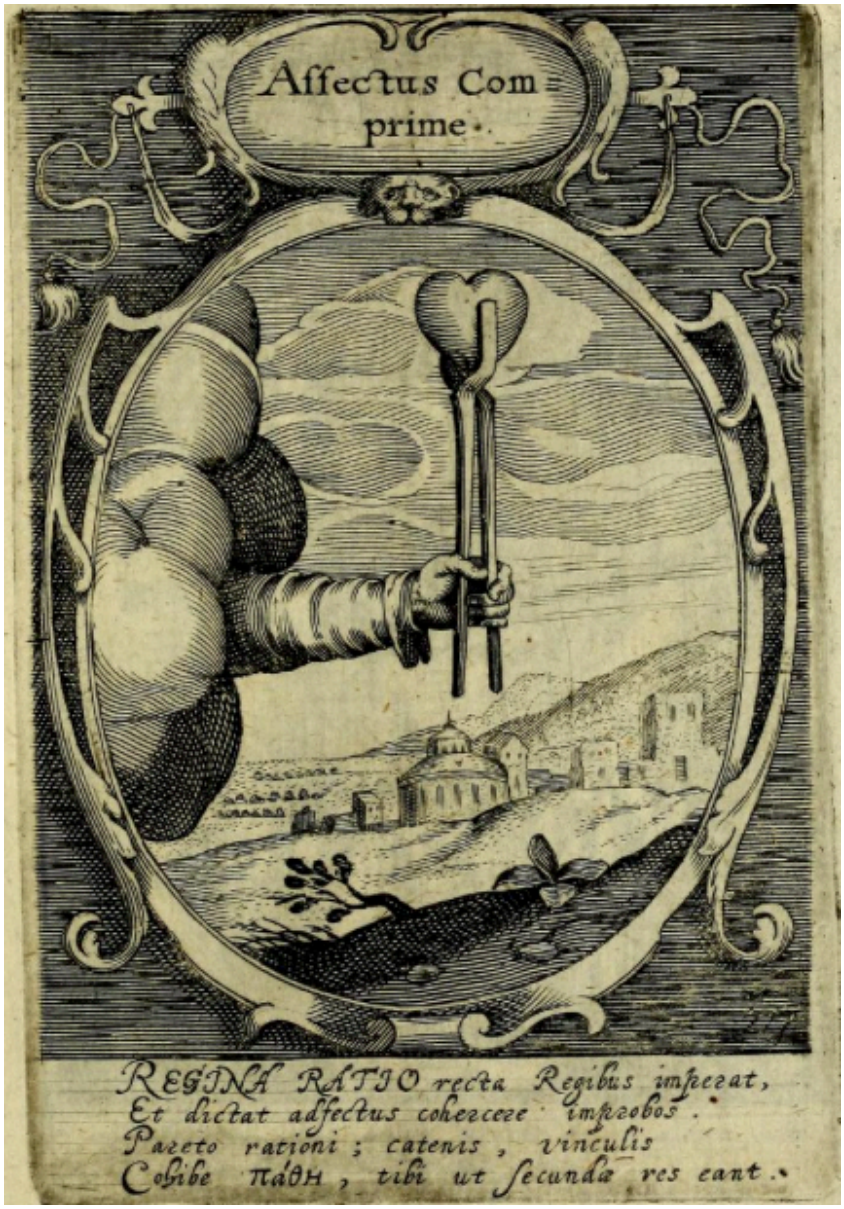
I want to look at management more generally as a (behavioural) technology that uses technology to relate to the other assuming this is a way to make the other's behaviour follow a specific path. As such it is resonant with information processing technology that algorithmically relates information to certain, predetermined outcomes (coded) when processed. Technology would then correspond to a legitimate expectation – amongst decision makers in particular – that a certain input should yield a certain output if processed using a certain technique: the 'mode of causality' that Heidegger points to in the opening quote. It is specific for digital technology that it promises no distortion (noise immune) in transmission, that it consumes fewer resources when storing and transmitting, but that it requires more bandwidth to transmit the same information compared to analogue technology. In perspective of the washing out of noise that digitalization represents, I suggest that we inquire into whether the sources of the new spring perhaps primarily from the noisy part of the organisation (information-wise). Would the clean information handling of digital media processing lead to that the baby is thrown out with the bathwater in the washing away of the analogue dirt? Roughly speaking; you are not likely to invent new dialogues with the ATM, it has only a limited, preprogramed/coded set of algorithmically enabled responses. But maybe the Herakleitan playing child that, in his description, rules the world, can still bring about creative becoming vid affectively engaged bodies in motion? Maybe the multiplicity and open-endedness of play, most of which reads like mess from a digital perspective on what makes algorithms tick, finds ways through the tightly coded organisational landscape?

But what is there before F. W. Taylor and Herbert Simon, that places management on the path that today makes softwareized decision making into normal and businesses like SAP grow? A recent article from The Economist (Sept. 12th, 2015), referring to a piece on Amazon in New York Times, states: "…digital Taylorism looks set to be a more powerful force than its analogue predecessor. The prominent technology firms that set the tone for much of the business world are embracing it. […] Pentland's sociometric badges have produced some counter-intuitive results: for example, in a study of 80 employees in a Bank of

America call centre, he found that the most successful teams were the ones that spent more time doing what their managers presumably didn't want them to do: chatting with each other. Amazon's "Amabots", as they call themselves, seem happy to put up with micromanagement if they get a nice bonus at the end of the year." Where does this passion for technology as a route to evermore control come from?

