

On Information Design: Rethinking the Concept of Information and its (Un)Certain Performance

Soo-hong Min¹, Suhong Hwang²

¹Department of Design, Seoul National University, Seoul, Korea

²Division of Design and Art, Yonsei University, Wonju, Korea

Abstract

Background As the formation of Information Design became a generalized feature in design studies, with its analytical dimensions examined during 1990s, the tendency toward treating "information" as concept itself was what made the relational approach so important. Hence, it has become crucial to expound upon the very nature of information, that is, to reflect on information. It is because the issue of how much and how one can trust certain information have come to the fore. Information Design as specialized design related activities treating information, strives to propose excellence in methodology of communication centered on consumer or user, by representing the theme, object, phenomena, or their degree of change in efficient and sophisticated manners. Such methodology is based on "classification and analysis on information (on various subjects/ phenomena)" and simultaneously, "setting-up of object(s)/issue(s)" to figure out the causality, and accuracy to support such setting-up, that is, to seek "certainty". In order to make improvements for information design, we need an approach enabling the design practices to think about "the reality" of what is the information more creatively and correctly, why and how such information comes into being.

Methods This paper analyzes documents and case studies on various applications of the aforementioned three notions in our life, in the fields of Sociology, Informatics, History and Philosophy of Science, Science and Technology Studies. And, epistemological and performative features and limits of the three notions will be analyzed. Furthermore, questionnaires enabling critical thinking on actual complexity will be proposed by Information Design experiments and practices based on scientific methodology, so that information and its establishment-pursuit, the "sociality" of interpretation could be considered carefully.

Results The practice of Information Design which treats information and visualizes the context is enabled by embodying scientific methodology and exploring, but it is difficult to overcome the complexity and uncertainty of the real. It is because the visualization of Information Design cannot avoid the schematization-establishment of mechanical causal relationship which form in the process of practice and the indication of input-output. Therefore, "(certain) Information Design" can be proposed/applied only limitatively under "specific condition (or standard)".

Conclusions The concept of actual complexity is simplified and becomes abstract through classification-analysis approach, theme determining, etc. during the process of designing and realizing Information Design. Hence, certainty is pursued but uncertainty is also at stake since the real situation, which is not/could not be revealed, exists at the opposite side. The intellectual activity of Information Design cannot avoid this result. Therefore, we should always have in mind that the hidden prevails over the shown, a plenty of unseen happens in the process of seeing. With such understanding, the attitude of "information" treating design practice would become much more prudent and enhanced. assumptions about this work as well as the environment must also change.

Keywords Information Design, Sociology, Science and Technology Studies (STS), Concepts and Ambivalence of Information, Questionnaires for Design Practices on Information

*Corresponding author: Suhong Hwang (suhongh@yonsei.ac.kr)

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1. Introduction

It is a difficult task to determine what the modern origin of Information Design today is. Many in the field have debated its relationship to print or broadcasting media. Others have been preoccupied with how information conveys meaning, and in what way information takes on a visual form. If information is a visual conveyor of meaning and knowledge production, there could be numerous interpretations, critical frameworks and contestations, as we witness its definition across disciplines and cultures. As Floridi reminds us, information is always redefined in different local contexts.(2005) Interestingly, the importance of the notion of "Information Design" and its practice has re-emerged since the mid-1990s, when the World Wide Web came to emphasize the concept of intuitive-random-democratic accessibility to information through search engine, and grew rapidly to disseminate and structure the production and distribution of certain information.(Castells, 1996) Various studies, practical theories and guidelines on visualization of information and reproduction of it had begun to emerge during this period and have continued to this day; in a similar vein, the monopolizing dynamics of knowledge production and discourse formation in economic, psychological, cognitive scientific as well as aesthetic aspects from the previous era have flourished.

