

The Metaphysics of Sexual Technologies and brokenness

Working draft

Introduction

There are certainly many possible definitions of “sexual technology” and we will discuss some of these in this paper. Of course it depends on what we understand by “technology”. Let us then begin with a definition of technology that we have been using recently and which belongs to Svante Lindqvist¹ who defines technology very intuitively as “those activities, directed towards the satisfaction of human wants, which produce change in the material world.” He also says “the distinction between human “wants” and more limited human “needs” is crucial, for we do not use technology only to satisfy our essential material requirements.” In the case of sexuality, humans do not exercise sexuality with the only aim of reproduction. Consequently, from this perspective, a sexual technology could be defined as those activities, directed towards the satisfaction of human sexuality that are intended to produce changes in the material world that *manage to satisfy these wants producing simultaneously changes in the material world*. Any definition of technology implies the incursion in metaphysical considerations concerning different aspects of sexual technologies and its evolution.

Technologies in general, are “effective procedures” directed to achieve a praxical result. We can assume that human *intentionality* imbedded in sexual tools, could be described as the “effective procedures” that work beyond human capabilities through the sexual tools. However, a sexual tool or a sexual machine can do worse than the human body or than another tool or machine. When tools or machines do worse than the human body does, or when they do better than the human body but worse than other tools or machines, they became *broken technologies*; otherwise they are *full technologies*. We can use this principle to define operationally what a “full technology” is and what distinguish it from a “broken” one.

Another approach to a definition of sexual technologies is their usefulness which improves studying the interaction between the

¹ Lindqvist, Svante. *Technology on Trial. The Introduction of Steam Power Technology into Sweden 1715-1736*. Uppsala Studies in History of Science I, Uppsala 1984; p. 14.

artefact and its user. In engineering, the usefulness of an artefact is determined by two qualities: its *utility* and its *usability*. From our perspective there is *utility* when the artefact is efficiently designed to dock with another artefact or with the world; at the other side, *usability* describes the artefact's qualities from the point of view of the user. The three goals of the engineering of usability are directed to produce artefacts that fulfil the following conditions: a) the artefact should be "more efficient to use (it takes less time to accomplish a particular task); b) it should be "easier to learn (the operation can be learned only by observing the object)" and c) the artefact should be "more satisfying to be used."²

Usability then, is measured through:

- 1) *Learnability*: How easy is it for users to accomplish basic tasks the first time they encounter the design;
- 2) *Efficiency*: Once users have learned the design, how quickly they can perform tasks;
- 3) *Memorability*: When users return to the design after a period of not using it, how easily can they re-establish proficiency;
- 4) *Errors*: How many errors do users make, how severe are these errors, and how easily can they recover from the errors; and
- 5) *Satisfaction*: How pleasant is it to use the design.

In the case of sexual technologies and sexual artefacts their usability are *broken* in all or some of these aspects if they are not more efficient to use; they are not easier to learn and they are not more satisfying to use.

Of course there are other ways to define brokenness that are *historically* related. For instance, let us consider the case of *old* technologies, as the condom. This technology still "works" today and it could be used in the same way that it was used hundred years ago. Why should it then be called "broken"? The answer is "because of its age", we would say that it belongs to a world that does not exist anymore. Then, it could be described as "historically-broken".

²Nielsen, Jakob. *Usability Engineering*. Academic Press, 1993; p. 10.



Presentation 1: “Casanova (1725-1798) mentioned condoms several times in his exhaustive memoirs. However, he was not enthusiastic about them. He did not appreciate the value of the condom until later in life. He used to inflate condoms to amuse the ladies and test them for holes.”

H. Youssef (Institute of Obstetrics & Gynecology, Hammersmith Hospital, London), *Journal of the Royal Society of Medicine* Volume 86 April 1993. Presentation from *Casanova's memoirs*. (The British Library London).

But, what about other old sexual technologies, e.g. the introduction of spermocidal substances in the vagina such as sodium carbonate, acacia gum, lemon juice, stones and other natural substances to prevent pregnancy? They are in some sense old technologies too, but we notice that they are different from cases like that of the condom. We know that the old condoms are the same as old chemical contraceptives, the product of a world that has disappeared; however, we notice that an important aspect of these two technologies is their efficiency to achieve the intended goal independently of history. A condom is an old technology but it is the product of an idea (noema) and praxis (pragma) which is adequate to the surrounding world independently of historical time. We name this adequacy as “congruency”; we say that the condom and the world still “dock congruently” independently from the historical period in which it is used. At the other hand, in the case of old contraceptive chemistry, while the pragma (methodology) of using chemical substances inside the vagina is still actual, the foundational ideas of action need to be changed completely because these old technologies were based in inadequate chemical and medical knowledge.