As a genealogical gesture that seeks to reveal how the intimacy of management and technology was inaugurated (admittedly a too bold an ambition), we can turn to Hirschman's (1977) splendid and still very timely study of the rise of arguments for capitalism before its triumph (as the subtitle says) – the study of the *Passions and the Interests*. It keeps generating a context in which its relevance becomes apparent. Perhaps the role of technology is most precisely communicated in the analysis of the image from the *Emblemata Politica* (Nuremburg, 1617), pivotal to Hirschman's study. This might be so for the reason that technology as well as art holds a revealing power that, in this image, are strangely intertwined. Technology and art are here made to touch in the Greek sense of *technē* – as a craft of making, which is also intimately related to a bringing forth, a revealing (*poiesis*). These two sides of *technē* are curiously captured in this image as it both shows that 'the coming to presence of technology threatens revealing, threatens it with the possibility that all revealing will be consumed in ordering' (Heidegger, TQT, p. 18), and it does so in a poetic way, revealing in a shining or radiant un-concealing (or disclosing; cf. Spinosa, Flores and Dreyfus, 1997). However, it is also precisely here I find the image fascinating, in that it brings *technē* and *poiesis* together, for it also says – maybe for the first time in modern history, in this particular way – that we ought to allow *technē* to drive out other possible ways of revealing by enframing (Heidegger's Gestell) technology as precisely assembling, calling forth a particular order. The image would thus show us the battle between *poiesis* and *technē* that *technē* will win. There is thus, performatively, a destining in this: it shows us what technology does, at the cost of *poiesis*? This dichotomy seem like a retrospective construct (cf. Eikhof and Haunschild, 2007), added as a result of a romantic understanding of art. Rather, at the time (1617), this squeezing out of

the heart-elements seems rather as a necessary cleaning out of the mess that belongs to the affective, bodily. In a digital language we would call this noice-immunity.



The Latin text below the image in the original printing is as follows (English translation included):

Latin	English
Affectus Comprime *Regina Ratio recta Regibus imperat,* *Et dictat adfectus cohercere improbos* *Pareto rationi; catenis, vinculis*	Master/Repress/Retrain the affects/passions Queen Reason rules properly over her subjects and decrees that disparate *affectus* be made to

Cohibe (pathos), tibi ut secundae res eant.	agree with one another. Yield to reason; bind your passions together with chains and fetters as good fortune is apt to swim away from you. (transl. Leo, 2009: 391)

The image and the text following (cited above) prove to be rather difficult to merge into one coherent understanding. The text seems to address human capacity to control affects and passions, whereas the image as such – and the title given in the image – seems to refer to a greater economy of activity and passivity over which only Reason/Nature reigns. This is then closer to Spinoza's idea that affect is much more what produces subjectivities than it is a product of subjects. Such a view is resonant with a processual understanding of subject-positions as relationally composed, always in open-ended processes of becoming, and always already belonging to a sociality (Deleuze, 1988; Massumi, 2002; 2015). Individual and society is here unthinkable outside a relationship, 'empirically inseparable, they are strictly simultaneous and consubstantial' (Massumi, 2002: 71).

What I find particularly curious in 'Hirschman's image,' however, is the use of the pincers. As a representative of technology, I am asking why, in the context when this was communicated, would God need a piece of technology to achieve his/her end? Indeed, a man-made thing like a pair of pincers could not come in-between God and his/her creation. If not God, why is the arm coming out of a cloud? If, thus, the hand coming out of the cloud is Reason (as the text below the image, in the original printing, suggests in Leo's (2009) interpretation), we would more readily accept that the pincers then 'walks the talk' by applying the effect of reason – technological development – to make the statement clearer. In addition to using technology, technology would also help you keep the distance to the heart, i.e., to hold affectus comprime, repressed. Reason was of course divine and the church had a historical monopoly representing divine reason to its subjects. The image's message is also that technology (a materialisation of reason) helps us achieve control over affections. Reason would guide the hand to exploit the

forces of the pincers. The heart is clearly in the grip of the pincers, and there is no doubt that this grip is potentially devastating. The pincers provide a lever effect that multiplies the force of the hand: reason is strengthened by technology. The message: technology increases your force, enables you to dominate other forces, brings you to the favourable position in a hierarchy of forces. Leo (2009) suggests both messages are held together in the image – a poetry of composition: we can control our affectus/passion, but it also goes beyond what we can decide/control/master:

"In Spinoza's *Ethica*, moreover, affectus are not reducible to feelings or emotions. Affects, rather, exceed, reconfigure and reorganize bodies and subjects; they are thus constitutive of, and integral to, a dynamic economy of activity and passivity. In the *Emblemata Politica* a similar definition of affectus is revealed in the tension between the Latin poetry and the image—between the determination of affectus as a passion within the subject's control and its status in a larger divine economy, the province of God, exceeding the limits of human agency." (Leo, 2009: 393).

This is fully consistent with Spinoza's view of affect, passion and action, and how it is interpreted by Gilles Deleuze, who renews the way we understand Spinoza (Deleuze, 1988; Spindler, 2010). An affect, in Spinoza's *Ethics*, is described as a duration that makes a body/mind tend towards the next state in a way that either increases its power of acting or decreases its power of acting (Deleuze, 1988: 48-49). Affect describes a body/mind's potential for interaction. And therefore, as noted above, the analogue (body and thought, they are parallel to Spinoza) is a 'fold ahead', since it tends/leaps, moved by affect, beyond the present limit: it brings interactive capacity also to the imagined-to-come.

