

# Rethinking Design Data: Focusing on Statistical Analysis as Method

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**Background** Statistical thinking through enumerating and the place of this form of analytical approaching has forged us new conceptual and practical boundaries for not only design object settings—where measurement is approximated through realization—but also institutional and financial backings, where the scope or levels of testing find justification through this mathematical method. The selection of artifacts for design would lie at the basis of reasonable choice made by officials. Any decision, risk analysis, environmental impact or design strategy cannot appear without decision-making couched in terms of probabilities today. By covering opinion with a concept of objectivity, one could place judgment via computation models. Embodiment and development of Statistics through the enumeration has made our cognition to world and the way of conceiving others, including today's design and various issues about it.

**Method** This research seeks to conceptually reframe the importance of statistical analysis, now largely considered the most concrete data form available to researchers. In exploring this conceptual framework, we find that it not only activates many concerns and issues pertaining to design studies more generally but also becomes a means for practical and theoretical approaches in more traditional scholarship found in the field of design. Just as the theoretical boundaries in design studies are being continually redrawn, this optic would also try to demonstrate more cognitive ways of understanding numerical data, how to articulations this data in relation to design planning, while accounting for new critical judge through estimation and probability, particularly the cultural conditions and situations rendered under this new modality.

**Results** In a historical context, numerical and statistical design thinking has become possible and is underpinned by three grand cultural movements: “Erosion of determinism,” “Discovery for regularities of people and their habits,” and “Avalanche of numbers.”

**Conclusion** Analytical research for humanistic understanding and epistemological consideration to design data-Statistics and its cultural and ontological conditions could be the insightful approach for enhancing reflective and creative research capacity for the design science.

**Keywords** Statistics, Design, numerical data, humanistic understanding, epistemological consideration

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## 1. Background, Purpose, and Approach

This study aims to figure out whether scholarship in design studies today's including "methodological approach to solve problems" are taking a blind eye toward the numerical and statistical data that are seen (or considered) as "fluctuation rate of facts and phenomenon." It is of common opinion that the "fact"-identifying procedure and conceptual consent required in the process of setting up and analyzing the theme of design through complex observation and understanding of cultural influences, the phenomenon and objects and pursuit of objectivity and accuracy, is disregarded, often relegated to mere abstraction and "the process of forming (certain) facts or knowledge" by concentrating on the numerical rate of change to solve these problems.

Contrary to this widely held belief, my research demonstrates a more positive understanding of designing and performing analysis by utilizing quantified numerical data that can show various conditions and situations and attitudes toward them.

To this end, this paper raises questions about design and reconsiders the use of statistics, which can be said to function according to more formal and specific data which drives various theoretical approaches and practices. By endorsing this unorthodox approach, this study discusses questions pertaining to the "cultural and ontological characteristics of statistics" and can such translatability of statistics for culture yield distinct possibilities for understanding and strengthening today's humanistic research capacity in design studies. Equally, other sections of this paper question the attitudes toward the formation of the discussion that require "participant observation" and "analytical reasoning" more positively.

As Woodhouse & Patton(2004) pointed out, design studies which includes today's practical design activities and multidisciplinary study dealing with them becomes concretized by connecting cultural and formative knowledge and practices with various issues in natural science and social science that have grounded these disciplines since the 19th century. In this respect, many attempts to look at the cultural characteristics of statistics concretized in the field of science tend to focus

on “nature” and “society” as research objectives, perspectives which are considered to be useful for increasing creativity and performativity that are both held imperative components in design activities and studies. The consideration of characteristics in statistics via its epistemological objectification and its analysis methodology can be helpful for raising questions and forming discussions through data analysis. Interestingly, this perspective is not more widely turned to and should be considered by designers, the persons concerned in design tasks and systems, and preliminary designers, professionals that might find this methodology an improvement for types of situation analysis.

To this end, first, this study looks at the distinguishing aspects of statistical data utilized for recognizing, evaluating, and analyzing today’s living situations and summarizes the methods that statistics work in everyday life by presenting several case studies. Next, this study looks at the methods where statistics and statistical approaches are used specifically in the field of design studies and how several characteristic cases can be reused as a template for future use. Indeed, this data allows for the materialistic and conceptual objectification of design and reviews how statistics and statistical approaches have an impact on fragmented practices and concerns in the field of design.

This study reveals another phenomenon: the cultural implications that epistemology holds by looking at the process of forming and performing a discussion in everyday life and the historical origin that the statistics themselves have; in other words, I wish to determine and judge concepts by constituting an issue, typically concretized outside of design, but based on the contents mentioned above.

While diverse in scope, this study reconsiders the epistemic and realistic characteristics of statistics while at the same time, discusses whether such a conceptual analysis and consideration of statistical data can have a significant cultural impact on design practices today. My hypothesis is that statistical data does contribute to driving design thinking which must be seen as more active and analytical—that is, designing and approaching new methodologies will increase the sophistication and elaboration of research performance in the discipline.

