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Soft Systems Thinking in the 'Information Age'

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"Everything we hear is an opinion, not a fact. Everything we see is a perspective, not the truth."
Marcus Aurelius161 to 180 AD.

Abstract

Many of us are in a state of information overload. We are overwhelmed with 'information' in all its forms each day. Information overload prevents us from thinking about it in a rational way. In this paper I consider if the ideas underpinning soft systems can help to create a 'firewall[4]' between being subsumed by the sheer weight of information and evaluating what it contains. To do this I return to the notion of phenomenology that underpins soft systems thinking. Phenomenology is that realm of intentional consciousness that enables the phenomenologist to develop a radically unprejudiced justification of their basic views on the world and of himself and explore their rational interconnections. Similarly, in soft systems we acknowledge that reality is formed by sensation and fashioned by experience. It is not exclusively a process of thought, (although this may shape how we process our experience), for us the world exists as the result of a subjective appreciation of it. In this paper I explore how soft systems thinking through the 'method' of phenomenology might be a valuable skill in coping with information overload.

Key Words: Soft Systems; Phenomenology; Information overload.

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[4] Firewalls establish a barrier between secured and controlled internal networks that can be trusted and untrusted outside networks, such as the Internet. I use this term metaphorically to suggest that soft systems thinking can provide such a screen

Purpose of this paper

My intention is twofold. First, to raise my concern about data overload and its effect upon us and second, suggest that soft systems thinking might prove to be a useful way of putting into context the data and its implications. To do this I return to Husserl's phenomenology which arguably forms the basis of soft systems ideas.

Introduction

The ubiquity of digital devices has provided the platform for the transmission of an excessive quantity of information on every conceivable subject. This has created in each of us a feeling of information overload at times. Information overload is defined as a situation where you receive too much information at one time and cannot think about it in a clear way (Cambridge dictionary, 2020). It is caused by the struggle of managing the volume of information from multiple sources this, coupled with a scarcity of time, makes it difficult to make an informed judgement. Information from too many sources makes it difficult to analyse and understand the message itself resulting in confusion rather than better understanding. Individuals are often left in a state of bewilderment through their excessive consumption of the data that is available to them with little time to critically evaluate it[5] .. The main driver is information technology and the social media platforms it supports enabling vast amounts of data to be generated, which is easily accessed and distributed every millisecond on a variety of topics; too much for any individual to fully comprehend. We have to make a choice about what we read, but how do we make those choices?

In this paper I consider how our experience shapes the way in which we make sense of the world and make choices. In modern times what we 'think' is influenced by the choices we make from the vast amount of material available to us. To do this I contemplate Husserl's phenomenology as a way of understanding why there are different opinions behind each 'envelope' of 'information' that we access and why it is important to recognize and be aware of these differences.

The situation of interest

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[5] See: Mintzer, Paying Attention: The Attention Economy, 2020
See https://econreview.berkeley.edu/paying-attention-the-attention-economy/.

The epithet '*information*' age is somewhat misleading. More correctly it is the age of big data and data processing. We are bombarded with data from all kinds of sources that is packaged in such a way that we refer to it as information. Your rejoinder to this assertion might be to point out that you receive personal information from a variety of sources that you find useful, such as emails, contacts from social media and advertisements from on-line shopping and so on, but this is not information. It is a representation of something that you the reader/listener/viewer transform into something that makes some kind of sense to **you**. In some instances, when the topic is unfamiliar, it might be necessary to find out more, but this is not always easy and could lead you into a situation you had not expected. For example, it would be unwise to accept an offer for cheaper insurance, or a holiday package, or accepting an offer of a large sum of money from unknown sources without further research[6] . These kinds of communications are based upon a digital process that sorts through a large database that 'selects' you because your profile matches the sender's intentions. The wise recipient will explore the communication further but 'finding out' is not easy and without a strategy of some kind can lead to confusion.