As the notion of Information Design became generalized in the design field, and its principal components, and tendencies for treating "information" within design more quantitatively, such theories and practices now found an audience. Hence, it has become important to ponder the very nature of information, that is, to reflect on information as a network of social organizational arrangements understood via events, ideas, and objects that can be reduced to data on a global-local scale (Castells, 1996). It is because the issue of how much and how one can trust certain information that a data-centric approach has come to the fore. Information Design as specialized design practice is thus related to activities that treat information as the purpose of its methodology. This is accomplished through communication centered on consumers or users, by representing the theme, object, phenomena, or their degree of change in efficient and sophisticated manners. Such methodology is based on "classification and analysis on information (on various subjects/phenomena)" and simultaneously, "setting-up of object(s)/issue(s)" to figure out the causality, and accuracy to support such setting-up, that is, to seek the process of pursuing "certainty" which is formatted with "data", and making some "narrative" by our/their inference.

This paper analyzes documents and case studies on various applications of the aforementioned three notions in our life, in the fields of Sociology, Informatics, History & Philosophy of Science, and Science and Technology Studies (STS). And, epistemological and performative features and limits of the three notions will be analyzed. Furthermore, questionnaires enabling critical thinking on real complexity will be proposed by Information Design experiments and practices based on scientific methodology, so that information and its establishment-pursuit, the "sociality" of interpretation could be studied carefully.

2. Information and Design of Information

The task of defining information in an accurate manner seems to be an impossible task, as it is such a relative concept, scholars in the field of information and related logic and philosophy have often postulated. But generally, information is perceived as "communication or reception of knowledge or intelligence" or "knowledge obtained from investigation, study, or instruction" (merriam-webster.com/dictionary/information) and, "knowledge communicated or received concerning a particular fact or circumstance; news" or "knowledge gained through study, communication, research, instruction, etc.; factual data" (dictionary.reference.com/browse/information) and it is communicated in such sense. The interesting thing is, as Floridi (2005) pointed out, "Polysemantic concepts such as information can be fruitfully analysed only in relation to well-specified contexts of application", and therefore, in the process of communication and its understanding, we can infer the growth of numerous interpretations on information and their feedbacks, entailing transformative meaning and shift in importance. From this view point, information is a highly relative, non-aligned, volatile concept in all cases such as its production and distribution, consumption, maintenance and management and diffusion. Furthermore, the main reason for the establishment of Standard Definition of Semantic Information (SDI) – which is the protocol and standard of information treatment in Information Engineering, Computing Science, etc. - and the resulting (re)design of classification scheme, since volatile content of information must be diagnosed and formatted in order to discern it from misinformation and pseudo-information. (see Floridi, 2005)

The time when such "information" re-emerged as the keyword in the specialized field of graphic design and the related education fields, seems to be the mid 1990s, and conceptually rethought in the mid-late 2000s at the level of practice. This trend can be verified by searching books on design or various lectures with the term "information" in the title on Google, Amazon or journal search engines and you will find various syllabi, researches, conferences related to academic events that were mostly held in the time outlined above. (It is true that we are in need of more economic, cultural theory-based analysis on the factors creating such trends. However, such a vantage point for analysis is not covered by this paper and shall be left to future scholarship.)

With the search keyword "information design" on the Internet bookstore site Amazon, you can find 83,442 books listed, as of February 2016. Even if you exclude the "information" on unrelated books that were listed via Amazon's search algorithm, the books listed on the top 50 among the ones directly related to the practice of Information Design and guidelines, were mostly published since mid-2000. Exceptions are obviously to this generated list. Especially, the brilliant and pioneering guidebook by Edward R. Tufte, on interpretation and visualization of information and data, titled *The Visual Display of Quantitative Information* first published in 1983, and his *Envisioning Information, Visual and Statistical Thinking: Displays of Evidence for Making Decisions, Visual Explanations: Images and Quantities, Evidence and Narrative* were published respectively in 1990, 1996, and 1997.