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## 2. Statistics: Criterion to Recognize and Determine Everyday Lives

Today, modern citizens across the globe are surrounded by statistics. Ian Hacking(1990), a prominent analytical philosopher came to the realization that the development of statistics and the sciences of it have made possible a myriad of institutional purpose and professions: from “establishing evidentiary materials for tax collection and imposing military service” to decisive figures on how to financially run a state. However, as the object and scope of investigation is gradually expanding and various members of society begin to interpret the possibilities for statistical analysis—processing into more sophisticated information and knowledge, understanding as new facts supporting or threatening the existing facts, and utilizing in their own ways to develop a discussion based on their interests, ‘identification of phenomenon and problems’ and ‘calculation of related efficient causes and influential scope and size’ came to function as important information and criteria to move our ordinary lives in modern people.

As we can see from <Figure 1>, which shows “how much various kinds of TV programs watched at American ordinary homes in the middle of the 1980s attracted external (commercial) capital (depending on the broadcast media and the contents),” all kinds of numerical data experienced is identified via this seemingly “state of ordinary routines”; for example, price index and interest rate fluctuations also relate to statistical numbers, rate of industrial operation, exchange rate report, etc. – each are representative forms based on statistical data and modeling that are observed and scrutinized by those who are more meticulous in “managing ordinary lives” by “identifying indexes.”

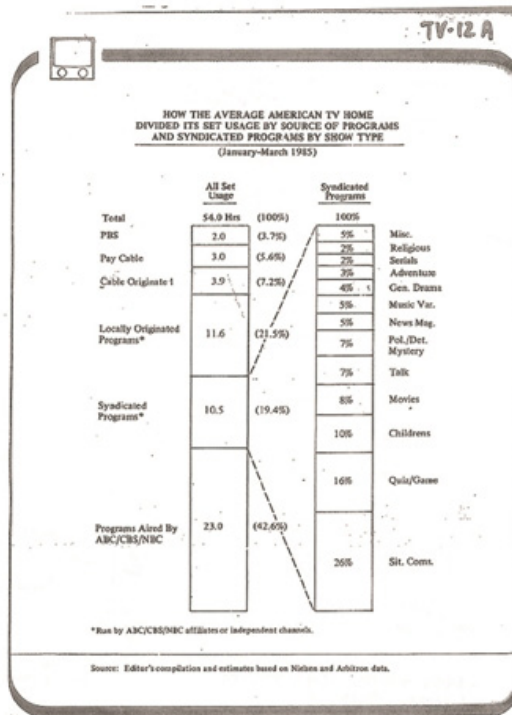


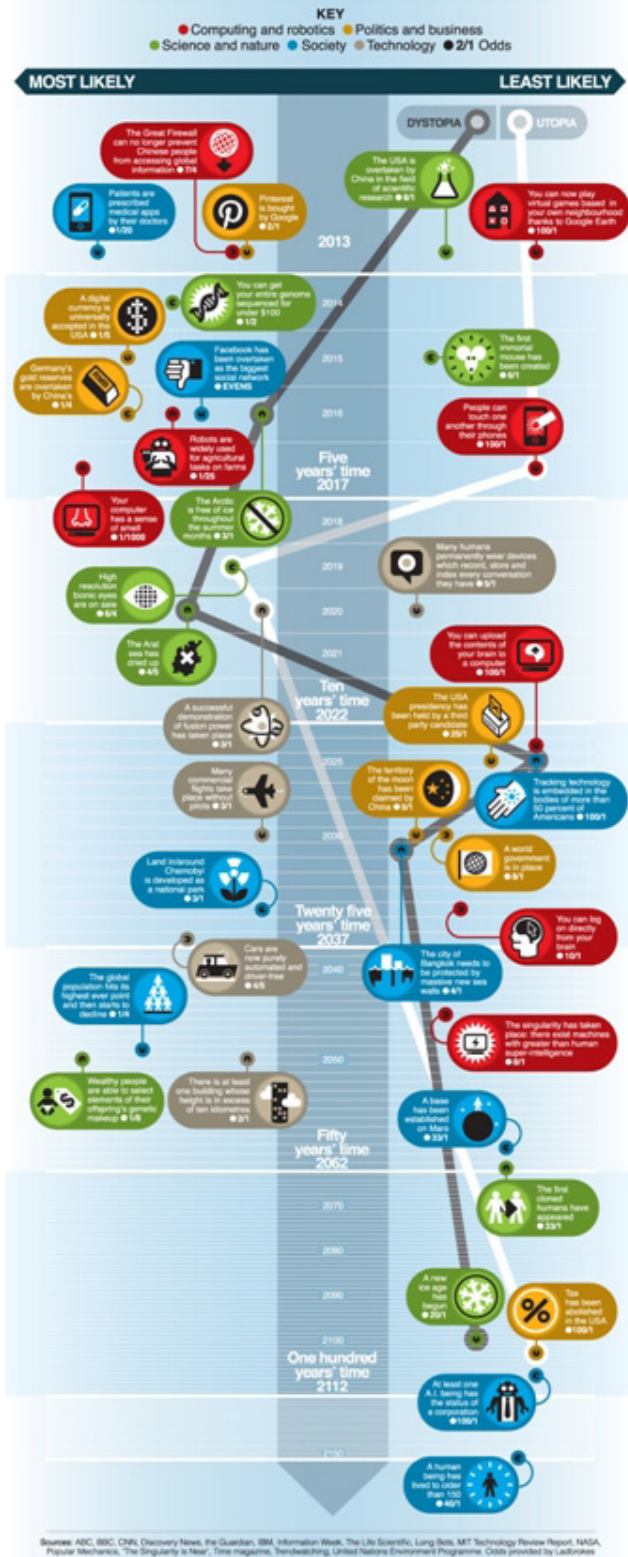
Figure 1 Statistics on *Media Economics* studies