The fact that old technologies of sex should be included in the family of *full* respectively *broken* technologies actualizes the importance of history in this study. We know that the condom is a historic vestige of another time, but—pragmatically considered—it is still going on, and it could be implemented at any time in any future situation. In the condom’s ontology is something that is historically-free. So, what is old in it is some particular materialization (pragma) of the condom-noema; specifically the material used to produce it. We notice now that Lindqvist’s definition contemplated the changes that technology makes on the world but did not say anything about the changes occurring between the world of artefacts and the “human world” and how these changes affected technology. To avoid this

problem we will try to ground the phenomena of technology in *praxis* with historical connotations. We will call this approach “historical phenomenology” and present sexual technological artefacts as the consequence of *human intentionality* imbedded in procedures, tools and devices. “Sexual technology” for us means the development of “sexual effective procedures” that work *within and beyond the human capabilities*. In this sense, broken sexual technologies can also be seen as the result of the situation in which sexual effective procedures of any kind, do worse than the human body does, or when they do better than the human body, they do worse than other sexual effective procedures.

**First-level of
techno-sexual
brokenness**

Let us now consider another example, the “sexual technologies of poverty” which for us define a family of broken technologies. Any materials that society discards as garbage are suitable for being reprocessed as technologies of this category. What is broken here is the *amount of forms* (noemata) that are available to be used as sexual artefacts and tools. Using a “bottle” as a “dildo” could be a good example of how this technology *redirects intentionality*. The immediate question is the following: what *dildo-like-qualities* does the “bottle” have? Moreover, what is it that is *not working properly here*: is it the *knowledge* of the possibilities of the bottle respectively the dildo’s possibilities to “dock” properly which is inadequate? Is this case, as in the case of old contraceptive chemistry, a case of lack of knowledge? Alternatively, is it the *system of beliefs*, which is not congruent with the tools? Can it be so that “deprived” people *believe that* a bottle is *the same* as a dildo? The answer is simpler, deprived environments do not offer the full range of tools that match the everyday world of “regular” environments. There are no problems with the system of beliefs or with the implied knowledge; what happens in fact is that the technical means that are of disposal are incomplete to match the world of garbage. But this insufficiency is noematic; an initial lack of “forms” demands the recourse of a redirection of intentionality. Because of this case of brokenness, it is necessary to distinguish between that which *depends on knowledge* and that which *depends on praxis*.

Knowledge can be manifested as a *clear idea or form* about how the laws of the world work. I call this clear idea a “noema”. For example, to have “virtual sex” with an *avatar* implies the material connection from a person to the digital projection of an alter-ego that it is nowhere placed, is a sexual technological idea that belongs to the *fantastic*. The idea or *noema* of this technological procedure exists but not its “pragma”. As *pragma*, we understand the sexual technological procedure *itself*, which permits the idea or noema to be realized. We say that sexual fantastic technologies are pragma-broken because “they know what they want” but they do not know “how to manage”

to produce these outcomes. To realize avatar-sex properly, will demand the development of a “touchable” avatar technology which does not yet exist.

An opposite situation is that of *magical sexual technologies*. They have a pragmatic solution (that is the “sexual ritual”) but they have not a clear sexual noema or sexual cognitive base to produce this. The action of having sex with a surrogate partner to “fertilize” a third partner is a sexual magical procedure that shows a “precise procedure” for the expected outcomes of this praxis. To drink magical potions to stimulate sexual powers also belongs to this family of technologies. In this procedure, the connection between the involved bodies is *too equivocal*, and therefore is not congruent with the world. We say that the magician “knows how to do” but does not know “what he/she wants,” and that magical sexual technology is *noema-broken*.

We find that other cases of sexual implementing that are more complex than the fantastic and magical, cases in which both the noema and the pragma are—in some degree—congruent with the world. That is the situation of the chemical technologies that prevent pregnancy discussed above, which show the full presence of both noema and pragma. In any case, we can say that this presence is *weak*. We deduce that their weakness affects their wholeness but *more* in respect to their pragmatic aspects than to their noematic aspects. It is possible to say that preventive chemical technologies are *ontological-broken* because they do not work properly in spite of having a *nearly clear* idea about how they *should* work. Ontological-brokenness is a higher level of the pragma-brokenness. It is a matter of degrees that makes the one different from the other. Preventive chemical technologies are *a more* pragmatic-open than the case of the fantastic erotic avatar.

Following the same path, we say that the sexual technologies of poverty are *ontical-broken* because they are weaker in respect to their noematic aspects than to their pragmatic aspects. The bottle can be used as a dildo, but it *does not match properly* the idea of a dildo. Noema-brokenness, pragma-brokenness, ontical-brokenness and ontological-brokenness constitute for us the first-level of the brokenness of the world.

