

DAIS (Digitisation – Artificial Intelligence – Society) – Economy of Every day's life¹

Reflections for EASA-working group, proposing a presentation for the March-workshop

The following are some considerations and reflections for a workshop ‘digitization, artificial intelligence and society, organised by the European Academy of Science and Arts, specifically geared to the economy and law of every day's life. These are only some provisional key thoughts and topics that come to mind. These are important issues, any discussion about digitisation and artificial intelligence must reflect upon, analysing a wider context and looking from here at the opportunities, but as well the restrictedness, restrictions and dangers. Up to now, much of the work is oriented on the technological side, of course standing at the core of the relevant questions – social and societal aspects, if issued at all, are considered in a very limited, ‘mechanical’ way. One example could be the analysis of processes of financial transactions and the development of e-banking, also looking at acceptance levels of different demographic and social data,² while leaving out the change of ‘banking mentalities’ and considering even less the changing role and function of the financial markets. In consequence many of the analyses are characterised by a mismatch between macro and micro: we are looking at individuals and the impact of single acts and apply this on the society, but we do not really see or analyse how these changes eventually change “societality” as manifestation of the social, understood as ‘outcome of the interaction between people (constituted as actors) and their constructed and natural environment. Its subject matter refers to people’s interrelated productive and reproductive relationships. In other words, the constitutive interdependency between processes of self-realisation and processes governing the formation of collective identities is a condition for the social and its progress or decline.’³

Referring to a vague understanding of society, phenomenologically welded with the understanding of state, or even more distorted, cojoined with an existing nation state, we start from what we have, of course, and, being mislead, extend this to the present understanding of society and state, without considering that we may face a really fundamental change of the understanding of society and the

¹ May be quoted as WIP; CW – please, send to herrmann@esosc.eu

² See e.g. Ernest & Young, 1/2021: Digital Banking 2020; https://assets.ey.com/content/dam/ey-sites/ey-com/de_de/news/2021/01/ey-digital-banking-2020.pdf; 25/01/22

³ van der Maesen, Laurent J. G.; Walker, Alan, 2012: Social Quality and Sustainability; in: van der Maesen, Laurent J. G.; Walker, Alan (eds.): Social Quality. From Theory to Indicators: Basingstoke: Palgrave Macmillan; 250-274; here: 260

impact on the social: a sea change in how we live together, how we shape social spaces. This limitation is becoming clear when politicians – and at times academics alike – ask for the acceleration of digitisation and application of AI, ignoring that acceleration of a whirl is at least ambiguous, as long as the direction cannot be clearly spelled out.

The following brings forward some keywords that are important for developing a further debate. These are definitely not meant to be anything like final considerations. We are facing a fundamental change of development of society, technology and the way in which they interlink and we have now to think about its meaning not by way of development but as matter of a space we have to curate. Importantly, such design must consider the different power relationships. Looking at power structures means as well that we must consider what it means in the educational sector, finding answers to the questions of how we educate ourselves and others in order to master technological change and its impact and the challenges as well from society. At the end, it is societal ‘demand’ that determines technological development though such demand is not a matter of purchase power but of profitability creation – profitability with various possible meanings as enhancement of monetary gain, capabilities, social quality, quality of life and/or others. We are confronted with the multifold relationship between seemingly infinite development of information technology/AI, at a given time finite applicability and the even more finite application by actual human beings. This is important as the analysis can mark as well the understanding of ourselves. This is not limited to understanding our behaviour and action but concerns as well the way in which we organise ourselves, the way we define our economy and our rights as human beings. One marked example is the (supposed?) move towards ‘distributive capitalism’,⁴ the tendency to replace traditional money, the changing technology of paying and thus the need to understand and accept a new relationship to property – an extreme expression of it are the NFTs; the later also pointing out that bitcoin as new currency may replace the traditional financial system.