I recall some years back when a post graduate was undertaking a project as part of the programme and had decided to carry out the research in the university library. As the course director I received a call from a librarian expressing concern that the student had a mountain of books and seemed to be overwhelmed. I visited him and the librarian was correct. The student was overwhelmed. What he was looking for was certainly contained in the texts, but each text was written by someone who had a different perspective on the subject at hand and every text he read was undermined by the opinion expressed in the next text. The student was bewildered. We can multiply that feeling of confusion many times over because every day we are bombarded with data, each written from a particular viewpoint (usually undeclared).

These days we are subjected to 24/7 technology and rolling broadcasts on TV. Social media is full of material, much of it is unchecked, which spawns conspiratory theories raging from doubt about the moon landing through to G5

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[6] Over a third of scams (34%) were over the phone; Almost a quarter of scams (24%) were through visits to a web site;16% were letter or fax scams; One in ten scams (10%) were through emails. Reference: https://www.citizensadvice.org.uk/about-us/how-citizens-advice-works/media/press-releases/four-million-people-scammed-each-year/

being responsible for the Covid19 pandemic (In May[7] there were a reported 77 attacks on U.K. phone masts and cell tower employees). Our present concerns are about the pandemic and the virus Covid-19, but what we learn about it comes from a variety of sources, some potentially dangerous, e.g. it is reported that groups on social media are combining to resist taking a vaccine against Covid-19 because 'they' say it is about making huge profits[8] . Moreover, it is reported that some sources of dubious creditability, and some state controlled, use the media to undermine stability and boost their own credibility. Foreign powers use the medium to spread alarm[9] as a means of creating unrest and disturbance. This underlines the importance of being aware of the viewpoint that is embedded within the 'information'; it is not neutral.

Using the web, we are able to access 'information' where we will find every shade of opinion. This can have unintended consequences. No matter what the subject might be, the searcher will find one to match with their own in their pursuit for some form of recognition. For example, groups with genuine concerns wishing to exercise their right to peaceful protest find their protest hijacked by others with a different agenda, all of which is easily organized through the power of social media. It is easy to become overwhelmed with 'information' without being able to discriminate between tittle-tattle and substance. To 'find out' about something is not a trivial task, which becomes increasingly difficult the more data we access and the more we explore the subject of interest.

Technology is not neutral

We are overwhelmed by a tsunami of 'information' each wave interpreted by the receiver as it arrives in a variety of ways; mobile telephone, tablet, TV, radio, other

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[7] See: https://www.pymnts.com/news/retail/2020/pandemic-and-conspiracy-theories-delay-5g-at-retail/

[8] See: https://www.politifact.com/factchecks/2020/may/14/facebook-posts/no-evidence-gates-foundation-will-profit-coronavir/ and https://www.gov.uk/government/news/uk-steps-up-fight-against-fake-news.

[9] E.g. see https://www.nytimes.com/2019/09/26/technology/government-disinformation-cyber-troops.html. Last summer the World Economic Forum (WEF) invited its 1,500 council members to identify top trends facing the world. The WEF consists of 80 councils covering a wide range of issues including social media. In tenth place was a concern over the rapid spread of misinformation online, specifically social media's role in this. (https://theconversation.com/hard-evidence-how-does-false-information-spread-online-25567)

people, newspapers and so on. Does the way in which the 'information' is presented affect our interpretations? For example, does a 280-character message on twitter carry the same weight as a half-page article in a newspaper? This is thought-provoking since less than 10% of 'tweets' hit the character limit, most are around the 33 words average, which suggests the receivers and the sender have a similar understanding of the subject matter. There is no debate. For those outside that intimate 'bubble' may find the contents of the message less clear, meaning that they are effectively outside that community. To paraphrase Wittgenstein, a word or sentence hasn't a fixed meaning given to it by some omnipotent power, a word has a meaning someone has given to it (Wittgenstein, 1987, p.28) and each community will understand what is said in a different way.