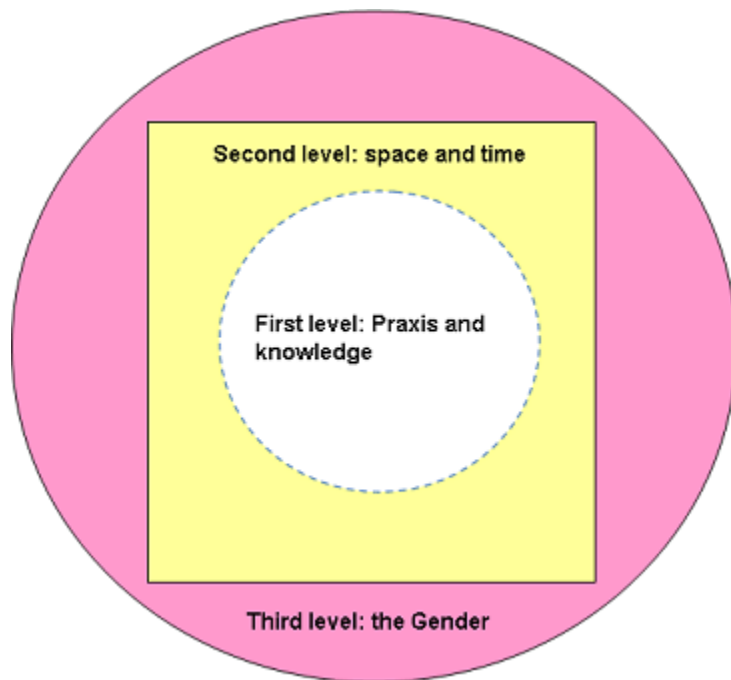
Second-level of techno-sexual brokenness

In the case of obsolete sexual technologies as the condom; the problem deserves a deeper analysis because there is nothing wrong with their noematic and their pragmatic aspects. These levels work “properly” notwithstanding that these technologies, are *archaic*. Historical-brokenness cannot be explained in terms of noematic and pragmatic aspects or with reference to their onticality or ontologicity.

We identify this *second-level of sexual brokenness* as the level in which what is broken is *dimensional*. It is a kind of sexual brokenness that affects the dimensions of time and space, of duration and extension. Explaining that condom-technologies are “old” is to say nothing new; to solve this problem we need to introduce the idea of *enigma* or “historical riddle”. We mean that out-dated sexual technologies are enigmatic in the sense that they work “properly” but only in a *reconstructed scenario*. In some cases the reconstruction needs to be significant and in some cases will be impossible. For instance, if the sexual technological procedures used during the classical time of the Incas in Peru are forgotten, it might be impossible to reconstruct them in exact the same way. Another example could be that if some primitive plant used as preventive chemical technology become extinct, the situation makes the preparation of this kind of preventive technology impossible. We can reconstruct the sexual procedure and the preventive chemical technology, but we will never manage to *restore* the authentic phenomena into our own reality. Of course, our analysis is an historical one too, and what we classify and organize depends on our perspective of the historical facts. That which for us is broken today was certainly not broken for men in another time-scenario.

**Third-level of
techno-sexual
brokenness**

In the highest level of brokenness, we find the third-level of brokenness, in which technology is intended to affect sexual behaviour in the social and cultural level. We are thinking of a special kind of sexual procedure, which involve *gender* aspects. As a typical case of gender technologies the case of *sexual reassignment surgery* can be considered. This kind of surgery converts a man who is “living as a woman” into a woman, and a woman “living as a man” into a man.



Presentation 2: The three levels of sexual brokenness.

**Typology of
sexual
technologies**

At this point of our investigation, it is necessary to initiate a preliminary classification of some different approaches to the study of sexual technologies recurring to the idea of “docking”. With the term “docking” we refer to two processes, first to the processes of adjustment in-between artefacts of different dimensionalities and secondly to the adaptation process that the body goes through when it tries to match tools, machines and the raw material during some process of work.

If we consider the human body as the *primary* reference, we can give some of the artefacts the category of *secondary* pragmata. There are artefacts that have been developed to *dock* with the whole body. That is the case of the bed and the lie-down-type group of artefacts. In this case, every point in the human body corresponds to a point of the secondary artefact. We shall call this docking as point-to-point (or 1-1-congruence). Into this group we find food, drinks and medicines, artefacts that work directly at the *inside* of the body, in a kind of *internalisation* of the process of *docking*.

Another primary-to-secondary group of pragmata shows approximately a $\frac{1}{2}$ - $\frac{1}{2}$ -congruence; they are the seat-type-group of artefacts. This group includes chairs, couches and their like. The docking between the body and the secondary pragmata create families and sub-families of artefacts.

Some artefacts are related to a third group of artefacts and not to the body as the primary group of artefacts does. This is the group of *secondary-to-tertiary* pragmata. That is the case of the shelf-type-group, which includes the bookcase and the hat-rack. The related group of artefacts includes books and hats. We could say that the bookcase has some definable congruence with each book on the shelf. A cabinet or closet is different from the bookcase not because of their structure but because the kind of pragma they are intended to preserve. However, a closet is also appropriate to keep books, more appropriate than a bed or a couch. The table that consists only of one, broad “shelf” can also “be used” as a bookcase.

Kinship between those artefacts depends on their capability to substitute each other in connection with the process in which they were created. The capability to substitute each other reveals the genetic process underlying the artefact’s genealogy.