As such changes are mutually influencing each other, we are witnessing changes that, at the end, require a new understanding of humankind, considering that humans are social beings, but the social is also a result of the environment within which the ‘human as biological entity’ is located. A scaffold for sociological analysis is given by the Marxian political economy and Eliasian formational sociology and its concretisation in the theory of civilisation. New forms of civilization,

⁴ Arthur, Brian, 2017: Where is technology taking the economy?; in: McKinsey Quarterly – October 2017: 8; <https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/where-is-technology-taking-the-economy>; 30/10/18

their psychogenesis and sociogenesis, must be understood not by way of extending what we have but as fundamental change, altering the understanding of what the different elements of social existence – understood as elementary forms – are. Information, knowledge, skills, abilities, capabilities ..., these are just a few terms that are often – also in academia – taken in an arbitrary way as synonyms. Being very careful when using these terms of utmost importance. It may well be a task of the Academy to elaborate an interdisciplinary glossary, discussing and presenting relevant key terms, binding the different disciplines together – methodologically a major challenge, resisting the push towards ongoing specialisation without undermining it. – Some repercussion can be seen, the spirits of the early machine age re-awakening, the debates on differences between machines, tools and instruments ... – and of course new Luddites lurking around each corner, vehemently requesting regulation, a return to an ‘old normal’ or seeing the emergence of a new normal, fearing inferno, struggling with a perceived purgatory, hoping for paradise.

Furthermore, addressing the question of the individual, gains new relevance. While seeing human beings as ‘social animals’ is generally pursued, there is little agreement on what this exactly means. It is today anew the task to figure out how we can understand the individual against this background – and importantly: it is an interdisciplinary challenge. Though not entirely new, and not only bound to D/AI, the dependency of pure existence is increasingly depending on ‘technical means’: though an extreme example, we may think about the amputation of a limb, followed by its replacement with a prosthesis, reaching as – today – highest level technical means that are enabling a person suffering from amyotrophic lateral sclerosis – ALS, taking part in all ways of life, including making an exceptional career as academic as it is the case with Stephen Hawking. Equally relevant, while in completely different ways: though apparently mechanisms of individualisation, the various uses of smart autonomous devices, smart home devices, smart phones and smart speakers are much more, namely condition and expression of new forms of socialisation. However, looking at these developments we should not overlook that it is not primarily technology that changes the world but it is a changing world that defines ‘pull mechanisms’, guiding to a large extent the interest of research. The often criticised condensation of communication, the information overflow are surely facilitated by D and AI but their origin has to be located elsewhere.

The emergence of platform industries deserves special attention – in many cases also considered as quasi-synonymous with disruption. If we unravel these developments and look at what is involved, the following rough picture shows up:

- the clearly defined separation of roles and functions: here the employer, there the employee and in another there-position the customer (in some cases to be added: there the subcontractor, delivering raw-material, executing certain specifically defined tasks and again another 'there' the state) is dissolved, and with this also the centrality of the employer;
- while production and consumption remain distinct, we find here as well the blurring of borders – to the extent to which this is true, it is not only meaningful as matter of economics (in particular the determination of value), but also by way of designing what life is about. Would it mean just a more balanced relation between the two or the re-merger under different aegis? Could it be a move towards overcoming the 'separation of work and life', establishing a work ethos that allows overcoming the pattern of alienation? Or could it result in the complete subordination of life under the requirements of commodity production?
- The new constellation has also major consequences for the social contract – this applies to the understanding of the social contract in the traditional understanding, regulating in particular the relationship between citizens, civil society and state (with the main connotations to Hegel, Hobbes, Humboldt, Locke, Marx, Rousseau ...) and subsequently the rule of law in particular. Without elaborating this much further, it may be sufficient to mention that concepts of governance play an increasingly important role, though not replacing the traditional systems of state and a statutorily underpinned rule of law, at least supplementing and altering them.

As a result we find in several areas a 'new normal': what started as disruptive activity, is compromised in the threefold way: taking the so-called car-sharing as example we see that parts of the original idea, namely the APP-mediated immediate connection – mind the paradox – between driver and customer, remains in place, part is altered and in one or another form integrated into the old-normal – today the so-called car-sharing is to a large extent as regulated as the previously dominant taxi- and hackney services, finally resulting in a more or less traditional competitive relationship between very similar services – so we face disruption of the disruption. While this has to be welcomed as increasing control of the customer (one 'sees' the car approaching) on the one hand, it remains an open question in three respects: (i) doesn't this nullify the possible positive effects? Doesn't it remind us of the computer being used as intelligent typewriter? (ii) had the old securities really been securities in an optimal way or can we develop new securities that are more appropriate – not only and primarily by way of looking at the new conditions, as they are set by D and AI, but also by what society and citizens need – we should not forget that the welfare and social state never really existed. After a while we are becoming used to the disruptions – in a positive and negative sense. (iii) we have to ask as well if the advantages are socially available to everybody –