These oeuvres were unrivaled in their era. Meanwhile, the introductory book on Information Design which Robert Jacobson had edited and published in 2000, titled Information Design begins like this: "Information design is the newest of the design disciplines". Put another way, the historiography on Information Design should examine various origins as opposed to the current trend of identifying a single origin. By looking at Information Design from a historicist lens, this signals one aim of this article.

Compared to the fabric of information in design which is not simple or cannot allow itself to be simple, the problem found in design practice and studies dealing with today's information is that, they consider it unilaterally as a theme that can be realized, that "has no element of manufacturing (even though it is made of ingredients displaying active change)". Put simply, information is both tangible and ephemeral, As a result, there is lack of reflection on "different" contexts in which one can discern the before and after state of treatment of certain information and its respective features. Additionally, designers participating in Information Design understand their work superficially. This could be caused on ignoring the difficulty of defining and treating information and its ambivalent state. Consequently, there could be more serious ignorance and indifference, misunderstanding, which goes against the grand objective and principle of Information Design, "better understanding and establishment of knowledge".

From now on, we will examine possibilities for Information Design production to overcome such limits, through rethinking the grand scale and multimodel nature of information itself.

3. To Classify: To Analyze

The task of classifying objects, events or persons according to a certain conceptual template of categories, requires the ability to observe and think about different aspects and appearances of such configurations. This is an essential step taken in the process of informatization and it forms the basis of the user's method of accepting and using information. It is utterly crucial to reflect on the characteristics of to classify and to analyze in the field of Information Design. This is because it enables consideration of the performative method of Information Design, of the very nature of performance itself. The approach for classification and analysis must follow objective standards and neutral aims to ensure important conceptual standards. Because every generalization would be caused on the level of using, applying, interpreting the information which were treated under to classify-to analysis process. Certain individual specificity of any object, event or person ought to be revealed through generalization. But interestingly enough, as the sociologists Bowker & Star (1999) have showed, any system of category enabling classification-analysis is never perfect despite scientific arguments supporting knowledge production or economic arguments supporting its functionality and efficiency. Therefore, "to classify is human" and to analyze is extremely relative as well, and naturally, a social task due to the constant demand of new standards and the novelty and polysemy of countless environments and premises.

Classification and analysis of information share the following understanding of categorization and characteristics.

First of all, the prototype classification defined by experimental psychologist, Eleanor Rosch (1978). Rosch argues that the ideal of classification required in the process of production and acceptance of information, enabling us to consider classification (which entails analysis) itself as clear and unitary mode of analysis. Compared with this, the Aristotelian classification deduced by theoretical physicist John Taylor (1995), which proposed pioneering conceptual frame on error analysis makes us understand classification itself as fluid and binary. (see Bowker & Star, 1999, pp. 61-63) Hence, on the level in which complexity of the real situation is reflected, the following aspects are constantly required: new classification and analysis, local design and application of system of categorization, subsequent, arbitrary and autonomous movement among categories.

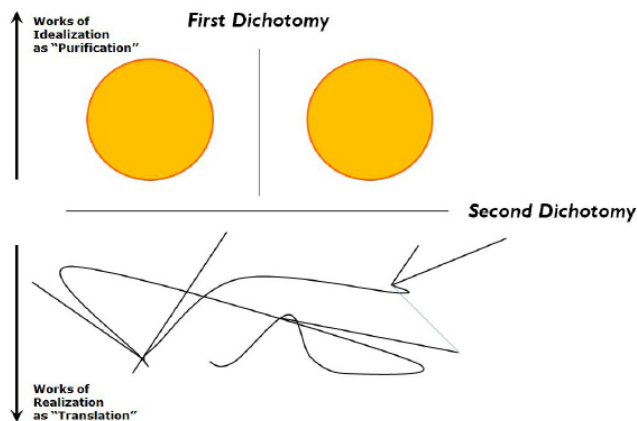


Figure 1 Works of Idealization and Realization on To Classify and To Analyze

This can be explained through <Figure 1> which makes use of the diagram of social conceptualization examined in Latour's study (1983). For classification through analysis under clear standard to look plausible, the actual should be divided into certain ideal dichotomy, as in the division of purity and non-purity. Prototype classification would be such. Consequently, this leads us to adopt "a model of analysis that respects the very boundary between micro- and macroscale, between inside and outside". (Latour, 1983, p. 153) Meanwhile, it is necessary to examine the characteristics of epistemic limits of method of classification which invites boundary defining. Whichever boundary defining is at issue, it is (re)constituted socially to the extreme so that it becomes relative and fluid, quite different from the original intent.