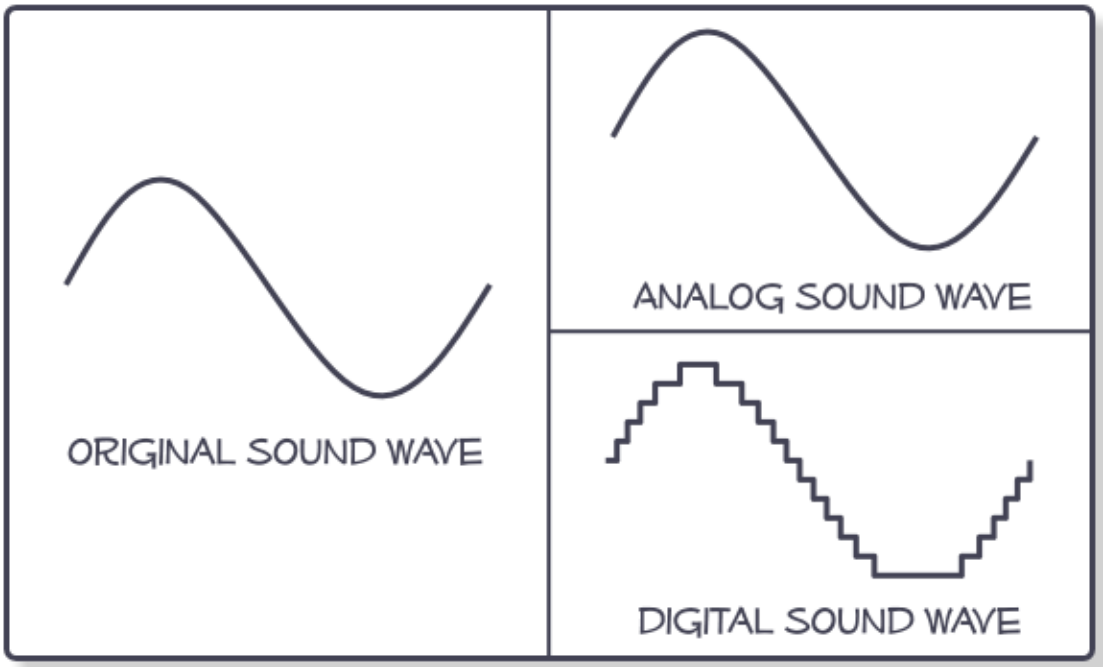
Principally, for Spinoza, only God can act in the full sense of being capable of adequate ideas that can guide the body/mind to act. The rest of us are passionate beings that become-new all the time by forming inadequate ideas, that makes us open to external ideas that can act upon us to some extent and make us move to a greater or lesser force of existing/power to act, than before –

greater or lesser *conatus* in Spinoza's terms. "Accordingly, it will be said that its power of acting or force of existing increases or diminishes, since the power of the other mode is added to it, or on the contrary is withdrawn from it…[…] The passage to a greater perfection, or the increase of the power of acting, is called an affect […] of *joy*; the passage to a lesser perfection or the diminution of the power of acting is called *sadness*. (Deleuze, 1988: 50). The question is what role technology has as a way to joy or sadness in our organisational lives. It is not a wild speculation to suggest that in the hands of managers, on the upper side of a hierarchy of forces, technology (information technology in focus here) would increases one's power of acting (joy), increase the technology-user's efficiency, whereas on the dominated side of the hierarchy, one's controllability would be increased and thus potentially one's sadness. The analogue noise, however, operates at the fringe, and imagines a rest from being affected by the virtual.

On the analogue - digital distinction and management

Since the digitalization of information and communication, management has also shown to be marvellous in its capacity to integrate technology in ever more intricate ways into methods of control. Technology has always been a key element in managing, as one way to describe managing is to say it secures the on-going reproduction of predictability and efficiency in organisation (Chandler, 1977). If we by technology understand a specifically configured system of knowledge, prescribing a limited range of practices, managing would then operate with knowledge-practice relationships that mean we should legitimately expect control over correct execution to be possible. And it does that by increasingly relying on information-technology that algorithmically secures predictability, efficiency and controllability in organisations. Management in itself is thus a general form of technology in human organisation, and digitalization has meant that computer-based information processing technology further drives standardization (Kallinikos, 2001). This means that information increasingly needs to be uniform (bits): easily recognised, assessed and accumulated/stored (as bytes) by the algorithmically operating systems. Such 'machines' are also abstract in the sense that they are not developed in site, to fit

local conditions – as is the case with bureaucratic procedures – but rather coded for context-independent, universal use. "…[C]ompared to the strictly standardized and codified character of computer-based applications, bureaucratic rules were vague and open enough to be shaped by the specific circumstances of particular organizations." (Kallinikos, 2001: 58). Such openness allowed for tactical interventions, insinuations that explored and experimented in the cracks of the strategic grid of the bureaucratic system, so as to transform and change the whole. An analogue technology would thus also allow for creativity, which seems to be 'coded' out of the information processing systems in the digital era of un-human precision. The less precise does call upon judgement, whereas the (digitally) precise only needs a decision to execute prolonging of what the data tells you (i.e., the incipient causality). There is, according to the digital information logic, only right or wrong, correct or incorrect, efficient or inefficient ways of doing. One and zero, no in-betweens. Isn't creativity analogue in this sense? Or, rather, isn't creativity's opportunities infinite in the analogue representation of the world? The analogue is processually continuous with an infinite number of potential in-betweens and a movement that at all times is saturated by potentiality, or tendency to become. The digital is like a Lego approximation of life, in bits and straight lines without tendencies: every piece goes on according to a certain, preprogramed quantity, and when it stops it stops in full (and the next starts):



There are many excellent inquiries into management as a technology (for a recent example, see Bloom, Sadun, and Van Reenen, 2015), where management is defined (for survey-based measurement purposes) as monitoring, target-setting, and incentives/people management. Such definitions can themselves be thought of as a digitalisation of the managerial practice and function. The translation of management practice into a conceptual definition is meant to serve an operational definition that lends itself to quantification and statistical processing. It becomes – in an analogy to the image above – a digital representation of the analogue practice. In contrast, qualitative methods can be said to represent a strive to stay with language (metaphors, images) so as to keep life in language. Anthropologists have called this an emic view (coined by the linguist Pike in 1954; locals', native's view) and the ideal scholarly translation of such into text as 'thick description' (Geertz, 1974). It is important to note, as Greenblatt (1997) does (reading Geertz) that thickness is a result of description and, thus, that language matters (digital or analogue, statistical or literary) in grasping life. We can serve executing decision-makers with data, but we can also serve imagination by including tendencies, affect and stuff that help us leap ahead.

In process studies that also strive to understand how the organisational conditions for creativity is changing in a digitalized world, it seems wise to strive

for an analogue resonance with lived practice that we study. The experience-near point of view that is dear to Geertzian anthropological ethnographers comes, however, with the challenge of bringing this point of view into language. Greenblatt has tackled this challenge, leaning on Geertz. When Geertz describes the interpretive strategies that anthropologists use as they try to understand the symbolic systems and life patterns they study, Greenblatt says this resonates with a literary theorist like him. This is because language – also literature – here makes contact with reality, with pieces of writing or, as Greenblatt clarifies, with 'verbal traces less self-consciously detached from the lives real men and women actually live.' (Greenblatt, 1997: 14). Thickness, again, a concept Geertz developed from Gilbert Ryle's 1968 lecture on thinking, is for Ryle "…not in the object; it is in the narrative surroundings, the add-ons, the nested frames." (Greenblatt, 1997: 17).