the city of Amsterdam once shot themselves in the foot: they introduced an automated ‘smart system’ for paying of public services as e.g. transport. However, it required the purchase of a chip-card that resulted in a setting that these services, in particular: public transport, could not be accessed by casual visitors. More general, many mechanisms and features are not much more and much different to shifts of responsibility to the end-user and mediators

– Socio-psychologically one of the positive aspects of those disruptions is the need to question supposed ‘givens’ – though it hits many people hard and there is without doubt the need to find appropriate solutions for those who are negatively affected.

It is easy to comprehend that part of this is the emergence of new patterns of communications and vice versa: some of these platforms are – successfully – only possible as the means and modes of communication changed – platform industries and services are not much more than an advanced version of old patterns of relating, bordering, merging, mutually spiralling ... Varied forms of roles and functions – as already analysed by sociology and social psychology – are condensing as new identities. That we are now more aware of it is because we have to project them consciously in an artificial realm, where they need to be curated. Being father, bus driver, official bureaucrat, politician, volunteer, lover ... is not enough anymore as such a matter of valid and sufficient existence – instead, nowadays we must be, design and curate ourselves – curating by way of taking care of and presenting in the public. The various identities by which we present ourselves – and that we perceive, looking at the identities of others – are in actual fact part of the creation of a secondary reality, as such part of a secondary economy and secondary legislature. – The latter became especially true and real during recent election campaigns, on the one hand Trump emerging as second reality, being permanently present, on the other hand social networks as Facebook and twitter expelling him: while one may welcome the fact, one must accept that there had been only very limited legitimation for doing so, the same applying for the appeals committee⁵.

Part of the problematique is the mode of communication itself. D and AI are structurally defined by the fragmentation of communication – again one must see that fragmentation is part of the origins and consequences of the development. Two dimensions must be mentioned, the first intrinsically linked to digitisation. A basic principle of D and AI is the binarisation as mode of operation: this

⁵ <https://oversightboard.com/>

begins with the famous 0 1 coding⁶ and moves to processes of decision-making that are very much guided by the principle of exclusion: if not a, b, c,... then it must be z. Is this fundamentally different to human decisions? One might question this, but this needs further exploration. At first glance there is already the difference that HI is based on experience, whereas AI is limited to the evaluation of given data and their linear reproduction. This is admittedly a curbing of the existing and developing mechanisms as latest versions of smart technologies are also able to develop their own database – however, it is still limited by the principle of binary linearity. This is surely an important field for further research. Equally important for further research is the question of humans, adapting to the need of ‘binarisability’. Knowing that an AI reaction will be based on (a) the reference to a database and the likelihood of a specific occurrence and (b) the binarisation of formulations, I will most likely use formulations that fit easily into the binary system use, i.e. I may well anticipate the expectation of the AI-system in my formulation. In respect to (a): it is much more likely that the answer to ‘what is the weather like this afternoon’ will provide information about temperature, precipitation etc. than about what may actually be meant: suitability for gardening, for a walk, my personal liking ... – is it the blessing or the curse to be precise when formulating a request? At least one problem may be that there are certain issues where the formulation of the question nearly equals the answer – those who know the German broadcast “Berufe-Raten” of earlier years may remember the unfamous, sometimes longwinded sequences “is it correct that ...”.