Other examples of statistical encounters are bountiful. In a daily newspaper articles, for instance, one titled “Dyspepsia 31% ↑ for the past 5 years..... to “greasy and spicy and hot foods should be avoided” to “the increase in crime rate especially in the U.S. baby boomers is due to lead pollution?” each title illustrate data measured by statistical analysis that contribute to “good health” and “public health care” that are also becoming “problematic” or emerging as “too abstract and relative consent.” Hereby, (as the existing information or patterns are supported or refuted), various changes and aspects constituting the ordinary lives of modern people are (re)configured from the general public’s perspective.

Year in and year out certain fashions or customs springs up and then disappear, depending on changes in values or whether determining conditions and the status of specific fields or issues differs and accordingly, these patterns relevant to culture change are also “identified” as explainable through statistics. As such, statistical analysis obtains or loses its value depending on the object(s) of study. For example, news headlines with titles like “adolescents are more acceptable to multiculturalism than ordinary adults”, “Seoul, 8 in 10 select cremation..... funeral culture changing”, “More than half of TV watchers in their 50ties or more - 50.4% from ground wave.....

# Tomorrow's World

What's going to happen in 2013? In ten year's time? 50 years? 100?  
We look ahead to see what the future holds according to predictions from  
thinkers, scientists and pundits – and the odds on them happening



19.2%p ↑” and so forth are typical examples where diagnosing the cultural fluctuation is based on rates of change and its social patterns articulated through statistical indexing from numerical data.

On the other hand, theme approaches in info-graphic including “Greeting New Year” broadcasted by BBC as shown in <Figure 2> suggests that the analysis of various phenomenon and ontological execution based on “statistical values” has a major impact on predicting, analyzing, and evaluating future trends numerically. This article pointed out that the prediction of possibility of “future world” coming to reality would be too different. Ladbrokes, the British Online Betting company was 175% confident in predicting that ‘Chinese Internet Censorship Firewall will be incapacitated,’ but 4% assured that ‘robot farmer would appear and human beings would be free from food production.’ By looking at cultural-numerical analysis attitude toward such an analysis and subject approach, we can see that statistical recognition and its objectification will also have effects on the process of setting up a subject or decision making in design to be developed further.

Figure 2 “Tomorrow’s world: A guide to the next 150 years”

Like this, statistics and the sciences of it reveal themselves in a numerous situations which then come to analyze and trace the fluctuation rate of modern people's lives and cultures today. Such statistics and statistical information that make epistemological limitation and quantification on the ordinary hierarchy aspects according to each and different need and approach reconfigure modern people's complicated everyday lives stemming from the process of configuring statistics and being extracted from it in a conceptual way.

Hacking (1986) diagnosed the cultural tendency, through the concept of "looping effect," postulating that researchers who focus on "humans" as research object concretize new type of humans dependency on statistical analysis, and conversely, diagnosed the cultural tendency that such type of people are observed, found, and made', which requires the "enumeration (of an object) is categorization (of such enumerated object), and defined people in a new class for a statistical purpose." And Hacking (1990) also pointed out "the way we think of others has an impact on the way we think of our possibility and potential"—thus various aspects of our daily lives are diagnosed and evaluated through our own statistics and statistical information. Modern citizens living today are seeing, thinking, experiencing, making and deploying statistics in the process of determining lifestyle and career choices, changes in their life conditions and the larger public sphere, and algorithmic modifications to the production of goods and commodities.