Compared to this, Aristotelian classification focuses on formation of new type of classification by the objects of classification and on classification-analysis as translating autonomous revisions, that is, purification and its method of pursuit, in a local context.

In order to delve into classification and analysis on information, and the meaning of classification and analysis in the process of informatization, we need to closely examine Bowker and Star's questionnaire which deal with the practical characteristics of classification and analysis, namely, the notion of ambivalence: "What work do classifications and standards do?", "Who does that work?", "What happens to the cases that do not fit?" (see Bowker & Star, 1999, pp. 10-12) Upon asking these questions in the cases of International Classification of Diseases (ICD), Nursing Intervention Classification (NIC) and Apartheid, which were legally implemented racial segregation in Republic of South Africa, what we find is the (unexpected) aftermath giving influence to the classifying-analyzing which is far more complex, instead of thorough and steadfast simple classifying-analyzing and (intentional) effects. Through this, what we can recognize is that, despite the myths of scientific objectivity and neutrality, classification and analysis are extremely relative themselves. As there are various agents active in the process with respective interests, co-constructive dynamic politics which is not simply vertical but is at play. And in the each case, one can find scenes of transformation entailing huge misunderstanding and prejudice, much more serious violence, new negotiating terms whether intentional or not. The approach and practice with the objective of giving order brought about new disorder (or savage state) and the aftermath allowed individual and unique cases which were difficult to categorize, to be deemed classifiable through local and personal-social mediation. The non-classifiables create new criteria and categories that allow them to be classified. As such, confusion and the intention of removing confusion do not disappear.

At this point, the genuine issue which we need to examine is that, Information Design, to produce and treat its source information, directly performs such classification-analysis or applies previously obtained results of certain classification-analysis, as grounds and standards of objectification and visualization. To secure scientific objectivity and neutrality in this process, cross-disciplinary approaches are emphasized again. This is because we are aware that Information Design, which overlooks user and user semantics, would encounter difficulties while following the line of performative system. If so, we need to ask ourselves again to reconfirm. And the answer would be understood as somewhat circular argument. What are information and informatization? (As the substance of information and informatization itself) "Information systems mix up the conventional and the formal, the hard technical problems of storage and retrieval with the hard interactional problems of querying and organizing". (Bowker & Star, 1999, p. 7) We can safely say that the discourses on information require questioning and reasoning to consider the sources of information and Information Design which have already stabilized and established themselves as reliable, as the objects of new classification-analysis. This process necessitates social and historical aspects in considering the relativity and ambivalence.

4. To Objectify: Setting up Issues and Problems

To objectify lies in examining, guessing the influential relations among certain events or objects from a different, even third person's view, thus it is an absolutely necessary act to establish and realize information. Because in order to treat such relations among some "objects", events, identification is a required process. And information comes to being in the process of this level of identification and its outcome as a whole.

To objectify comes before the aforementioned to classify and to analyze, or simultaneously. Examining the characteristics of objectification in the realm of Information Design is very useful in understanding performativity of information itself and it can greatly influence our decision-making manner in Information Design matters. This is because the issues and problems we have to deal with, and their characteristics would be recognized depending on the manner of objectification. Furthermore, we can measure the manner of setting barriers in the inside/outside of certain organizations or societies through objectification. This allows us to evaluate what to interpret as information. In this research, we review the epistemological feature of such objectification in a historical perspective. Information Design should pursue objectivity, so objectification is always the subject of design performativity. By looking how to objectify was made possible in methods far more novel than we would think, in historical aspect or relative perspective, it could help feel less saturated with dealing with this subject, since it is such an obvious discourse in Information Design.