Many of our citizens are seldom seen without peering at some device as they wander around our streets, apparently unconscious of their surroundings and absorbed in its message. It is unlikely that its contents are conducive to critical evaluation. It is not a characteristic that is limited to one particular group either, as it is rare for any age group not to have access to some form of digital receiver. My father-in-law had an iPad and mobile telephone in his 90's, he used it primarily to follow the fortunes of his favoured football team. Experience of these technologies show us it is equally as easy to search until the searcher finds something which reflects their own opinion. In 1983, Vickers wrote, *'...men and their cultures are profoundly influenced by the tools they use. In this sense technology is not and can never be neutral. It shapes users minds and habits; it limits as well as enlarges'* (ibid, 1983b, p.8).

How do we find out about anything and what 'information' can we trust? Well it is out there, because alongside the misleading and unsound data also exists answers to the questions to which we wish to find an answer. Finding answers requires intellectual skills to support our ability to analyze and make sense of what we see and hear, but this too is influenced by our experiences of 'our world'. I believe that it is important that we should be aware that our 'appreciation' of a situation itself is not free from the influences of the 'community' to which we belong. To this end I will reflect upon what contribution *soft* systems thinking[10] can make to understanding of complexity through the lens of phenomenology at the heart of soft systems. I do not claim this as a new idea as Checkland refers to Husserl's

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[10] Not Soft Systems Methodology but soft systems thinking - See Stowell, 2020.

phenomenology and Schutz's sociology as the basis of Soft Systems Methodology (SSM), but this paper calls upon soft systems thinking itself and not SSM.

Soft systems thinking and understanding the world

To imagine that our experience or experiences alone represent the world, is to deceive ourselves. Our *reality* is formed by sensation and fashioned by experience, it is not exclusively a process of thought, (although this may shape how we process our experience), for us the world exists as the result of subjective appreciation. Husserl argued, that we can take this to represent that 'area' we have acquired from experience which provides us with a form of stability of thought, but even so we should recognize it for what it is, it is not absolute because as he reminds us an '…*absolute reality is just as valid as a round square*.' (ibid, 2012, p.109). A researcher might consider their findings to be objectively created from past theories, but these 'models' are, from the phenomenological perspective, eidetic; propositions from a world that is imagined by their creators. The inquirer believes them to be 'real' and believes that others share it, Investigation arises from the psyche of the investigator who is also predicated to a particular perspective. The observer is not without pre-knowledge of the object and of the subject being investigated, an association that brings into question the whole notion of objectivity. To consider an investigation to be truly objective is to accept that the Lifeworld of the inquirer is 'real' and shared by others. Soft systems ideas challenge the notion of objectivity and, indirectly, the basic premise of scientific inquiry into human social situations.

Lifeworld, Lebenswelt, was Husserl's explanation of distinguishing between our world of lived in experience and the world of science that supposes a natural world as existing, waiting to be explored and modeled. This is not to deny the world is 'real' because as Husserl says, '… *the real world indeed exists, but in respect of essence is relative to transcendental subjectivity*…' (ibid, 2012, p.xliii). Science, of which technology is its outcome, presupposes the thesis of the natural world-perspective, investigations being in this framework, and is bound up with the ontology of the real[11]. In other words, ideas are explored from the same basic premise from which they started. A natural scientist accepts this as the process of developing ideas, but the phenomenologist places such 'discoveries 'in brackets', what is referred to as *epoché* (Husserl, 2012, p.97), and does not assume them to

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[11] *See: Patocka, 2016, p.145, also Zelic 2008, pp.416-419*

be a part of the original thesis. This is because every idea is subjective to a greater or lesser degree and in order to understand 'something' we need to separate the phenomena from our predisposed ideas about it. This means suspending belief about 'something', that is to say attempting envisioning its essence. From a phenomenological perspective this can only be achieved by putting to one-side personal opinion (epoché), removal of presuppositions, denying reference to forestuctures and what Vickers calls readinesses.