If we accept that evolution follows a process from the simple pattern to the complex pattern, then it is acceptable to think that the first “piece of furniture” of humankind was the simple flat surface of the “floor”, the foundations of the cave. Because a bed can be used as a shelf but a shelf cannot be used as a bed, we can deduce that the bed is more primitive than the shelf. We can formulate this law of evolution as follows:

The *utility* –that is, its relative pragmaticity– of a piece of furniture determines the place of that piece in the genealogical process of the development of household’s artefacts; more pragmaticity, means less primitiveness.

We can grasp two directions in this development; first a tendency to *loose mass* winning *in mobility* and second a tendency to a *multiplication* of artefacts through a *specialisation* of functions and a reduction of pragmaticity. Furthermore, there are tertiary artefacts that work in direct contact with the body and other that work indirect with the body. When a tertiary artefact works directly adjacent to the body it becomes secondary; that is the case of the

comb and of the toothbrush and the dildo. However, that is not the case of cutlery, the set of knife, spoon and fork or that of a drinking glass, because those artefacts work as ordinary tools, working “from” the body and directed to another tertiary artefact. When a tertiary artefact works on another tertiary artefact, we could call this a peripheral artefact. These peripheral artefacts as the nail, which is not thinkable without the hammer or the piece of wood, make possible the process of nailing up a shelf. In a sexual context the penis pump is a *secondary* artefact that consists of a cylinder that is fitted over the penis, with a manual or motorized pump to create suction.



Presentation 3: A penis pump

The pump removes gas molecules from the inside of the cylinder creating a partial vacuum around the penis. We can say that the pump is a *peripheral* artefact to the cylinder which is *secondary* artefact to the penis.

In the same manner, sexual bodies, artefacts and devices can be studied from the point of view of their docking properties:

- 1) The first and most common conception of techno-sex is when the sexual praxis is reduced to a *methodology*; when the sexual intercourse is conceived as an “effective procedure”; for example the perspective of the *Kama sutra*. The approach is that of listing all the possible docking alternatives between human bodies. The human body acts direct on other human bodies and can be described as a *primary-to-primary* docking.



Presentation 4: Monuments from the Khajuraho Temple, at the Indian state of Madhya Pradesh.

- 2) The second most common approach is that of technological devices used as *sex tools*. In this case, the artefacts act as an extension of the human body, as the hammer is an extension of the arm. For example: the dildo acts as a technological *surrogate* of the penis and therefore the praxis can be considered a *secondary-to-primary* docking. As we said above, when a tertiary artefact works directly adjacent to the body it becomes secondary.
- 3) A third group consists of technological resources that improve sexuality. For example, the Viagra or the penis' pump. This group can be divided in mechanical and chemical. The Viagra works *internally* and then can be considered a secondary artefact, participating indirectly in the sexual act. The same can be said about the penis' pump but in this case the grade of congruence is minor.
- 4) A fourth group consist of contraceptives and in general artefacts that prevent pregnancy. This group can also be divided in mechanical and chemical. These technologies have an important but indirect influence in the sexual intercourse. However, their docking path is *secondary-to-primary*.
- 5) Technologies that only indirectly influence the sexual life. For example the development of the bicycle which influenced in women's use of trousers and the general impact on women's dressing mode. A bicycle and other means of transportation, is also a secondary artefact.



Presentation 5:

Susan Anthony, one of America's most influential suffragettes said: She who succeeds in gaining the mastery of the bicycle will gain the mastery of life. In her opinion, "the bicycle had done more for the emancipation of women than anything else in the world. It gives a woman a feeling of freedom and self-reliance." (Bonnie Alter).

<http://www.treehugger.com/>

Belonging to this group are artefacts that have been developed to serve specific gender roles. For example, the development of home machines at the beginning of the 20th Century

- 6) The group of artefacts that are aimed to support pregnancy and child delivery. This group of technologies are also indirectly connected to sexuality towards its consequences.



Presentation 6:

A woman giving birth on a birth chair.

From: Eucharius Rößlin, *Der Swangern frauen vnd bebamme(n) rosrgarte(n)*. Hagenau: Gran, um 1515. Wikimedia Commons.

Sexual imagery

The human mind identifies artefacts as male or female if they resemble the male or the female sexual organs and their properties. We can therefore speak about male–artefacts and female–artefacts. The identification happens in two levels: first, we find the *form* of the artefact and second the *function* of it. The reference that makes the determination of the *ontology* is the factual form of the sexes, the phallus and the vulva or vagina. The reference that determines the sexual category by *function* is the relational dynamics of the act of copulation translated to the act of congruence between pragmata: these traditional roles are *passive* respectively *active*; *dry* respectively *humid*, *rigid* respectively *stretchy*. Furthermore, artefacts can be *bisexual* because they act as ‘females’ in some situations and as ‘males’ in some other situations. A nail for example, can be seen as a she–artefact in respect to the hammer (functionally) but a he–artefact in respect to timber.