The evaluation on to objectify was accomplished with the criterion of how neutral its intent or attitude has been. The interesting point lies in the method of completing such to objectify as if it can be dealt conceptually and formally. As Crosby (1997) and Porter (1996; 1988) demonstrated in their own works respectively, to objectify is accomplished through quantification measuring the real and numericalization marking such measurement. Accordingly, the discussions of interpretation of the effect and its pertinence would mainly consider the methods of quantification and numericalization. As Hacking has pointed out, "No public decision, no risk analysis, no environmental impact, no military strategy can be conducted without decision theory couched in terms of probabilities. By covering opinion with a veneer of objectivity, we replace judgement by computation". (Hacking, 1990, p. 4) Thus, we can never make any discussion and decision making without numericalization as objectification performed with treating numbers considered which treats the real.

On the other hand, the belief that objective indexes on certain objects, phenomena, or group, can be obtained through scientific measurement has supported innumerable various quantitative approaches that were applied since the 18th century. (see for example Crease, 2011; Chang, 2007; Hacking, 2006; Porter, 1988) These approaches predict and prepare for the future tendencies of changes (of the object and its surroundings) by correctly grasping the manner of action of a certain object and the mechanism of its influential relations, so they seem to find their origin in statistics as modern science, being linked to the reasonable manner of thinking prevailing today.

As for the birth of statistics, a Belgian mathematician of the mid-19th century, Lambert Adolphe Jacques Quetelet (1796-1874) had combined the German Staatenkunde (; comparative study on certain countries' state or situation under different themes based on quantification, "國狀學" in the Chinese) and the political arithmetics (; quantitative method of research on fluctuation rate of socio political themes, "政治算術" in the Chinese) and probability theory from natural sciences.

The 19th century scholars who studied the human condition and their society, actively applied probability theory of astronomy and mathematics in order to display scientific justification of their researches and to prove their utility.

In the Victorian period, and the keen interest in empirical thought, these men of science had to quantify their findings on fluctuation rates of various events in the human society. The events encountered in the process of actualization and institutionalization of the awareness of the numerical value and statistics were mainly an epistemological phenomena (or transition), one that arose in society, a mode of thought and critique that critically influenced natural science as well as social science in this epoch. The statistics technique, regarding human observation had developed expansively by the end of 19th century, for the use of social science, were followed by forging statistics as modern science. This new statistics also transformed attitude and methodology of science dealing with "nature". (see Hacking, 1990) In fact, nature had become an object of which its state, normalcy, heterogeneity, etc. were being verified, based on what the humans have understood. Hacking, the philosopher of science, has amusingly revealed such tendency through his idea of the looping effect. (see Hacking, 1986) He had diagnosed our current world of epistemological-phenomenological character; if scholars studying humans would define new categories of the human according to statistical analysis, the people who would be classified into such category would be made up: "enumeration requires categorization, and that defining new classes of people for the purposes of statistics has consequences for the ways in which we conceive of others and think of our own possibilities and potentials". (Hacking, 1990, p. 6)

