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Media Control

Definition

Call media control of an object, action, or event X the 'knowledge' we have of the control of that X within the medium in which it is imprinted.

The knowledge is that of an observer trying to comprehend his subject. It is therefore as much about this observer as it is about the subject considered to be an object.

Two qualifications apply. The first is that we may know nothing of the medium in which X is imprinted, except for the very possibility of observing X as imprinted in that medium. We call X a 'thing' or 'form', coupling more tightly elements of matter, time, or communication that are coupled more loosely within the 'medium' (Heider 1959; Luhmann 1990a).

And the second is that a medium does not arise alone. Any medium is a member of a family of further media. The content of a medium is another medium. To any figure, there is another ground (McLuhan 1964, 1987; McLuhan/McLuhan 1988). There is no way to fix any meaning except by controlling its media control within another medium, which is then governed by the same laws of the family of which they are members.

There is a society of media such that an object, action, or event X at any instant may be able to switch media or to play with several media in which it is imprinted.

Note that control is mutual. As X is controlled by its media, those media are controlled by X, since they need X to exert any influence whatsoever.

Form

Our definition gives us the form of X within its context of media control, written in terms of 'crosses' as understood within George Spencer-Brown's calculus of indications (Spencer-Brown 1972):
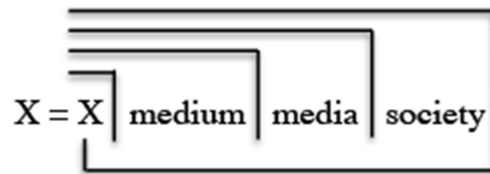
We propose to understand such a form as the *eigen*-value of a recursive function, which integrates our observation of X with our assumptions about how to account for its variance. A form spells out what we assume to know about X while reflecting on our ignorance, which is accounted for in terms of the unmarked state on the outside of the form.

The remainder of this paper tries to make explicit what is part of the form given to our definition.

Function

The first interpretation of this Spencer-Brownian equation on the form of X within a context of media control is the consideration of the functional interdependence of its variables (Korzybski 1994: 133-8), which are contained in the form. In that sense, the equation says that

X = X (X, medium, media, society, unmarked state)

The only peculiarity is that we define X in terms of itself, among other variables, and that we endogenize the function which describes the interdependence of the variables. It is in this way that we deal with phenomena of self-reference and self-organization.

In order to be able to 'solve' the equation at all, we need to include our role as the observer defining X in terms of its being a product of its media control. This inclusion is done when writing down the equation.

As a function describes relations of interdependence, we assume, when writing down the equation, that any one variable may be understood either in terms of a problem to which all other variables pose the solution, or else in terms of a solution of those problems that all other variables may pose. And this, in turn, is assumed to be true for any and each variable.

We stick to the understanding of a function in terms of interdependent variables, without making explicit any assumption regarding causal, statistical or other (if there are any other) relations between the variables. Causality is to be assumed but is superabundant, such that any selection of specific causes and effects refers to an observer responsible for that selection (Luhmann 1982). Statistical relations do apply, but they too depend on an observer selecting countable elements and establishing their set as unity.

Media

As our definition does not tell us how to conceive of a medium, let alone of a family of media and their possible interdependence, we may feel free to work with varying understandings of media. Our understanding here is that of Fritz Heider's distinction of media and things (Heider 1959); combined with cultural studies' understanding of distributive communication media (Innis 1986; McLuhan 1962, 1964), mass media included (Luhmann 2000); and sociological systems theory's understanding of generalized media of communication (Parsons 1977; Luhmann 1997: chap. 2).

We have thus a *general* definition of media of perception, communication, and other manners of cognition, telling us that no cognition is possible unless it constitutes 'things' or 'forms' within the loosely coupled media that prefigure what kinds of things or forms are to be imprinted within

them, and that are themselves the product of former attempts to imprint things or forms within them, now dissolved again into the media.

We also have a *cultural studies* definition, which advances the hypotheses (a) that media in general affect "the whole psychic and social complex" of man (McLuhan 1964: 4), and (b) that the advent of distributive communication media in particular, such as writing, printing, and electronic media, may define whole epochs in the structure and culture of human society, such as the Aristotle Galaxy, the Gutenberg Galaxy, and the Von Neumann Galaxy (or should it be the Shannon Galaxy?).

Finally, we have a *sociological* definition, which maintains that generalized symbolic media may have their origin in Greek Antiquity(when writing introduced the possibility and need to nominalize former verbs and adjectives in order to be able to repeat what began to be considered as their substantial content), yet that they only replaced earlier structures to inhibit, motivate, and control action and communication in modern times, in parallel, as it were, to the introduction of the printing press. Ever since, money, power, love, belief, beauty, and other media motivate action and communication, just as did status in traditional societies (Parsons 1977).

Moreover, we have language as a medium of communication, which not only introduces references difficult to control at any instant, but also the possibilities to lie and deceive and at any instant to be able to answer yes or no to whatever proposition (Spitz 1957). There are mass media which recode any object, event, or action X within society in terms of a distinction of the new and surprising from the old and familiar, or of information from non-information (Luhmann 2000). And there are media of matter, time, and culture, which present us with the necessary conditions to imprint any thing or form whatsoever, even while we are far from having understood let alone catalogued these up to now.