The process of sexualisation of the everyday world is archaic and can be found in any society of any time. The ontological sexualisation of nature plays a very important role in the process of “taming natural forces”. Wind and rain, mountains and floods have always been sexualized. The same process determines the character of jobs, carriers and professions that organizes in connections with procedures that we see as male work and female work depending on the dominating functions of the procedures used in the working process. According to psychoanalysis, human communication is highly sexualized and artefacts are the natural sexual symbols of it.

An analysis of the ontological properties of the human body conduces to the conclusion that because the body has the capacity to act on itself, it could be seen as a *hermaphrodite* artefact. In this sense, machines could also be seen as hermaphrodites. Many secondary artefacts (beds, couches, tables, chairs, etc.) can be seen as female while many tertiary artefacts as tools or machines often are seen as male. However there are plenty of exceptions; bags for example, can be seen as “female” by a kind of sexual definition transmissible by usage:

Bags are female seeming objects, and have strong associations with female experience in many cultures. Few women are able to bear the horror of male fingers rummaging in their handbags; there is no man who has never itched to do this. In Britain and America, subtle, untaught but unbreakable rules still govern the kind of bags that men and women can feel comfortable holding or carrying. One of the rules seems to be that the floppier the bag, the less male it seems. Another bizarre rule concerns the length of the handle. The longer the handles of a bag, the more effeminate the bag, perhaps because the more handle there is attached to a bag, the more it can appear to be something hanging on to you, rather than something that you are actively holding. And then, for reasons which I cannot easily explain, a man's masculinity seems

more compromised by a string bag than any other kind.³

According to Calvin S. Hall⁴, in psychoanalysis “one object or activity becomes a stand-in for another object or activity” because some law of resemblance as follows: 1) Association by resemblance in shape to the human sexes. All circular objects and containers with the vagina, and all oblong artefacts with the penis. 2) Association by resemblance in function of the human sexes. All objects that are capable of extruding something, e.g., gun, a fountain, a pen, a bottle with a penis. 3) Association by resemblance in action. Any act that separates a part from a whole, e.g., beheading, losing a tooth, an arm or a leg, having a wheel come off an automobile identifies with castration. By the same token, dancing, climbing stairs, riding horseback, going up and down in an elevator identifies with the coitus. 4) Association by resemblance in colour. Chocolate identifies with faeces, yellow identifies with urine, milky substances identifies with semen. 5) Association by resemblance in value. Gold identifies with faeces, jewellery identifies with female genitals. 6) Association by resemblance in number. The number three identifies with penis and testicles. 7) Association by resemblance in sound. The blaring of a trumpet or bugle or the sound of a wind instrument identifies with flatulence. 8) Association by resemblance in quality. A wild animal identifies with sexual passion, a horse identifies with virility. The Church identifies with virtue, a night club identifies with sensuality, a bathtub identifies with cleanliness.

We see that the way in which psychoanalysis understands the kinship between pragmata and the imaginary, is possible when it in some sense is related to the concept of docking (congruence).

Multistability in sexual technologies

Don Ihde discovered an important particularity of the process of developing technologies which he named *multistability*. He explains multistability as the phenomena in which the “same technology takes quite different shapes in different contexts.”⁵ Ihde studied different forms of firing an arrow and established that “each of these variations, however, serve the same purpose, to fire an arrow. But in a new context if one holds the bow in a horizontal position instead, and ‘plucks’ the bowstring—we are transforming the bow from its usual use, into a new use, as a sort of stringed

³ Connor, Steven. *Bags*. <http://www.bbk.ac.uk/english/skc/magic/bags.htm>

⁴ Hall, C. S. (1953). “A cognitive theory of dream symbols.” *The Journal of General Psychology*, 48, 169-186.

⁵ Don Ihde. Janus Head: “Technologies—Musics—Embodiments”: <http://www.janushead.org/10-1/Ihde.pdf> p. 13.

instrument!”⁶ Ihde then describes what happens in the mind of the archer: “Every archer could hear the bow string ‘twang’ when fired. Could it then be ‘played?’” Ihde then concluded: “Thus the ‘same technology’—a bow—apparently fits two radically different trajectories, one of them musical. And this set of different trajectories is apparently also very ancient.”⁷

Applying the concept of multistability to the field of sexual technologies, an example could be the discovery of the possible use of a bottle as a dildo; a very possible scenario for a family of brokenness that we have called “technologies of poverty”.