All this is closely linked to structurations, taking the form of fragmentation: Beginning on the visible level with communication on platforms that limit the length of messages, going on to the still very obvious level of a mode of communication oscillating between instant and permanent availability on the one hand and strings of communication that stretch over long periods while the actual content is limited to something that could be dealt with in seconds or at most minutes. In order to maintain connectivity, it means in substantial terms sending little ‘packages’, each of them quasi-independent from the entirety. Of course, this is very similar to ‘real world communication’, however, it makes a difference, seeing this stretched over one or two days instead of communicating directly, carrying so to say permanently the overall plan with the conversation instead of separating the different issues from each other. An ample example for such fragmentation can be seen in the use of translation and dictation applications: one can literally see how the latter

⁶ Btw., going far back, being already mentioned by LEIBNIS (Leibniz, Gottfried, 15th of March, 1679: De progressionem dyadica, manuscrit des archives Leibniz de la Niedersächsische Landesbibliothek Hannover, fac-similé publié dans Erich Hochstetter & Hermann-Josef Greve, eds., Herr von Leibniz’ Rechnung mit Null und Eins (Berlin, Siemens Aktiengesellschaft, 1966; <https://archive.org/details/69LeibnizDiadica/mode/2up>; 30/01/2022

works, searching and creating meaning by permanently matching what is understood and what is stored in the ‘global database’ and appears to be a combination that is meaningful... – a sentence as ‘How many gigabyte has a horse?’⁷ may be – in the best case – be mechanically reproduced; but it may also be distorted beyond comprehension. A telling example is the reflection presented by Daniel Kehlmann under the title *Mein Algorithmus und ich*, after ‘cowriting a novel with AI’.⁸ – It is well known from communication theory that – in some situation more than in others, in some languages more than in others – communication is context sensitive. And of course, context refers to space, time and ‘social situation’.

One aspect that is concerned with work/working conditions comes to mind – already earlier it had been pointed out that – in some areas – the traditional understanding of work/employment/entrepreneur/enterprise ... wobbles. This gains another time special legal meaning against the backdrop of fragmentation as immediate challenge for jurisprudence. We may speak of a secular development: the famous move from status to contract (H.J.S. Maine) finds a complement in the dissolution of human existence from nature as determinant, establishing social status, this being subsequently replaced by ‘role contracts’, i.e. contracts defining specific roles as that of blue and white collar worker, bread winner, father, grandmother, customer, arriving now at a stage where it is more likely that contracts are defining individual, singular acts – the gig economy being a typical example for such a relationship, redefining the twofold freedom:

- what had been the freedom in the sense of being free, i.e. not being owned by anybody, unlike the slave who had been owned by the slaveholder, and being free in the sense of not owning the means of production
- becomes now the freedom of expectations, going hand in hand with the freedom from expectations, grounded in hedonism.

The real quantitative meaning is at this stage contested – by and large we are still living in industrial societies, in several cases resulting in an amalgamation of modern and traditional life regimes, from there translating into specifically defined modes of life, not least depending on the physical

⁷ According to *The Economist* ‘a high-end car, for instance, has the digital horsepower of 20 personal computers and generates 25 gigabytes of data per hour of driving’. (*The Economist*, 2015: Does Deutschland do digital? Europe’s biggest economy is rightly worried that digitisation is a threat to its industrial leadership; in: *The Economist*, 21.11.2015; <http://www.economist.com/news/business/21678774-europes-biggest-economy-rightly-worried-digitisation-threat-its-industrial>; <http://www.economist.com/node/21678774/print>; 26/03/16)

⁸ Kehlmann, Daniel, 2021: *Mein Algorithmus und ich*. Stuttgarter Zukunftsrede: Stuttgart Klett-Cotta Verlag

environment with which people (can and have to) engage. To the extent to which the notion of ‘distributive capitalism’ is valid, the mode of life is gaining increasingly a determining role – the patchwork as paradox: looking at the external frontiers, a restricted space which is internally highly heterogeneous. In terms of social structure, D/AI is – taking today’s trends – equalising at the bottom while resulting overall in a massive increase of inequality. In other words, a relatively small homogeneous elite – the plutocrats⁹ – standing against a broad and diversified citizenry.