A key to the force with which Geertz' text has impacted on the field of ethnography, and why it is interesting for this article, lies in how it has made "…the literary and the nonliterary seem to be each other's thick description. That both the literary work and the anthropological (or historical) anecdote are texts, that both are fictions in the sense of things made, that both are shaped by the imagination and by the available resources of narration…" (Greenblatt, 1997: 22) is the reason to why they are not separated by some non-traversable canyon dividing the real from the fictitious. At the bottom of the canyon runs language like a life-giving flow that we cannot step into twice but which has made the rift which we cross. And we cross using the only method that performatively affirms the life-bringing capacity of language: by taking the plunge, by speaking and writing with the force of poiesis. This seems to me as the important difference – is taking the plunge part of how you see yourself as researcher, or not? Performative approaches have urged us to 'jump in' (Beyes and Steyaert, 2011; to experiment, Steyaert, 2012). The balance thereby has to shift to "…techniques which embrace their own inventiveness and are not afraid to own up to the fact that they add (if so meagerly) to reality." (Massumi, 2002: 13). We arrive at imagination and the poetic as ways of making the world and add what is missing. This builds on the analogue as a productive vagueness, a 'fold ahead' of the digital noiseless representation of the world that fits operations management

software and its users.

Technology, Economy, Organisation and Management

If the technique is 'looking into the eye of the one that address you', the technology that helps us understand that technique would (in certain cultural-historical contexts) be that of politeness or courtesy. If a certain technique or behaviour 'follows' upon another, we would then say this is the result of desiring to adapt to circumstances so that one's actions result in greater fit (less friction, minimal transaction costs) or efficiency. This is an approximate definition of *homo oeconomicus*, which, in Foucault's interpretation of Becker's neo-liberal economics, is "…someone who accepts reality. Rational conduct is any conduct which is sensitive to modifications in the variables of the environment and which responds to this in an non-random way, in a systematic way, and economics can therefore be defined as the science of the systematic nature of responses to environmental variables." (Foucault, 2008: 269). This is also what is communicated in the 'affectus comprime' image above – it is a calling, a summoning and destining of *homo oeconomicus*.

Efficiency would then be limited to matching expectations in a way that reduces loss of meaning and adjustment/correction due to misunderstanding. The more exact 'transmission' of input into exact/predictable output, the more digital a technology would be (given the digital is defined by its immunity to distortion and noise). Management of work would then – as a science (cf. Taylor above) – benefit from a digitalised organisation that would offer a non-random way, a systemic way of operating. It is easy to see how more software support is demanded or even craved by managers. Seeing management as a technology is thus based on a contrast between human action that trusts the open-endedness of processual fluidity and behaviour that is governed or directed by a pre-configured system of mechanisms (input) according to which one should legitimately expect only a specific set of decisions and behaviours (techniques) to generate a specific output. Its language or data if you like.

Already Herbert Simon was aware of the critique against 'mechanical efficiency' being the result of emphasising administration/organisation/decision making as a technology. What is new in this then? Today the creative, entrepreneurial, innovative organisation is normal, and thus we want to understand how recent algorithmization impacts on (enables or prevents) the making and creating activities so much sought after. It is not only the case that management provided the most successful methods for making the marriage between economism and behaviourism work (Taylor, 1911; Mayo, 1923; 1930; 1933; O'Connor, 1999). As knowledge and practice, it has also proven to be splendid in its capacity to integrate technology into work-processes so as to increase their efficiency. Maybe Simon's administrative man did not reach further with the help of technology, but technology subsequently reached further into human thinking (as Heidegger implies in the opening quote), judgement, and decision making so as to make it more resonant with information processing technology in algorithmic, digitalized form.

Jacques Ellul, the author of the central study of technology – *The Technological Society* – from 1954, go so far as to state that "…efficiency is the very law of technique.' […] At the same time that the economist has created a technique for knowing, he (sic!) has created a technique for acting." (1954: 171). He adds: "Like a horse chafing at the bit, the techniques of economic science await the signal to intervene more completely than ever before in the reality they have come to understand." (Ibid.). This is resonant with Foucault's more general remark that in the eighteenth century economy came to "…designate a level of reality, a field of intervention…" (1991: 93). The image above, when the pincers squeeze the hart, can also be read as a prophecy of this 'level of reality' that, at the time, was about to become dominant (Foucault suggested it did so in the 18th century; the hart-suqeezing image is from 1617). The generality of this 'level of reality' made Adam Smith imagine economy as an invisible hand. Although he had carefully prepared his study of economy by first studying moral sentiments (1759, 17 years before the Wealth of Nations), the world has now become so caught up in the economic that it only remembers 'the invisible hand' from Smith's thinking. Self-love was discussed by Smith as a way to explain the

motivation underlying exchange, and only that, and "in the rest of Smith's writings, there are extensive discussion of the role of other motivations that influence human action and behaviour." writes Amartya Sen (2010).

In this world, becoming increasingly incapable of understanding the nature and motivation of human action outside the models served by fashionable economics, the dawn of the Business School and its central discipline – management – quickly became a natural extension of this 'level of reality'. Management promised to marry behaviourism (psychology had advanced along instrumental lines too in-between the two world wars) and economism in ways that promised control of the organisations. Especially in its North American version, management became the new explanation to why competitiveness was achieved. Alfred Chandler (1977) made a thin but well-spun thread back to Adam Smith when he adopted the 'invisible hand' metaphor of Smith's to describe management as the 'visible hand.'