Type of brokenness	The type of relationship	Argumentation
pragma broken	The bottle is used as a dildo	Intentionality is redirected. The pragmatics of the bottle, its <i>bottle-hood</i> is broken
noema broken	The bottle is used just as a bottle, only to explore its <i>dildo-hood</i>	There is a lack of knowledge about the bottle’s “other face”, that is, that of the possibility of being converted into a sexual tool.
ontic-broken	The other way around: A dildo (a bottle-like sexual tool) that is used as a bottle (to drink-like activities)	The relationship between the bottle and the dildo <i>is not symmetrical</i> ; in this case the dildo <i>cannot be</i> used to drink-like activities. There is a lack of knowledge about how the dildo and the bottle dock <i>together</i> with the world
ontology-broken	A bad dildo (a bottle-like sexual tool that cannot be used as a dildo either) and that can only be used as a (bad) bottle	The artefact does not work neither as a dildo nor as a bottle, but still is intended to be a dildo

Presentation 7: Don Ihde’s concept of multistability combined with the analysis of brokenness in technology

In our terms what happens in the mind of the bottle-user could be studied step by step according to the four fundamental alternatives of the dialectics of intentionality and knowledge that we presented in our work *Broken Technologies*: 1) the action (intentionality) is redirected and the pragma of the bottle is broken; 2) there is a lack of knowledge that reveals the absence of a noema that match the new

⁶ Ibid.

⁷ Ibid. p. 15.

use of the bottle as a dildo and then experimenting is necessary ; 3) The other way around; there is a lack of knowledge about how the dildo and the bottle dock *together* with the world. 4) There are artefacts that cannot match the one or the other properly.

The dialectics of multistability in general

Sexuality is female and male and a study of sexual technologies must consider these two aspects of praxis. Obviously, for example, it is not the same to “penetrate” than to “be penetrated”, and even if these two roles—the female and the male—are independent of the actual sex of the practitioners, it is necessary to study from which perspective the sexual device has been conceived. Because of the importance of sexuality for the human being, it is almost inevitable to use sexuality as the analogical reference to any form of congruence transcribed as the property of “initiative” and related properties as “complementary”, “participative” and “receptive”.

This underlying sexual congruency can be followed in games such as “rock, paper and scissors.” The relationship between rocks, papers and scissors is not depending on human sexuality, but sexuality is related to it through intentionality and knowledge. This relationship is developed on the artefact’s intrinsic (ontological/ontical) properties, properties that change as soon as these artefacts are confronted with others. The properties of the paper in relation to the rock are different than those of the paper in relation to the scissors. One artefact is acting on the other according to its ontological properties causing a relation of dominance and subservience which in fact is characteristic for any form of communication in which one part drives the initiative and the other part is the follower.

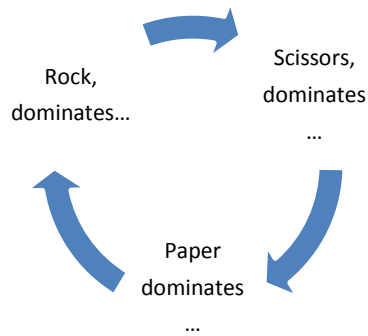


Presentation 8: “Rock, Paper and Scissors”

We will analyse the phenomenological features of the traditional game ‘Rock, Paper and Scissors’ in respect to these properties. The point of departure of the reductive work of analysis is always the world as we have apprehended intuitively during our childhood. This world is presented to us as ‘natural’ and Husserl referred to this original presentation as the “natural attitude”. In the traditional game ‘Rock, Paper and Scissors’, artefacts are imitated by the movement of the

hands.

The structure and process of the game is depicted in the following Presentation:



Presentation 9: We symbolize ‘dominance’ with ‘D’ and reproduce the mechanism of the game as follows:

Rock ‘D’ Scissors / Scissors ‘D’ Paper / Paper ‘D’ Rock

The game assumes that the artefacts are congruent with the human hands. This knowledge about the congruence-status is part of the common sense of the everyday world. Let us see the combination of these individuals in a game-structure. The game as it is, shows to us—through its materiality and concreteness—three artefacts that are related to each other according to some rules of dominance that are *techno-sexual*. That means that these properties *are determined by means of sexual heuristics*. We understand ‘heuristics’ as the study of the *act of discovering* the inner *congruence of the world* the necessary step before the development of any technology. The word comes from the Greek *heuriskein*, which means ‘to discover’ or ‘to find’. We think that heuristics depends on phenomenology and hermeneutics working together; as Don Ihde has observed:

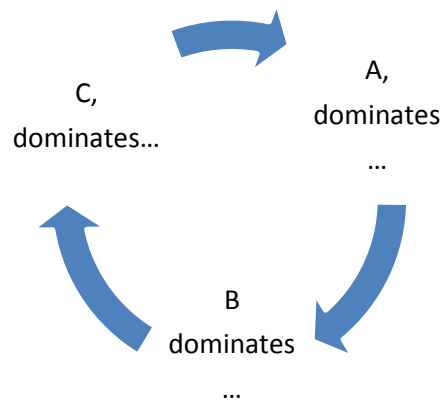
If phenomenology is the archaeology of getting back to the ‘thing themselves,’ hermeneutics is the archaeology of unlayering meaning-sediments originally associated with texts, but to become a broader unlayering of philosophical traditions.⁸

Our work will follow this double path in two steps; the first step entails, designing an *eidetic* reduction that can lead us to the *grammar of connectedness* and then a *hyletic* reduction that can lead us back to “the thing themselves” or *examples* of connectedness.