However, we are in any case facing two major challenges on the soci(et)al level, pointing on some general shifts: the private and public sphere and questions around responsibility and legitimate power. A fundamental pattern is given by the fact that any statement made on a platform is public – even if access is limited to ‘friends’ – it enters another sphere of legitimation and punishability, and gains a distinct meaning. The social newness of many features we see in connection with algorithm-based ‘social communication’ may well be questioned, replacing only the calculation method and calculation instrument respectively. Taking such a position, the undeniable problem is (1) the increasing general demand of connectivity and connectedness and (2) – though to a lesser extent – the external and instrumentalised control by actors who, up to hitherto, had not been involved, now emerging as investors. Is the often-criticised selectivity of communication – our ‘friends’ are only those who are of the same opinion as we are – today really so different if compared with the communication that had been composed by social stratification? The German song by Degenhardt, *Spiel nicht mit den Schmutzkindern*¹⁰ saying as much as that by Reinhard Mey, telling the story of the *Schlacht am Kalten Buffet*,¹¹ analysed by Pierre Bourdieu in sociological terms,¹² reflected in Armin Nassehi’s sociological stories gained during the journey *Mit dem Taxi durch die Gesellschaft*.¹³ Hadn’t been the socio-spatial limitation at times when only very few people used air-travel, accompanied by the socio-educational limitation, making learning one foreign language an option for only a small group in society, a much stricter limitation than the mental captivity in the algorithm-controlled information channels? Had been the ‘translation’ of meaning between strata and classes really less error-prone than the machine-translation of advanced AI? What is the difference between today’s influencers, working with or based on elaborated systems of targeted ‘information’ (be it consumer-oriented marketing, political propaganda or educational) and the opinion makers/trendsetters of earlier times? It may be an underlying old professionalism

⁹ Freeland, Chrystia, 2012: *Plutocrats: The Rise of the New Global Super Rich and the Fall of Everyone Else*; New York: The Penguin Press

¹⁰ Don’t play with the grubby kids

¹¹ The cold buffet battle

¹² Bourdieu, Pierre, 1979: *La Distinction. Critique sociale du jugement*; Paris: Les Éditions de Minuit (English as *Distinction. A Social Critique of the Judgement of Taste*; 1984)

¹³ *By taxi through society*

attitude or even conceit: one difference is the ease of supply and access of information by and for everybody that can easily mislead people, disinform them and replace a wrongly understood professional containment of experts by an open and uncontrolled spread of information that is presented in a way that it seems to equal knowledge while experts would still be required for the full exploration – however, it is again not a fundamentally new occurrence – the reading of the blurb, delivered with every medical product, the complex legal information accompanying many technical gadgets, often taking more space than the user instructions, are a telling example for such information overload – and that these various guidelines are nowadays often machine translated without human controlled does improve things.

It may be concluded that the change is not one intrinsically linked to what is going on as such (closure of communication ..., trendsetting ...) but one that concerns (a) the reach – with this being more prone to the development of universal patterns and also more exposed to external control. For instance, the closure of circles of communication in a village is globally not (necessarily) meaningful. Even if there are local groups developing as neo-fascists, environmentalist etc., they will most likely show up with different features. As wider the geographical and historical circle becomes, as more likely is the emergence of a commonality that allows developing a relevant political authority. The same is true for the occurrence of fashions. In addition, such partly homogenised and homogenising forces are also more interesting for ‘third parties’, offering a platform for executing political and commercial influence and power. Of course, a qualitative leap is obvious: we are witnessing an at least likely powershift by way of disempowering people via degrading them from makers on a small scale to followers on a large scale. – A telling example had been the ‘follower-status’, introduced by the Bavarian CSU, this way allowing non-Bavarians gaining a quasi-membership status, binding people without providing (full) membership rights. (b) Another relevant aspect is given by the already mentioned gain of power of ‘third parties’. In a recent case, ‘the Commercial Division of the Regional Court of Karlsruhe ruled that Facebook (or Meta Platforms Ireland Ltd., which operates the portal for users outside the USA and Canada) is not prevented from placing a notice before the sharing of a post that has not been clicked on (and thus not read), asking the user to read the post first.’¹⁴ The decision is interesting as it implies a

¹⁴ Landgericht Karlsruhe, 20-1-2022: Entscheidung über Facebook-Hinweis; https://landgericht-karlsruhe.justiz-bw.de/pb/,Lde_DE/Startseite/Aktuelles/Facebook-Hinweis?QUERYSTRING=facebook;26/01/2022 – original German text: ‚[e]ine Kammer für Handelssachen des LG Karlsruhe hat in einem heute veröffentlichten Beschluss im Einstweiligen Verfügungsverfahren entschieden, dass Facebook (bzw. Meta Platforms Ireland Ltd., die das Portal für Nutzer außerhalb der USA und Kanadas betreibt) nicht gehindert ist, dem Teilen eines nicht angeklickten (und folglich nicht gelesenen) Posts einen Hinweis vorzuschalten, mit dem der Nutzer gebeten wird, den Beitrag zunächst zu lesen.‘