Warnock points out that '…*the question of the existence of the object of consciousness 'in' the mind, now has its aim the removal of presuppositions, which might prevent the direct and immediate awareness of essences* (Warnock, 1970). In other words, we should be aware of our tendency to form an opinion based on past experience and 'overlook' the essence of the 'object' of interest. Husserl refers to our appreciation towards the *purity* of the property of 'something'. By this he means that we differentiate between the item as an object and our valuation of it. (Husserl, 2012, p.68-70). Although it is unlikely that any of us think of an object in terms of its purity, practitioners of SSM will recognize that separating the real world from the thinking world in mode 1 is an attempt to do just that. Realistically it is doubtful if this can be fully achieved in practice, but this should be the intention. I believe this idea to be an important point to think about within the context of the 'information age' and our understanding of what we receive.

Husserl argued that we learn about our world through our senses and from our practical experience of it so it is difficult to disassociate this experience from **our** perception of reality. We can ask ourselves how can we believe that the world exists as a function of our imagination and the same time experience its existence? This is an important point as Hermberg (2006) writes, '…*Thus there is no way to move from what the subject presumes to be fact to what is actually fact, from what **seems** to be the case to what one **knows** to be the case*.' (ibid. p.18). It is difficult for us to disconnect what we see or think about something from the phenomena. For example, most are familiar with a mermaid or a unicorn, yet there are no such things.[12] We fill in our lack of detail about these mythical creatures with enough 'reality' for us to accept them as a central point in a story. To explain this dichotomy Husserl used the term *intentionality*. He explained this as '…*the* directedness of experience toward things in the world, the property of consciousness that it is a consciousness of or about something. According to

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[12] E.g. see https://www.britannica.com/topic/unicorn

classical Husserlian phenomenology, our experience is directed toward—represents or 'intends'—things only *through* particular concepts, thoughts, ideas, images, etc. These make up the meaning or content of a given experience and are distinct from the things they present or mean. A world exists for each of us because we focus upon an aspect of an object and make sense of it from our lived experience. By accepting this premise, we accept that each situation that we encounter is 'shaped' by the way we perceive the world. Similarly, we 'fill in' any blanks in the 'information' we receive from our own imagination and experiences. From a 'soft systems' perspective this seems to be encapsulated by Vickers notion of the 'Appreciative Systems'. An Appreciative system is, he says, '…*the inner history of an individual, an organization and a society…an unique interpretative screen, yielding one among many possible ways of interpreting and valuing experience*.' (Vickers, 1983a, p.69).

It is important to note Vickers said '**many** ways' of interpreting and valuing experience. What we hear and see has a variety of meanings at the time we hear, see or experience them. How we grasp what is being said is itself subject to our life experience and each object of our attention may have many meanings and the very act of perception may generate meaning itself. We each interpret something according to self-experience of the life world and the groups we share it with. We might belong to a sort of 'cultural' community that is fashioned by 'communalized' living and doing things together. The community is made up by individuals with an informal bonding that is difficult to recognize by an outside observer. As such this 'community' is barred to anyone from another community entering in relation to theirs. Anyone trying to enter is considered as an outsider. Experience of life shows us that within each social grouping there is a 'boundary', not just in terms of expertise, but also an informal bonding[13] that to the outsider, is not always easy to recognize or penetrate. Our understanding of the 'world' is in respect of our surrounding world or culture, our consciousness of the world is created by and from 'things' which are around us. It is those 'things' which are of relevance to '*me*' which I experience, that forms the basis of understanding of the world and my relationship to it. This experience belongs to us as a *subjective* appreciation of a phenomena, and *that it is ever changing*.