An eidetic reduction of the game presented, will give us the understanding of these phenomenological rules making them visible. The first step of the eidetic reduction needs to deconstruct the references to concrete bodies (rocks, papers and scissors). The eidetic reduction reduces the materiality of the artefacts (their hyle) to pure *sexual imagery* (heuristic relations of congruence). To reproduce this process we will change the three artefacts to three substituting symbols

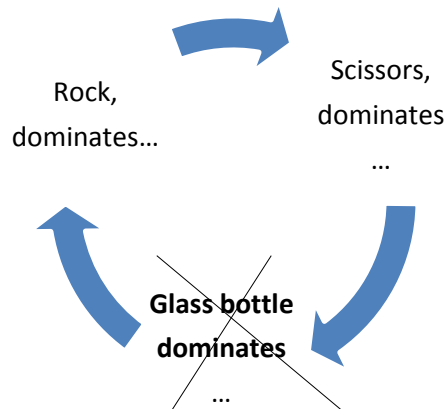
⁸ Ihde, Don. *Expanding Hermeneutics. Visualism in Science*. 1998; p. 80.

e.g. A, B and C. This first reduction reveals their mutual relationships. We notice that the rock ‘blunts or breaks’ the scissors, the scissors ‘cut’ the paper and the paper ‘covers’ the rock. In other words, ‘blunting or breaking’, ‘cutting’ and ‘covering’ have to be related to the ‘phenomenological powers’ we are searching for.



Presentation 10: Eidetic reduction, A 'D' B / B 'D' C / C 'D' A

Now we ask ourselves if we can find some *other artefacts to play the game*. We can try to find other adequate artefacts using the trial and error method introducing new artefacts and checking if the *technology of the game still works*. This is essential for phenomenology as methodology, and is known as the *study the variations* of a phenomenon. For example, we can substitute the *paper* with a *glass bottle*. We discover that a glass bottle is *not congruent* with the rock and the scissors in respect to the rules of the game. We deduce then that according to the game, there is some kind of “hierarchical” structure among artefacts that the glass bottle does not fulfil. We say that the games-rules are broken and the glass bottle is a broken artefact in respect to the game.

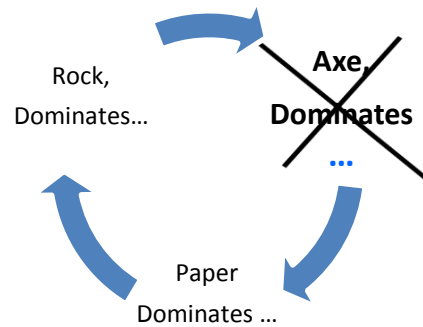


Presentation 11: Hyletic reduction; the glass bottle is not a solution for the general congruence of the game

This second reduction moves then, from the essential sphere to the concrete sphere, an action based in a previous eidetic reduction. We call this second change in perspective a *hyletic reduction*. During this second moment, the essential features shall be reversed to create a new hyletic content, a process of embodiment of the eidetic content in a new materiality.

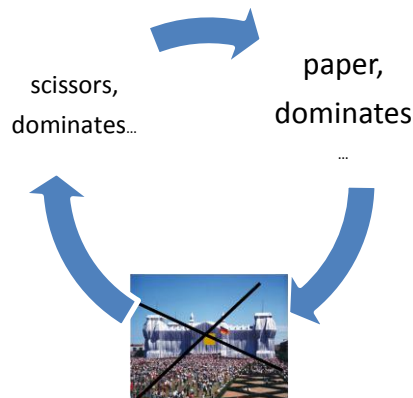
Getting back to our example, we need to find three new artefacts that fulfil the principles derived from the eidetic reduction and which intend to be congruent with the eidetic model 'Rock > Scissors/Scissors > Paper/Paper > Rock'. We know that the relationship developed between the artefacts' powers, change as soon as these artefacts are confronted with others. We say that the powers of the paper in relation to the rock are different from those of the paper in relation to the scissors but they must be *invariant properties* that can be found and which can be found in other artefacts. In other words it is necessary to find the rules that regulate the three artefacts to find other artefacts that fulfil the games rules. In doing so, we will find three other artefacts which present the same reciprocal congruence.

We can try to be more selective in the choice of a new artefact: we can substitute the scissors with an *axe* because the axe "cuts" as the scissors does. However, we notice immediately that to use an axe instead of scissors produce a new kind of *brokenness*.



Presentation 12: The axe is not a solution of the ‘equation’ of the game. Not every way “to cut” is equivalent to any other. In other words, “to cut” is not a single praxis and it cannot be reduced to a universal.

Another try: if we can use paper to wrap up a rock, then we can use paper to wrap up the *Reichtag*, and the *Reichtag* will break the scissors. However, in spite of being theoretically adequate, the *Reichtag* is not working properly.⁹ We noticed that “size” is important for congruence and it is something inappropriate in docking artefacts of critical size differences.