(confirmation of) the shift of responsibility, moving it to the end-user while leaving the responsibility of internet providers, platform owners etc. limited. Here we see another time a development that originates in a shift of power relations, D/AI at most facilitator of further development. The fact that a court had been employed with such question is already telling. It is an area that is keenly contested, different actors playing a role: • **data- and platform providers a**, interested in little control, avoiding administrative costs; • **data- and platform providers b**, potentially interested in political control and campaigning¹⁵ as part of their corporate image and/or specific political and ideological interests, and being interested in the open and unrestricted data flow, thus being able to harvest data for specific goals (the targeted advertising only one) and being able to extend the reach of their enterprises;¹⁶ • **users a**, interested in privacy, rejecting any control and leaving disclosure to individual decisions, stating ‘[s]ince we desire privacy, we must ensure that each party to a transaction have knowledge only of that which is directly necessary for that transaction. Since any information can be spoken of, we must ensure that we reveal as little as possible. In most cases personal identity is not salient. When I purchase a magazine at a store and hand cash to the clerk, there is no need to know who I am. When I ask my electronic mail provider to send and receive messages, my provider need not know to whom I am speaking or what I am saying or what others are saying to me; my provider only need know how to get the message there and how much I owe them in fees. When my identity is revealed by the underlying mechanism of the transaction, I have no privacy. I cannot here selectively reveal myself; I must always reveal myself.’¹⁷ It is in my opinion questionable, though, to demand absolute privacy also for public statements – or to make statements on public affairs, refraining from accepting responsibility. Also, one may wonder if a technological shift, as proposed by John Gilmore, has anything to do with a realist democratic perspective, looking at his claim for ‘a guarantee – with physics and mathematics, not with laws – that we can give ourselves things like real privacy of personal communications. Encryption strong enough that even the NSA can’t break it. We already know how. But we’re not applying it. We also need better protocols for mobile communication that can’t be tracked.

We also want real privacy of personal records. Our computers are extensions of our minds. We should build them so that a thought written in the computer is as private as that thought held in our

¹⁵ See Nezik, Ann-Kathrin/Wefing, Heinrich, 20.1.2022: Wer Steckt dahinter. Die grossen Tech Konzerne wehren sich gegen den Zugriff der EU. Und spannen dafuer auch kleine Baeckereien ein, in: Die Zeit, 4/2022: 51

¹⁶ This goes beyond the network effects, expressed by names as alphabet (google’s parent company) and meta, formerly facebook – both names expressing some totalitarian claim

¹⁷ Hughes, Eric, March 1993: A Cypherpunk’s Manifesto; <https://www.activism.net/cypherpunk/manifesto.html>; 29/01/2022

minds.¹⁸ Relevant in this wider context is the support of self-control, e.g. asking for the disclosure of codes, algorithms, but also favouring the publication of vested interests, entanglements etc. standing behind web-traffic; • **users b**, seeing themselves left without control of manipulation and abuse, being interested in control, but also guidance; • **users c**, not being interested in relevant questions, taking things as they come due to real lack of concern or as consequence of resignation; • **the state a**, interested in competitiveness, thus more likely accepting ‘rampant growth’; • **the state b**, interested in maximising and optimising smart administration, thus depending on big data and in consequence not being concerned with the limitation of data collection, but with accessibility: * security of the own data, blocking unauthorised access * accessibility of third-party data * ‘participative data harvesting and data accessibility’ • **the state c**, obliged to protect privacy of citizens • **consumer organisations**, interested in consumer protection – however, it cannot be said what exactly this means, as data collection may well be interpreted as instrument used to protect consumers, it is possibly useful to differentiate between protection of consumers as individuals and data protection in a categorical take.

¹⁸ Gilmore, John, March 1991: Privacy, Technology, and the Open Society. Given at the First Conference on Computers, Freedom, and Privacy; <http://www.toad.com/gnu/cfp.talk.txt>; 29/01/22)