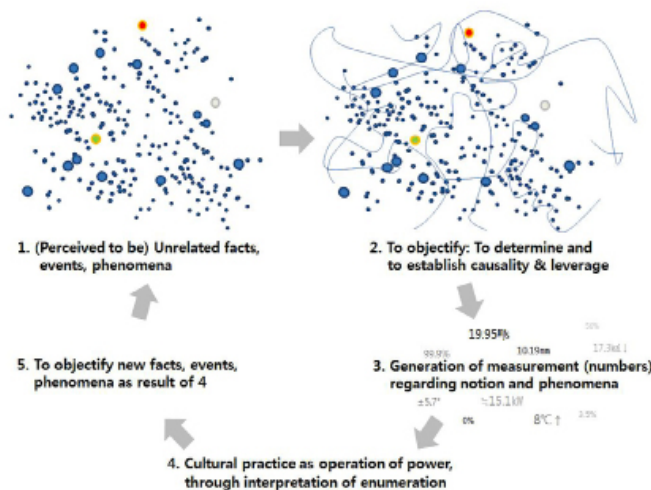


Figure 2 Circular Process of To Objectify: Making up Issues and Problems

In light of Hacking's statistical analysis, to objectify – a series of facts, events or phenomena determines the method of observing and considering certain theme and the relations surrounding the theme. Furthermore, objectification of data can influence the way we detect the problems that require treatment according to certain standards. For example, in <Figure 2> we see the displays of how facts, events, phenomena of "nature" and "society" are perceived as being individual but can also be conferred with mutual reactions in epistemological manner through objectification. Additionally, it portrays "how we (mis) understand the current state through the information which is the effect of the notion and attitude of objectification (which we conceived by ourselves)".

To objectify is, in the end, about reflecting and sharing the world which can be experienced and remembered by the subject of objectification. This is because related events and situations should happen in the realm of visible recognition in order to objectify. (see Daston & Galison, 2007; Bowker, 2006) This is not different from taming and familiarizing and it implies that certain amount of manipulation ought to exist. In this paper, the expression "the third" appears from the chapter dealing with 'to objectify'. There is a reason. The reason is that we need to give more thought to the aspect of objectification as "the third perspective" which pursues the ideal but actually is setting up another subjectivity with the rhetoric of objectivity. There is something which gets clearer when to objectify is issued unilaterally despite the lack of prior contemplation. This is the very "belief that an object can be controlled/predicted since it is known correctly". This could be a major factor of failure in information and its design. We shall continue this discussion in the following section.

5. To make (Un)Certain: To make (In)Visible

The idea of "the necessity of information and its significance" springs from "the belief on the possibility of maintaining or establishing certain state and on the means to change such possibility, that is, the operation of the notion of control". (see Hughes, 2004; Scott, 1999; Hacking, 1990) Influenced by this idea, tangible and intangible form and its custom have been created until this day to pursue "more correct information" and to manage them selectively. The rhetoric of the openness and closure of information, and the system and logic of management of related factors have become more sophisticated in our digital age. And such influence has been reflected on the visibility of current information design, changing the structure, form, content, as well. This change is not unilateral nor linear, but interactive and co-constructive since it is once again is about production and consumption of information, understanding and pursuing the meaning of information. (see in detail Bowker & Star, 2000, especially Ch. 2, 7, 8)

The issue for our discussion arises in the process of visualization, the informatization of the information's content and context with which such information encounters certain design practices. Especially, when this visual translation displays itself in inevitable mechanical schematization. (For example, Pink? For Women. Blue? For Men. For Nature? Green. Hotness? Red. Coldness? Blue, again. Directing cause and effect process? With arrows!) This is about using generalized and stabilized semiotic design elements based on certain cultural understanding and scientific knowledge, as various geometrical segment, line, curve, pattern, figure, and diagrams are gestural forms of communication. The resulting problem itself is begun by that matching as "the iconographic link", related to diverse human epistemology and ontologies, which is inevitable in Information Design practice. (The methodology of establishing the possible distinction between mechanical and intuitive idea/experience, and the case studies should be left to the field of psychology linked with brain neurology.)