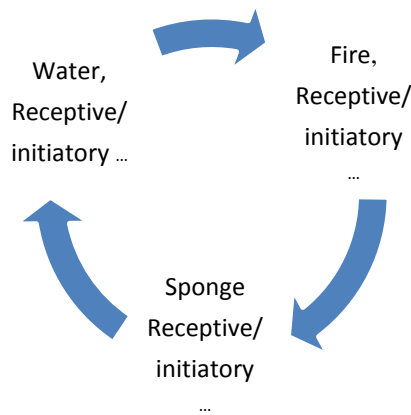


Presentation 13: Because its size, the *Reichtag* cannot substitute the rock.

⁹ Christo and Jeanne-Claude wrapped the *Reichstag* in Berlin in 1995.

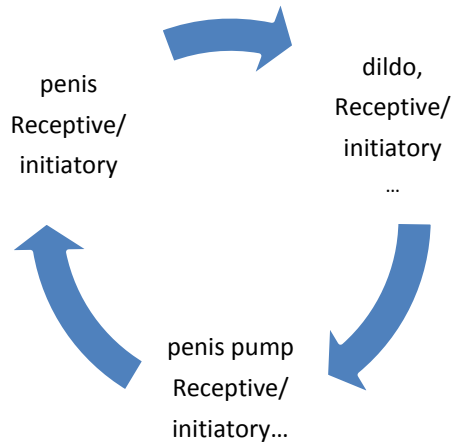
As we said before, to find new artefacts to play the game we need to perform a second reduction - which is the inverse of the eidetic- which we named “the hyletic reduction”. We assume that the powers of the paper in relation to the rock are different than those of the paper in relation to the scissors, but that they express *invariants* that can be found in other artefacts. These invariants are the heuristic powers.

We discover that some artefacts are the centre of action and name these as *initiatory*. An artefact is *initiatory* if it is the point of departure of a human action and essential for the performing of the action. Otherwise, it is *receptive*. In our actual game the rock is *initiatory* respect to the scissors which are *receptive* respect to the rock; further the scissors are *initiatory* respect to the paper which is *receptive* to the scissors and finally the paper is *initiatory* respect to the rock which is *receptive* respect to the paper. After studying the cases of invariance (try and error method) we find that a new adequate set of artefacts could be the following: ‘Water > Fire/Fire > Sponge/Sponge>Water.’



Presentation 14: We can see that these three new artefacts are both initiatory and receptive in an adequate form for the rules of the game

Trying to play the game with sexual tools the following could be a solution:



Presentation 15: the heuristic powers of the sexual game

Beside these two action-roles we find artefacts that are *indirectly connected* to human action and call it *complementary* if its role in the implementation of an action is secondary to the one that is *initiatory*. However, the rules of the game are based only in the heuristic properties of initiative and receptiveness.

In general terms and beside this particular game, studying the action general the four powers are relevant. For example, studying the action of ‘nailing a shelf to a wall’, we find that the hammer is the *initiatory* artefact and the shelf is the *receptive* artefact; the nails are the *complementary* artefact and the wall where the nails go into to hold the shelf, is the *participative* artefact.

We can thereafter classify the kind of the human body and the artefacts that are related to sexuality, defining four fundamental heuristic powers of the human body respectively sexual artefacts. For instance, studying the action of using a penis pump the cylinder is the *Initiatory* body and the penis is the *Receptive* body. The pump is the *Complementary* body and the Gas molecules inside the cylinder are the *Participative* body.

Depending of human action

Depending of human action: An artefact is 'Initiatory' if it is the point of departure of a human action; otherwise it is 'complementary'.

Independent of human action		Initiatory -A	Complementary -B
An artefact is 'participative' if it acts directly upon another artefact and it is 'receptive' if it receives the action of another.	Participative -a	Initiatory/ Participative – <i>Male condom</i>	Complementary/ Participative – <i>Penis pump</i>
	Receptive -b	Initiatory/ Receptive <i>Female condom</i>	Complementary/ Receptive <i>Spermicide substances</i> & <i>Personal lubricants</i>

Heuristic powers are related to *praxis*. *Initiatory*, *receptive*, *complementary* and *participative* are some examples of heuristic powers. The glass bottle, the axe and the wrapped *Reichtag* are three examples of artefacts that are *incongruent* with the rules of the studied game from the point of view of their heuristic powers. The glass bottle is not *initiatory* respect to the rock and is not *receptive* respect to the scissors. The axe could be seen as *receptive* and *initiatory* but in an unacceptable way because its *pragma* (the way and context in which it is used). Our conclusion is that to be *initiatory* is a general power dependent on the powers of the artefact to be *receptive*. The axe is *initiatory* to other artefacts different from the paper and the rock. Finally, the *Reichtag* is not a '*wrappable*' artefact, because 'to wrap' is related to smaller objects. These artefacts break the game down and convert the game into a case of *broken technology*.

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