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[13] E.g. See: Checkland and Poulter (2006) Learning for Action, Wiley, Chichester, p.37

The importance of essence

We are interested in the 'essence' of what it is we wish to understand. Such a consideration is difficult but recognizing the difference between our first reaction about 'something' and what that something really is, is important, particularly at this time of 'information' overload. Each 'entity' should be considered within its own 'form' (Eidos), in itself; its essence. Our understanding of 'something' can only be gained if we comprehend the 'essence of things' what Warnock refers to as a special kind of an immediate experience[14] . It is this that provides the relationship (or context) through which we make sense of the object of our attention. She says that '…*the question of the existence of the object of consciousness 'in' the mind, now has its aim the removal of presuppositions, which might prevent the direct and immediate awareness of essences*'[15] . Husserl says that '...*our awareness of the world, which is an intelligent and understanding awareness, could not be so unless we grasped the essence of things.*' (Ibid, 1970, p.33).

What Husserl meant by essence is something that, to this day, exercises philosophers and a lengthy discussion has no place in this short paper, but the 'notion' of essence is important to this conversation. To think about essence means thinking about the structure of our conscious experience. When we are conscious of a phenomenon it is because we are directing our attention to it – we intend to contemplate something.[16] But our experience is directed towards, represents or 'intends', things *through* particular concepts, thoughts, ideas, images, etc. These make up the meaning or content of a given experience and are distinct from the things they present or mean. A world exists for each of us because we focus upon an aspect of an object and make sense of it from our lived experience. By accepting this premise[17] , we accept that each situation that we encounter is 'shaped' by the way we perceive the world.

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[14] For example, the presentation of a colour. There is the colour itself, which is based upon experiences of similar colours but there is also the essence of 'colour' itself; what it is and its 'what'

[15] Wesenschau, the grasping of essences- acts of perception of objects go to make up awareness of general essences.

[16] See fifth meditation Husserl elaborates upon intentionality the individual and the surrounding world Husserl,1960, pp.131-136.

[17] Satre, an advocate of Husserl's ideas (and had his differences), prized the restatement of the principle of intentionality as he felt that it freed us from the epistemology inherited from Descartes (see Flynn, 2011 for useful discussion).

Husserl was concerned with explaining how each of us formulates our understanding of the world and of specific situations. He moved from the consideration of our understanding of verbal expressions to our perceptual experiences of the world ([18]an important difference between Husserl's ideas of intentionality and Dilthey). The phenomenologist and, according to my interpretation, a *soft* Systems inquirer, is concerned with gaining understanding of our imagined and our 'real' experiences and how it shapes our perception of the world. Husserl argued that we learn about the world, by experiencing 'things', which provides us with a way of making sense of them[19]. Soft systems is a compromise between phenomenology as a philosophy and phenomenology 'in practice'. Soft systems practice is enhanced by embracing the notion of subjectivity that underpins everyone's, often undeclared, opinion.

Avoidance of 'Instantaneousness'

In an age where 'instantaneousness' seems to underpin our everyday lives I believe that it is important that we develop our ability to analyze and dissect what we see, read and hear. It is by accepting our limitations, our limited horizons, that we can reduce the impact of preconceived ideas. Opinion, Gadamer says is the enemy of understanding (2004 pp.359-361) and it is by putting to one-side personal opinion, removal of presuppositions, that we can attempt to gain understanding. To truly gain 'a horizon' means looking at the whole and not merely the immediate by keeping an open mind to the view of the other person (Gadamer, 2004, p.271). Our understanding is improved by engaging with 'others' in a manner that allows each participant to express, unhindered, their opinion about the 'thing' in question.[20] Gadamer describes this interaction as follows, '… *the fusion of horizons that takes place in understanding is actually the achievement of language*…' (ibid, p.370). He makes an important point, which the soft systems practitioner can usefully embrace, he says, '*...the fusion of horizons was the form in which this unity (of*

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[18] For Dilthey we make sense of the world from three formulations; naturalism, idealism of freedom and objective idealism- see Makkreel, 2016 for a useful discussion

[19] Realistic phenomenology studies the structure of consciousness and intentionality, assuming it occurs in a real world that is largely external to consciousness and not somehow brought into being by consciousness - Encyclopedia of Phenomenology, Kluwer Academic Publishers, 1997, Dordrecht and Boston.