Matching is not different from linking depending on typological sense and context, as metaphors including figure of speech, simile, and synecdoche. It springs from the attitude of trying to provide structural understanding on any given object and phenomenon. This metaphorical drift, which is made of a succession of displacements and changes of scale, the source of all innovations, is well known. (Black, 1961) And as for all translations (as metaphor) it is possible and necessary to distort the meanings but not to betray them entirely. (Latour, 1983; parentheses are marked according to the researchers) However, new context is born in the process of collecting and reproducing and misunderstanding is born as well since free will contrary to the intent of making understood is grown anew. We have observed this aspect through various discourses in epistemology and semiotics until currently. Think about numerous reflective studies of human ideal and the real performed by the philosophers Barthes(1978; 1972) or Deleuze(1995; 1993). The ideal and desire for same understanding through accurate communication, indicates certainty. This is eventually the grand heritage bequeathed by mathematical-deterministic-mechanical view since Newton. (see Guicciardini, 2009; Scheurer, 1988) The notions of 'to classify', 'to analyze', and 'to objectify' examined in the previous sections are actions analyzing and suggesting certain possibilities and pursuing certainty. These three intellectual actions become the premise of information related activities in circulation, for the clarification of main criteria and causes of information analysis, for the enhancement of efficiency and control of the transmission and distribution of information. Let's consider the action condition required for a circuit diagram to operate clearly. But paradoxically, as the action pursuing accuracy becomes more concrete, conceptual abstraction in the context where the object indicated by the resulting information becomes stronger. And according to this conceptual abstraction, uncertainty becomes clearer as well. (see Poerksen, 2013) Let's examine the matter more closely.

"Subject" and "object" which were processed into something which can be identified and recognized according to certain intent or objective, are observed (or measured) in certain limited situation and their traits are calculated by information as being certain and continuous. Furthermore, the "problem" which is verified to be solved or controlled by certain intent or attitude, is calculated by information as being 'solved' or 'solvable.'

However, the situations we experience and the real sum of such experiences are extremely complex aspects lined up continuously, so they always tend to give birth to another, new set of problems. This is in the same vein as what Bertalanffy noted in his study of general system theory(1969); he opposed to the idea of deeming a system as a closed system unrelated to the exterior state, when a certain system is examined scientifically. In the end, the accuracy of the information we have obtained is guaranteed only when certain systems or situations are assumed as closed sphere unrelated to the exterior world.

But our real world is far from this assumption. All the field researches studying various complexity, uncertainty such as clinical medicine and nursing, food and nutrition sciences, humane geography, economic geography, sociologies, environmental engineering, and science and technologies studies, can be viewed as ample empirical documents "case by case". The more accuracy is pursued in the realm where the ideal is pursued, the more uncertain becomes local individual happening and its own context.

As our pursuit of certainty becomes stronger, we can observe the dimension and possibility of uncertainty increasing. If so, we can also observe the ambivalence; the more you try to show something according to certain intent and objective, the more there are things hidden and thus invisible. In indicating-inducing to view something by informing what kind of idea and attitude one should have on certain object and phenomenon, we can guess that there are facts and contexts which are excluded. <Figure 3> is a redrawing of <Figure 4.2> shown in Latour's research (2008) which well explains this relation.

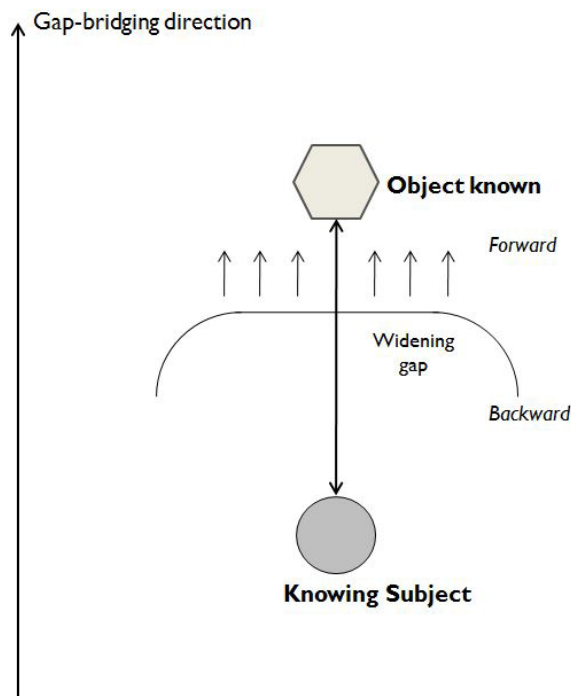


Figure 3 Epistemological–Ontological Correlation between "Subject (pursuing certainty) desiring to know (find out)" –"Object (of which the uncertainty increases proportionate to the expectation of the Subject) becoming known"

Somebody who or something which tries to know or make known certain things, always has objective and intent (Floridi, 2005), and in the process of pursuing the object, the actual application of the object and theme always becomes abstract and non-visualized as much as the range of original objective and intent.