The role of the manager – from Italian *maneggiare*, meaning 'to handle-' or especially 'to control a horse' – is here implied as the 'visible hand' that functions as a lever and adjustment on the market forces (Chandler, 1977). Economy no longer refers to the Greek *oikos (oikonomia,* translated as *dispositio* in Latin, i.e., *dispositif* in French, translated as *apparatus* in English*)*, the proper management of the household, rather it emerges as a new ontology where the population as a whole is to be controlled (Tellmann, 2009) by the help of statistics. It seems to me that the 1617 image above is part of this campaign, the launching of a new governmental regime, where economic behaviour generally is to be considered constitutive of modern humans – homo oeconomicus takes centre stage. People are now called upon in this specific sense that they are supposed to become governable precisely by understanding reality as economy and act rationally accordingly. Otherwise, 'fortune will swim away from you' (Poem above).

What role has technology in this? Technology rests on the law of efficiency, Ellul (1954) suggested. Government of the whole population co-emerges, thus, with the development of statistical calculation as an efficient

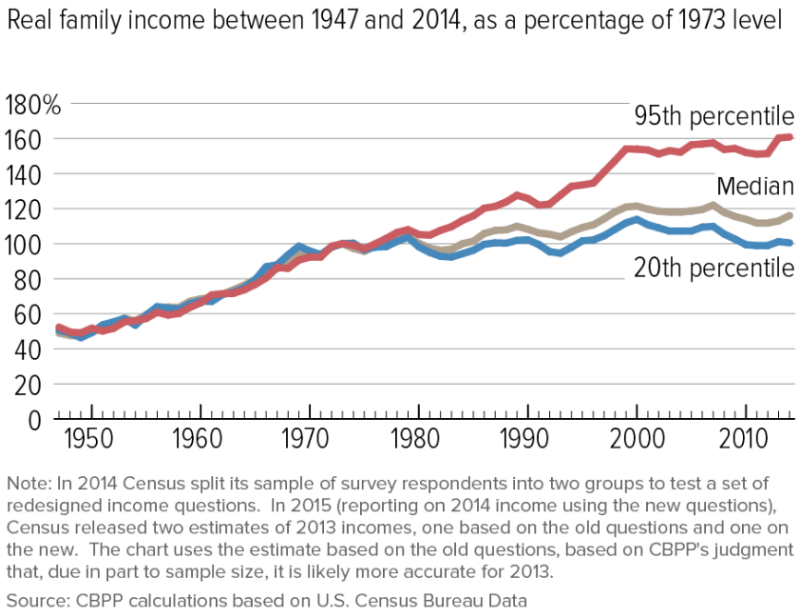
technique and technology. But there is a clash or tension between the free movement, the playful act and the rational act in the specifically economic sense – a clash between homo ludens and homo oeconomicus if you like. It glimpses through in Spinoza. Trained as a lens-maker, as a polisher of lenses, he writes, in a private letter to the Royal Society (London) secretary Henry Oldenburg, and comments on a another lens-maker's (Christiaan Huygen's) technological development with the following note:

"The said Huygens has been a totally occupied man, and so he is, with polishing glass dioptrics; to that end a workshop he has outfitted, and in it he is able to "turn" pans – as is said, it's certainly polished – what tho' thusly he will have accomplished I don't know, nor, to admit a truth, strongly do I desire to know. For me, as is said, experience has taught that with spherical pans, being polished by a free hand is safer and better than any machine."

There is a tension between wisdom, built from the free, analogue hand, guided by experience, and the insensate hand, following the digital template prescribed by technology. Is the *manus*, the hand of *man*agement, this Ratio that is guided by the template coded into technology, serving predictability and efficiency today – more than ever – what prevents the freedom needed for creativity to happen in organisations? Jacques Ellul, again, writes: "However important and impressive mechanical technique remains, it is only accessory to other factors which are much more decisive, if less spectacular. I have in mind the vast amount of organization in every field, the recognition of which led James Burnham to write The Managerial Revolution." (p. 11). In 'The Managerial Revolution', originally published in 1941[1] Burnham notes that the managerialisation of society is characterized by locus of sovereignty shifting from the parliament to the managerial class. What he says, in effect, is that management quickly became the dominant force, normality, theory, and ideology for organizing modern organisations (business or non-business). "What is occurring in this transition is a drive for social domination, for power and privilege, for the position of ruling class, by the social group or class of the *managers*…" (Burnham: 1941: 71). Studies regarding the US show that both income gap (between managers and

[1] Note this is 36 years before Chandler writes 'The visible hand – the managerial revolution in American business,' and 8 years before George Orwell's '1984.'

workers) increases and that distribution of income gains have stopped since the 1970:



Does this coincide with the loss of homo ludens? In Johan Huizinga's *Homo Ludens: A Study of the Play Element in Culture* (1938), he refers to a long tradition of thought that glimpses through in Spinoza's remark that the world belongs to the playing child, that the child rules the universe (Anchor, 1978: 63). Before we can inquire into the relationship between technology, management, and play/creativity, we need to elaborate on how organizational conduct is a target for managerial control.

Management, control, government

Critical or genealogical studies, often Foucault-based, have focused on management as a technology in the service of discipline and control (e.g. Burrell, 1988; Barratt, 2008). I note this due to the rich nature of this literature, from which I have also drawn a lot of inspiration and indeed conceptual direction (Miller and Rose, 1990; Gordon, Miller and Burchell, 1991; Dean, 1999). Admittedly, using technology mainly to increase efficiency (Simon, 1945: 182-4) also makes management more into a technology, and so the two sides are not possible to isolate. I have also meant to point out above that only an already 'digital' management (since Taylor), breaking down work into constitutive parts (cf. Ingersoll and Adams, 1986, above) eagerly picks up digitalisation as a means to further its immanent goals – control and efficiency.

If management can be understood as a technology in itself there would of course be a sense in which F.W. Taylor's basis in engineering still defines what management is. The instrumentality of technology is here understood as that "…it serves the end of another, only to the degree that it realizes its own end." (Agamben, 2015: 70). I have sought to approach the role of today's information processing support systems – such as Enterprise Resource Planning (ERP) software in particular – genealogically, to inquire into whether, as technology, management reduces organising to technē and squeezes poiesis out in its instrumental focus on its own end. In the 'hands of management' (management itself being an instrumental hand – *manus*, Latin for hand) such software also grasps the hand that holds it in the sense that it serves management to the degree that it realises its own end: algorithmically controlled organisation (cf. Beverungen, 2015). Management is now totally dependent on information-processing software.