[20] This view is contrary to that of Foucault et al who argue that discussion is oppressive and discourse a means of governing social groups. But here I take a different view and one that accords with what Gadamer refers to as Gemeinsinn, being public spirited; sensus communis. (Gadamer, 2004, pp.27-31).

meaning) actualizes itself, which does not allow the interpreter to speak of an original meaning of the work without acknowledging that in understanding it, the interpreters own meaning enters as well...' (ibid, p.578). Modern digital communication, even visual mediums, constrains this activity.

Concluding remarks

'Systems' is a particular way of thinking about the world. It is based upon the realization that the properties of the whole cannot be understood by reducing it to an analysis of its parts[21] . The whole (the system) is built from an interconnection of networks (and different perspectives) from which a 'shape' emerges that allows each observer to recognize it as a system. This notion of holism was the basis of modern systems thinking and practice, but *Soft Systems* offered a different way of thinking about the world than the traditional ideas of General Systems Theory (Bertalanffy, 1959, ASC/Macy conferences, 1946-53; Stowell and Welch, 2012, pp.132-134). It moved from thinking of the world in concrete terms where the 'problem' can be thought of as having a clear definition of objectives, which Checkland reminds us '… in systems of this kind a definition which is operationally useful is extremely difficult to obtain." (Checkland, 1981, p.142). Thinking in terms of Soft systems challenged the notion of a 'world out there waiting to be discovered' highlighting instead that each situation should be considered as being unique and resulting from the observer's experience. I believe that these ideas are of immense value to us in the information age. Soft systems thinking highlights the importance of subjectivity, the way it shapes our thinking and influences behaviour. By embracing these ideas may help to put into context and critically evaluate the 'information' we receive; much of it uncorroborated.

Concerns about the credulous acceptance of 'information' is not new. For example, Kierkegaard[22] in the early 19th century warned about the uncritical accumulation of 'information'. He expressed concern about the ease with which individuals latched on to phrases and ideas from books and newspapers (and in our case I add the media, in all its forms) can be in the grip of a particular outlook by deceiving ourselves into assuming no alternative was open to us. Living, he said had

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[21] Capra's 'The Web of Life' provides an interesting account of the early Systems thinking pp36-50. And Checkland (1999) pp.59-71 for a comprehensive account of 'Science and the Systems Movement'.

[22] Kierkegaard is credited as being the founder of Existential thought and of his concerns about the loss of self-identity that rob us of the intrinsic value of subjectivity are relevant to this discussion.

'*…become a matter of knowing rather than doing, accumulating things by rote… , people will excel according to their capacity for singling out the various facts like a printer singling out letters, but completely ignorant of the meaning of anything*' (Gardiner,1988, p.40). He felt that a kind of ventriloquism was emerging where people take refuge in doctrines and dogma which they then repeat without attaching any real significance to what they were saying (ibid, p.38).

The difficulty is how can we engage and avoid our presuppositions? Each of us has a limited knowledge of any situation and we are often a 'prisoner' of our background. When we seek to understand something, we form an opinion, through our experience of its associations. This relationship, or bond, comes through language. Gadamer highlights the link between an object of attention and language and is an important point for *soft* systems thinkers. We learn to appreciate a situation through social intercourse and the basis of this is language and empathy. Data based 'information' restricts our appreciation of the whole because of the way it is presented. We are denied access to the non-verbal cues that we develop through informal conversations. It lacks an opportunity for the receiver to learn what motivates the sender and why they view a situation in a particular way. The phenomenologist and, de facto, a *soft* Systems practitioner is concerned with gaining understanding of our imagined and 'real' experiences and how this shapes our perception of the world rather than seek a scientific interpretation. Husserl was concerned with explaining how each of us formulates our understanding of the world and of specific situations. He moved from the consideration of our understanding of verbal expressions to our perceptual experiences of the world; we learn about the world, by experiencing 'things', which provides us with a way of making sense of them. I believe by reflecting upon the ideas underpinning soft systems may be a way of adding context and value to the volume of information we receive.

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