All of these media present us with a generality that can relate diversity (Parsons 1978: 395).

Media step in where operational references are enigmatic.

Note that there seem to be prospects for a general theory – if not science – of cognition to move on to a more interdisciplinary approach to media theory, which are yet to be fully established, much less explored.

Meaning

In order to be able to consider X as the function of a medium, of further media, and of society, we must understand how Parsons' relation of generality to diversity takes place. We introduce the notion of meaning, and consider meaning to be that form of human understanding which not only is selective, but knows that it is, and therefore conceives of itself as a medium that works out selective references from a set of further possible references, thus entailing at any given moment a decision to either stick with a selection or to switch to another (Luhmann 1990b).

Note that this concept of an endogenously restless meaning works well within both systems theory and network theory (White/Fuhse/Thiemann/Buchholz 2007; Godart/White 2010; Fontdevila/Opazo/White 2011). Its core idea of selectivity within an overflow of further possibilities stems from information theory and retains its statistical underpinning (Shannon/Weaver 1963), yet it goes beyond Shannon's mathematical theory of communication in that it assumes the set of further possibilities not to be technically given but socially produced (Baecker, forthcoming).

Meaning thus becomes the most general medium, in that it allows us to consider possible relations between X, its medium, further media, and society, and forces us to include ourselves into the observation and thus selection of those relations, as it is us who maintain, experience, and suffer a media control of X.

Note that the distinction of meaning has its own form, which tells us that meaning needs physical, physiological, mental, social, material, and even technical assets, and leans on these in order to develop its play, which then, however, is conditioned but not restricted by those assets.

Observer

The notion of the observer is pivotal. Any cross noted in our Spencer-Brownian equation of a media control of X relates to a distinction being drawn by an observer, who is in turn observed by us, since we would not be able to write down the equation for any specific X otherwise.

Even if X, its medium, further media, and society would be considered as inert objects, at least their relation would be the product of operations of the observers sustaining the relation.

This means that we deal with observing systems, which are observed by us, who are in turn to be considered observing systems if and when as we are able to reproduce (von Foerster 1981, 2003a).

We do not have to be specific about those observers. Living systems, brains, mental systems, social systems, and nontrivial machines qualify equally if and only if they are able to reproduce and to participate in communication (Baecker 2011).

Yet because there is a variety of observers to be considered, it becomes all the more interesting to ask what kind of observers we may account for, that is, to whom we are already prepared to lend if not a voice, then at least a capacity to draw a distinction, that is, to produce cognition (Latour/Weibel 2005).

In which ways we will be able to spell out our media control equation of X depends largely on what kinds of observers we are able to imagine as drawing their distinctions between media while indicating things or forms imprinted into specific media.

Even our catalogue of media depends largely on what kinds of observers we are able to imagine, as the distinction between medium and media may relate to physical, social, mental, and artificial media, which then, however, each require their respective observers.

Communication

Any distinction being drawn, as much as any variable being specified, and any relation of interdependence, interference, or indifference being spelled out, depend on communication, if communication means the selection of messages to inform an observer, as well as the correction of noise, the compensation of errors, and the feedback of compensation in order to check that information within a context (including purpose), as set and corrected by the observer as he abides by his information (Shannon/Weaver 1963; Wiener 1961; Ashby 1960).

Communication is not a transfer or transmission of signals, but a selection of messages by observers among whom we are but one.

This give us hints as to how employ empirically our media control equation. We have to look for observers selecting their messages among things and forms imprinted within media while identifying other observers among those things and forms. Communication is a matter of second-order observation, all things and forms including our equation being *eigen*-values of the recursive reproduction of observers engaged with second-order observations (von Foerster 2003b).

For considering communication as a reproduction of *eigen*-values of second-order observations, one precondition of paramount importance is that we consider communication to be temporalized (Luhmann 1995). It consists of events that appear and disappear, presenting us at any moment with the problem of reproduction and the improbability of that very problem being solved. Communication may only be reproduced if it manages to produce a difference that makes a difference for observers inclined to get involved.

Society

Media control, then, is a control of observers with respect to other observers to whom they relate, and to media to which they refer, while indicating and thus distinguishing the things and forms they create within the meaning to which they have access.

How is this to be accomplished?

By 'society' we understand groups, schools, swarms, mobs, organizations, and individuals of observers of all kinds, who are able to present each other with distinctions regarding the distinctions they are employing. Society is both a system and a network framing all kinds of distinctions in terms of their value in requesting further communication. Society cuts through all levels of the reproduction of observers, and defines probabilities of reproduction, which then become contested, dealt with, subverted, and accepted.

Society here is not defined by substance but by reference to association and operation (Tarde 1969; Luhmann 1997). Operations of action and communication tie identities (organisms, individuals, collectivities) into relationships of interdependence, or of co-dependent production, while accepting the independence of these identities. A society is a framing of the social in order to be able to watch, describe, and decide upon its mix of interdependence and independence.