When the 'raw material' used by various management control software is information about human behaviour, the user of such software becomes raw material for it in the use. Yet, it is in using it that this disposition of the software – to control by processing information – is realised: "Thus an instrument has two operations, one which belongs to it according to its own form, and another which belongs to it insofar as it is moved by the principal agent and which rises above the ability of its own form." (Acquinas 3, q. 27, art. 4, in Agamben, 2015: 73). 'According to its own form' would refer to the algorithmic mathematics on the basis of which the software operates in a certain way, and the 'rise above' would then correspond to the managerial control that is achieved by making use of the software in a certain way. However, when you push the control buttons, you are already in the system and obey predetermined or pre-programmed responses. This is an important part of the softwarisation of the organisation (Beverungen, 2015).

Human Resource Development software has since long re-defined the person as a piece of 'human capital.' Enterprise Resource Planning software packages (e.g. such that SAP sell) need the HR-component to be fitting the rest of the software system in order to fulfil its promises (greater control, making more

with less, decision-making basis composed by ever more information, processed in ever more sophisticated ways). In this paper I have nurtured the possibility to look the other way, where – in the extreme case - the non-functional, inoperable human that has exhausted all digital capacity and only has analogue greyness and potential left, stands 'naked' and asks us how to 'enter the organised life'? If we, rather than focus on the digital/instrumental as a development in itself, ask the Agamben-inspired question of whether bare life still resides somewhere in organisations today and, if so, where and how? The point behind asking would be the suspicion that it is from such life that creation springs (Smith, 2007; Massumi, 2011; Deleuze, 1996; Colebrook and Maxwell, 2016).

Bare life, where freedom and subjection rub shoulders (Agamben, 1995: 13) is of course also where technology's promise makes the strongest impact on the human. Simon again, in 1945: "We are laying the foundations for a science of information processing that we can expect will greatly increase our effectiveness in handling the information around us." (P. 285). Information systems that more effectively and efficiently will help us handle information. We are increasingly wanted as cybernetic organisms that can integrate and interact with cybernetic systems. In such systems, the bare human becomes a bug, a glitch, a cost.

Technology, play and creativity

The image of the playing child that we glimpsed in Spinoza's note above is of course not his but Heraclitus', one of the pre-Socratic philosophers that is often referred to as the inaugurator of process philosophical thinking that has followed upon a poststructuralist questioning of Being, structure, and self-grounded subjectivity. Heraclitus talks about the child as moving freely, and Deleuze (a contemporary process philosophers) re-uses this in his Bergson-based (Deleuze, 1988) description of creativity, where the invention of a new language within language (Proust's idea describing what writers do when they create) brings thought into thinking as a free movement. This sets action free, free in the sense that there is no template to follow; action is not limited by an awareness of an efficient way of doing it, a norm for how to act properly. It has not seen the image of the pincers, nor been contaminated by the metanarrative

of economy as a reality that limits practice. It moves freely in the space for play that imagination has led the body to assume is available, bringing action to the virtual fringe of things (Massumi, 2002; Hjorth, 2014). Here the analogue cannot but tend towards its immanent processual nextness, imagining and anticipating the becoming-more of the world. It leaps from potential to actual, gives in to incipient nextness rolling into the world's becoming-already-more.

Play, however, must also be understood as how we learn to relate to this new 'level of intervention' called economy (in its modern sense). We play our way to learn about the economy of social life. Play maintains this capacity in some form. In Agamben's conceptualization of governmentality, which critiques Foucault's (Leshem, 2015), there would be bareness in play. Playing would be a mode characterized by potentiality and possibilities of becoming. In our adult lives – when we unlearn our capacity to be children – playing postpones the 'mature' ways of behaving. Play creates illusion (*inlusio*, *inludere*, in-play) and the "…fun of playing resists all analysis, all logical interpretation." (Huizinga, 1955: 3). Playing can be related to Agamben's concept of the inoperable life, life that is saturated by potential, but which defies the templates for action available. This is when life can 'donate' itself over to knowledge (Robert, 2013; Hjorth and Painter-Morland, 2016) again, as a bare start.

The new seriousness of industrial production, the technologically super-charged rationality of management, had no room for *ludere*, play, and homo oeconomicus instead rose to reign in the modern organization. But maybe it is precisely for the reason that it was 'lost', that it now is something we desperately need to find. The call upon the creative, entrepreneurial employee, the one that needs to co-create the innovative organization, is perhaps also a cry reflecting a sense of that something is about to get washed out for good? Underneath all talk about creativity, all ideas about innovation management (Van de Ven, 1999) and managing creative (Amabile, 1998) or managing for creativity (Florida and Goodnight, 2005), is perhaps a sense of loss. Where art thou, homo ludens? Has technology come in the way for play?

The above-mentioned article from *The Economist* (Sept. 2015) also

included a subtle reference to Hirschman's study (without mentioning it) via an illustration, where again a slightly more modern set of pincers grasp the heart. In this version, although seemingly operated by a human, there is an indication of lost control:

(Illustration: Brett Ryder, The Economist, Sept. 12th, 2015)

Looking for the place of the human in organisations is by no means new. A crucial event in this history is when Elton Mayo convinced Rockefeller to fund his research that in turn promised to solve the 'problem' of democracy at the workplace. As O'Connor (1999: 224) points out, "Mayo directed his attention to the interior, subjective, emotional state of the human being; and he promoted a particular point of view about human nature based on this view." If Taylor mechanized and economized time by moving control to the tempo of the machine, Mayo would be the one that opens up to the programmable employee, the precondition for the softwarisied organization. He does this by normalizing the managerial interest in the human as one based on correcting the mind of the employee so that it better matches – i.e., processes information to cybernetically fit the system – and can start to perform as human capital. To Mayo, the human in its urge to take part, with its questioning authority was all raw-material for the work of the human resource manager:

"His investigations stressed the irrational, nonlogical, and sentimental aspect of the human being; and, consistent with his key sources, they also emphasized the basic deviance and maladjustment of the human being. The technique to correct this maladjustment also came from psychology: what Mayo called the 'counseling interview' (Roethlisberger and Dickson, 1939: 270-91), now a standard part of HRM practices (Whitsett and Yorks, 1983: 165-85)." (O'Connor, 1999)

I am obviously not sharing Mayo's interest in trying to figure out how to correct this irrational behaviour of humans in organisations (Mayo, 1923). This interest

in conducting the conduct of the employees has driven management as a form of governmentality in late industrialism. As already mentioned, Mayo's agenda is important as a step in the preparation for the algorithmic organisation, calling upon a certain management-employee relationship that the recent digitalisation of information systems can feed with decision-making support (Mayo, 1945). Mayo was thus as central for managerial governmentality as was Taylor. When we try to think with Agamben, looking for the bare life we ask where the analogue (as opposed to digital) potentials still looms in organisations. Admittedly, there is a de Certeau style of thinking here. Recall how his belief in people often resulted in a praise of everyday creativity:

> "Every culture proliferates along its margins. Irruptions take place that are called 'creations' in relation to stagnancies. Bubbling out of swamps and bogs, a thousand flashes at once scintillate and are extinguished all over the surface of a society. In the official imaginary, they are noted only as exceptions or marginal events. … In reality, creation is a disseminated proliferation. It swarms and throbs. A polymorphous carnival infiltrates everywhere, a celebration both in the streets and in the homes of those who are unblended by the aristocratic and museological model of *durable* production." (de Certeau 1997, pp. 139-40)

The analogue would represent pockets of transformative force, simply because of their ambiguous, indecisive quality, their irreducibility to either zero (0) or one (1). I am indeed sharing Mayo's Hobbesian-Galileian view that motion is the 'natural state of bodies,' (a view shared by Whitehead, Bergson, and Deleuze) but have related this as more acutely and centrally expressed in Spinoza's philosophy. In Spinoza's philosophy it is also developed into a thinking with more immediate implications for processual organisation studies (Hjorth and Holt, 2014). De Certeau is with us also here as we tie the analogous to the indecisive, vague, and as such open to movement: "This nowhere gives a tactic mobility, to be sure, but a mobility that must accept the chance offerings of the moment, and seize on the wing the possibilities that offer themselves at any given moment. […] In short, a tactic is an art of the weak." (1984: 37). We could add; it is an art of the vague.

Deleuze, the reader of Spinoza that manages to revitalize and renew the reception of his ideas, discusses power in Spinoza as intimately related to movement and affect: "[A] ll power is inseparable from a capacity for being

affected, and this capacity for being affected is constantly and necessarily filled by affections that realize it' (1988: 97). And more directly to the point of the centrality of movement for Spinoza's philosophy: "And since the affections are not separable from movement by which they cause us to go to a greater or lesser perfection (joy or sadness) […] consciousness appears as the continual awareness of this passage from greater to lesser, or from lesser to greater, as a witness of the variations and determinations of the conatus…" (Deleuze, 1988: 21). Conatus has clear resonance with Nietzsche's will to power (Spindler, 2009) and describes our power to be affected and our strive to persevere.

Mayo digitalised the way management should relate to humans in organisations: the human is represented as codeable software. He transformed Taylor's machinic preparation it into a digital technology (symbolised by HRM) that promoted certain techniques (e.g. the counselling interview) that in turn made up a new human-at-work: the technologically grasped/approached/called upon human. This grasp is now made by a algorithmic hand, an intermediary tool, an enterprise operations management software (of some kind) that shapes what it grasps as well as the one that grasps. At least this is the idea, born in F. W. Taylor's inauguration of 'scientific management'. Mayo clearly declares his relationship to Taylor as being characterised as continuation, as he notes that his work is…: "an extension of that begun by the pioneer [Taylor]." (Mayo, 1924: 258, quoted by O'Connor, 1999: 224). This made the governing ambitions of managerialism so efficient in its grasp. However, with Agamben, Deleuze, Spinoza and de Certeau, we note that our strive to preserve our conatus, would drive us into the organisationally/managerially grey/vague. This would represent an escape from being determined and grasped/governed by the algorithmic tools of present-day organisation. As such, it would increase our movement towards joy, our increased capacity to create. Not produce, but create.

Technology, affect, freedom and creativity

What is distinct about modern technique or technology, Ellul says (1954: 67), is that it is instrumental in the sense that it seeks to eliminate such variability that was found in how each person tried to compensate for the deficiency of the tools used. In such compensation, individual skills, professional know-how, and a

trained eye were needed. This varied from person to person, thus there was room for expression and style. Expression and style is what we historically have associate primarily with creativity in the arts. This, however, is presently emerging as a strong discourse on innovation (e.g. Austin and Devin, 2003), i.e., that art and science has to mingle for there to be innovation. It seems that expression and style, what we associate with the artistic, is an important condition for creativity to happen; creativity that is increasingly collective and springs from ensemble work (O'Donnel and Devin, 2012). The algorithmic organisation idealises homogeneity in form so as to limit variation of expression. The model has to lend itself to be replicated, ease of administration and fit with standards of production. 'Making do', according to experience, tacit knowledge, style and expression, is not included as a playful use of the 'grey/vague'.

For sure, creativity has never been limited to the arts (de Certeau, 1984), but always been part of human culture wherever this is found (de Certeau, 1997; Huizinga, 1938). Today, as a means to handle the hangover of industrialisation, the mature industrialised economies all stress the need for innovation and entrepreneurship. Listening to this discourse, we sense a return of expression, style, and imagination, what is called for as an increase of variation needed for a multiplication of differences, as a source of newness, to happen. In line with this Walter Isaacson, President and CEO of Aspen Institute, and author of the Steve Jobs biography (2013), notes: "The most creative innovations of the digital age came from those who were able to connect the arts and sciences." (weforum.org, 2014).