6. If so, what Information Design should be?

We have hitherto discussed and observed new characteristics of information found while determining and classifying events and natures composing phenomena and problems, and (consequently) new issues that emerge while officially stating the problems (that need to be) treated, and uncertain and invisible characteristics that spring from the process of finding out the accurate and certain. In doing so, we tried to assess the ambivalent nature of information. Any effort of knowledge enabling the recognition of quantitative or qualitative content and the structural feature of the object and phenomena could become information, whether it is processed or not. Information becomes relative proportionate to the standard and level, different experience and situation, and interpretation. As it is the result of intellectual activity related to the process of knowing, information always becomes information with new meaning and different value, according to the different subjects who accept the information. Consequently, the moment it becomes information, it is already and always "manipulated" (by the reaction of subjectivity which tries to objectify it). Information in the pure sense, becomes useful when the dynamics and context which sought and kept it are observed. (Think about the approach of conveying a mechanism of causal relationship by measuring the rate of a certain theme.)

If so, what about Information Design? The practice of Information Design which treats information and visualizes the context, is enabled by embodying scientific methodology and exploring, but it is difficult to overcome the complexity and uncertainty of the real. It is because the visualization of Information Design cannot avoid the schematization-establishment of mechanical causal relationship which form in the process of practice and the indication of input-output. Therefore, "(certain) Information Design" can be proposed/applied only limitatively under "specific condition (or standard)".

The issue of analysis and reflection on the undertone and ambivalence of epistemological background of (en/dis)abling information which we discussed earlier, was originated from the theoretical realm which is helpful in reconsidering the level of using the given information as material for Information Design practice. But such problem posing bears a very practical nature with the following questionnaire. It is because what really matters to ourselves who attempt to bring advanced Information Design practice into the picture is not about drawing a blueprint of the process for finding more detailed methodology, but visualizing critical thinking itself which helps overcome the blindness forming in the process of accepting information.

So, now here are three not just conceptual but practical questionnaire for the every design practices thinking on information.

The first question: **What makes us see it as it is?**

This question constantly makes us observe and contemplate on what context and perspective does creating interest on certain phenomenon and theme/object follow (or seem to follow)?

The next question: **Where does this information that seems (not) to be what it is, come from?**

This makes us think more about what made us see it as "information"

And finally: **Why do we (not) have to see it as "information"?**

The last question would enhance our contemplation on the method of knowing and making known.

7. Conclusion

Information Design which follows the process of collecting, structuraling, and visualizing information, is about arranging and proposing new understandings. However, due to its nature, another misunderstanding can brew up at any time. The concept of certain complexity is simplified and becomes abstract through classification-analysis approach, theme determining, etc. during the process of designing and realizing Information Design. Hence, certainty is pursued but uncertainty is also at stake since the real situation which is not/could not be revealed exists at the opposite side. The intellectual activity of Information Design cannot avoid this result. Therefore, we should always have in mind that the hidden prevails over the shown, a plenty of unseen happens in the process of seeing. With such understanding, the attitude of "information" treating design practice would become much more prudent and enhanced.

This study does not deny Information Design. It does not talk about pessimism of Information Design. It is rather the opposite. Our research sufficiently acknowledges the existence and reactions of today's Information Design which takes into consideration the society in diverse levels and scales as its background. Therefore, this eventually brings us to certain optimism about Information Design and its experiments and issues.

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