Strange loops entangle these identities of independently living or acting units with other identities as they apply to stories, practices, locations, ties, domains, and networks (White 2008). There is a fundamental indeterminacy as to which of these identities belong to actors and which to structures and cultures.

If communication can only be reproduced by communication (*first closure*), then society is an attempt to regulate that reproduction (*second closure*) (von Foerster 2003c). Society is an organizational closure and a structure and a network, all at the same time specifying which identities at any time have what chance to control their own footing within a network of further identities (White 2008). Of course, without identities *aka* observers seeking their footing, there would be no society in the first place. Thus, we have another term for self-organization, this time adding the idea of the reproduction of communication in time to our observers' rather free play for things and forms within different media.

We even gain a further understanding of the distinction between medium and media, as society introduces restrictions on their relation as it refers to both to dissolve possible rigidities in either.

Society is our most general uncertainty calculus. It presents any one observer with the improbability of reproduction and thereby invites him to look for media to translate that improbability into more probable prospects.

Control

Control is the introduction of collectivity, if collectivity consists of some observers binding themselves in order to make it attractive for others to bind themselves as well. This is usually called politics, and implies here as elsewhere that observers employ a calculus of how and where to commit themselves in order to qualify as members of that collective.

The smallest possible collective of that kind is an individual binding itself in order to make it attractive to stick with itself (Elster 2000).

Control thus is the reference to a society of observers making it acceptable for themselves to restrict their access to certain things and forms within certain media.

There are two ways to do this: one being a tighter coupling of one medium to another medium, such that not just any X may be imprinted in the first medium; the other being the separation of one medium from other media, such that mutual references become inaccessible. Again, it depends on society what kind of tighter coupling or dissociation for specific observers becomes purposive.

Control may involve power, if observers are able to threaten others with respect to an action to be taken or avoided. Power is another medium, which may come contextualized within media of knowledge, belief, beauty, or money.

Newest Media

If newest media, that is electronic media involving instantaneous connectivity (McLuhan 1964) are introduced, traditional distinctions become obvious and lose their taken-for-granted quality.

Telegraph, telephone, movies, television, computers, and their networks allow for objects, actions, and events to check for further connections with other objects, actions, and events at any moment.

As it becomes difficult to control media within media, control becomes more noticeable (Kelly 1990).

Observers begin to play with media, looking at frames, re-entering them into the forms of their distinctions, cultivating any one medium as an argument with itself (Bateson 1972; Goffman 1974; Garfinkel 1967). Multi-media emerges, which is another way to unpack former media constellations and to look for new ones.

Networks are catching our attention (White 2008; Latour 2005).

Surveillance

Newest media imply ubiquitous computing (Weiser 1991). Big data supported by cloud computing promises to both enable and disable all kinds of calculations. We should begin to check more closely for networks and domains of social connectivity and to reconsider a language appropriate for that task.

To reconsider media control might be one useful step in that direction. Media control means that we are invited to check for ways in which observers rely on certain media to receive and imprint the objects, actions, and events they enact. Control means that ways to ensure feedback, compensation, and oscillation between sensors and effectors, depending on both drive and state functions, become decisive (Wiener 1961; von Foerster 2003d). And media means that allowing for loose coupling of elements to be coupled for any object, action, or event to be

possible, on the one hand, and possible interferences between media calling for play and, indeed, control, on the other, there is always a basic uncertainty with respect to the selection on which any control relies.

This is why the maintenance of ambivalence becomes the key skill for observers in social relationships (Leifer 1991). Ambivalence means to be able to check for further connections.

Scholars' papers as well need to maintain ambivalence.

Call surveillance any means to reduce ambivalence to definiteness. If control is circular, mutual, and thus symmetrical (Glanville 1987), surveillance is asymmetrical. If to be involved in control means to produce exactly that amount of uncertainty which may be avoided by all involved only in exchange for certain certainties (Crozier/Friedberg 1980), surveillance tries to produce definite realities. Surveillance can only be translated back into symmetry via risky means of sabotage, rebellion, and revolution.

An Example

Take twitter as an example. Any media control of X with respect to a tweet entails looking at an equation as,

$$X = X \mid \text{twitter} \mid \text{media} \mid \text{society}$$
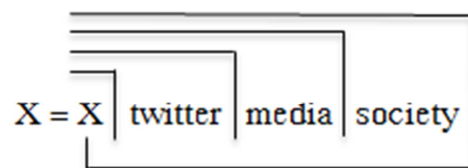
The next steps of an analysis will demand that one choose an X, look at specific media to which a tweet may relate or refer, and specify the society on which one focuses empirically.

Media control then means that X is bound by the uses of twitter with respect to other media (both to media of distribution, e.g. newspapers, broadcasting, television, or the internet, and to media of success, e.g. power, money, love, truth, belief, beauty), and with respect to certain states and processes of the society in focus.

And surveillance means that there are ways to restrict ambivalence in tweets by technical limitations, by blocking of references to, and from, other media, or by positive or negative sanctioning within society.

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