Technology (as the ideas for a technique) are not prostheses of the body, Massumi (2011: 147) writes, "[T]he senses are already that. Technologies are abstract-event multipliers and disseminators. They are prostheses of the life of abstraction. Aliveness engines." (2011: 147). By the abstract, Massumi here means what the process philosophers mean when they talk about the virtual. The virtual is potentiality that could become concrete according to the local conditions and the immanent tendency of a process. A process moves to the limit of what it can do given the intensity, 'the immanent affirmation' (Ibid, p. 84) of the process. At this limit it faces newness. In experience we find the genesis of

things, Massumi further elaborates (2011: 15), meaning the potentials for change is still there, played out in the occasion where we find ourselves. The virtual is an abstract event potential, the potential becoming concrete of, say, an idea. Technologies boost such tendency to become through continued variation. Technologies are not the medium, rather the interval, the moveability of the change (Massumi, 2002). In this sense, technologies are not prostheses added onto the body, but rather part of the body, like the senses, and qualitatively transforming its capacities and becomings. With technologies, thus, it is always a question of 'what a body can do' (Spinoza's question). Technologies are thus also a medium for opening up and increase our capacity – the route to Spinozian joy.

"The body cannot determine the mind to think, nor can the mind determine the body to motion or rest, or to anything else (if there is anything else; Spinoza)." (The Ethics, Part 3, Prop. 2)

This is Spinoza's parallelism, the mind and body is one and the same, there is one mode, which is now conceived under the attribute of thought, now under the attribute of extension. Technology would then always be part of the mind and body and enlarge or extend both in parallel. Spinoza can be used to inquire into what role technology has for management, with a specific focus on the tension (inspired by the so-far cursory analysis of the 'Affectus Comprime'-image above, and the quote from Spinoza on lens-making) between the free, playful (admittedly almost always romanticised) hand guided by experience-based wisdom, and the technologically directed template-delimited, predictable, efficiency enhancing hand of management. Maybe this can lead us to disclose a problem in today's organisations when there is a simultaneous emphasis on collective creativity and technology-powered knowledge-creation and communication. What does it mean when organisation (as practice and process) is in the technological grip of the instrumental hand (manus) of management (for which predictability and efficiency are the most important considerations) and organisation itself therefore grasps technology as a means to increase predictability and efficiency? Where does the free hand go? Or, technology has precisely set the hand free from the governing constraints of management? Technology has bent open management's grasp and made movement possible?

Technology has democratised organisations, increase our capacity for play, or increased control and tightened the managerial grip?

References

Agamben, G. (1995)

Agamben, G. (2003) *The Open: Man and Animal,* transl. Kevin Attell. Stanford, CA.: Stanford University Press.

Agamben, G. (2015)

Amabile, T. (1998) "How to kill creativity," *Harvard Business Review,* Sept-Oct. 76(5): 76-87.

Anchor (1978)

Barratt, 2008

Beverungen, 2015

Beyes, T. and Steyaert, C. (2011)

Bloom, Sadun, and Van Reenen, 2015

Burnham (1941)

Burrell, 1988;

Chandler, (1977)

Colebrook and Maxwell, 2016

Dean, 1999

De Certeau, M. (1984)

De Certeau, M. (1997)

Deetz, S. (1992)

Deleuze, G. (1988)

Deleuze, 1996

Donzelot, X. (1988)

The Economist

Eikhof and Haunschild (2007)

Ellul, J. (1954)

Foucault, M. (1991)

Foucault, M. (2008) *The Birth of Biopolitics – lectures at the College de France 1978-1979*, transl. by Graham Burchell, London: Palgrave.

Geertz, C. (1974)

Gordon, Miller and Burchell, 1991

Greenblatt, S. (1997)

Grey, C. (1996)

Hanseth, O. and Ciborra C. (Eds.) *Risk, Complecity, and ICT,* Cheltenham: Edward Elgar.

Heidegger, M. (1977) *The Question Concerning Technology and Other Essays,* Transl. by William Lovitt, New York & London: Garland Publ. Inc.

Hirschman (1977)

Hjorth, D. (2014)

Hjorth, D. and Holt, R. (2014)

Hjorth, D. and Painter-Morland, M. (2016)

Huizinga, J. (1938)

Ingersoll and Adams (1986)

Kallinikos, J. (2001)

Kallinikos, J., Hasselbladh, H., and Marton, A. (2013) "Governing social practice: technology and institutional change*," Theory and Society*, 42 (4): 395-421.

Leo, X (2009)

Leshem, 2015

Massum, B. (2002)

Massumi, B. (2011)

Massumi, B. (2015)

Mayo, E. (1923) "The Irrational Factor in Human Behavior: The 'Night Minds' in Industry," *Annals of the American Academy of Political and Social Science*, 110: 117-130.

Mayo, E. (1930)

Mayo, E. (1933)

Mayo, E. (1945) *The Social Problems of an Industrial Civilization*. New York: Macmillan.

Miller and Rose, 1990

O'Connor, 1999

O'Donnell, S. and Devin, L. (2012) "Collective Creativity: E-Teams and E-TeamWork," In Hjorth, D. (Ed.), *Handbook on Organisational Entrepreneurship*, Cheltenham: Edward Elgar, pp. 280-299.

Pike, K. L. (1954) Part I, 1954; Part II, 1955; Part III, 1960 Language in relation to a unified theory of the structure of human behavior. [Preliminary Edition.]Glendale, CA: Summer Institute of Linguistics.

Roethlisberger and Dickson, 1939

Sen, A. (2010)

Simon, H. (1945)

Smith, A. (1759)

Smith, A. (1776)

Smith, D. W. (2007)

Spindler, F. (2009)

Spindler, F. (2010)

Spinosa, Flores and Dreyfus (1997)

Spinoza Ethics

Steyaert, C. (2012)

Taylor, F. W. (1911)

Tellmann, U. (2009) "Foucault and the Invisible Economy," *Foucault Studies,* 6: 5-24.

http://www.weforum.org/agenda/2014/10/walter-isaacson-innovation-humanities-sciences/ (accessed Feb 1st 2016)

Townley, B. and Beech, N. (2011) *Managing Creativity – exploring the paradox,* Cambridge: Cambridge University Press.

Van de Ven, A. (1999)