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### 3. Design and Statistics

As Porter(1996; 1988) and Crease(2012) demonstrated in their own works respectively, the cultural mechanisms of "number" and "measurement," and its social and political implications, "facts" and "phenomenon" identified by statistical approach has depended on numericalization and quantification for major criteria and condition for design, its performance, and generally decision making today. The goal

of design setting and realization is to enable certain measurements and relevant institutional approaches that are appropriate to specific physical experiments and interpretations. Yet this methodology also has its limits. As we have already postulated, design outcomes are the result of forming knowledge by referring to object classification, analysis, decision, theory of decision-making from the perspective of probability and this includes evaluation and searching for measures to solve problems via statistical practices. This is a statistical characteristic that works in all design processes, and “by covering opinion with a veneer of objectivity, we replace judgement by computation.”<sup>1</sup> <Figure 3> represents this characteristic in the clearest possible terms and serves as an example that shows judgment and determination criteria on the installation of pedestrian passage in the central district of city.

〈보행통로의 LOS〉

LOS	보행교통류율(인/분/m)	접유면적(m <sup>2</sup> /인)	모형 상태
A	0 ~ 27.15	≥ 2.84	보행속도의 자유선택 가능
B	27.15 ~ 34.34	221 ~ 2.84	정상속도로 같은 방향 추월 가능
C	34.34 ~ 45.44	1.61 ~ 221	보행속도 추월의 자유도 제한
D	45.55 ~ 59.51	1.05 ~ 1.61	보행속도 제한
E	59.51 ~ 73.70	0.67 ~ 1.06	자신의 보통 보행속도 불가
F	> 73.70	< 0.67	떠밀리는 걸음, 정지 상태

**Figure 3** Regulations Scale Table for LOS(Level of Service) of Pedestrian Transfer(Official announcement No. 2010-496, date of enforcement: 2010.7.21), *Ministry of Land Infrastructure and Transport*

Like this, such separate shapes, structures, and functions are granted. The recognition and determination criteria for particular products representing (or symbolizing) various values and concepts, intangible services, and distributing and experiencing come to be realized, in some respects, through statistics and statistical approach and internalized to those who accepted and experienced them. For example, such issues related to design evaluation and realization including “purchase” as “representation of preferences and conditions” as well as consumer’s final choice after considering “purpose,” “quality,” “efficiency compared to price,” “consumer satisfaction,” and these variables are comprehensively

1 Hacking, I. (1990), p.4.



discussed continuously from the perspective of probability and statistics. According to Edward Tufte (1997) et al. visualization of numerical and statistical data becomes the subject or material itself in today's designs through info-graphic implementation.

In a historic, cultural, or conceptual context, it was in an Industrial Revolution that centered in Western Europe across 18th and 19th centuries that had the biggest impact on the manufacturing, and production of numerous number of artificial structures constituting today's design and their shapes and patterns for consumption. Through this event, the concept of rationality and efficiency was also pursued not to be compared with the previous period.

According to Robinson (2007), Kern (2003), and Galison (2000), such fields, areas, and concepts of manufacturing, mining, trade, public health, railway, war, and empire drove new orders and rules of capitalism to both comprehend and deal with numbers and to measure them with professional precision. In the process of such things being institutionalized from national level, the concept of normative patterns is also systematized in the field of design today, as suggested by Heskett (1980). "As the railways demanded timekeeping and the mass-produced pocket watch, they also mandated standards, not only of obvious things such as the gauge of the lines but also the height of the buffers of successive cars in a train"<sup>2</sup>, and artificial structures and shapes are adjusted in terms of function, shape, and condition, depending on the statistical knowledge formed based on the concept of such numericalization and quantification.

In the golden age of capitalism, was a period of economic prosperity in the mid-20th century which occurred, following the end of World War II in 1945, and lasted until the early 1970s, we find that the pursuit of "rationality and efficiency" and "granting identity to object or phenomenon and understanding the characteristics" are market-type calculations, one that sanction statistical approaches to human psychology, physical reaction, and scale of experiences to better interpret artificial structures and the shape of our modern world. As a result, as suggested by Woodham (1997), statistical knowledge, tools, and concepts to be referred to "for more rational decision making" when conducting design work increase at an alarming rate.

2 Hacking, I. (1990), p.5.

Statistical data constructed from the perspective of engineering and administration plays a big role in making today's design multidisciplinary in the interpretation and utilization steps, and as such, has had a big impact on identifying artificial structures and shapes from the perspective of "possible management and control." Such attitudes stem from mathematical modeling oft-called Operation Research (OR)' that claims the "pursuit of rationality through problem solving" and scientific techniques, and therefore bases the attitude of consumers/users, people who made up by concept and hypothesis to statistical analysis.

As demonstrated by Woodham (1997), OR which was realized by the Allied Forces during World War II, has evolved with ergonomics. At the time of war, the British and United States armed forces established extensive guidelines on the manufacturing of war weapons and among which, the guidelines made by the US army was published under the title of Human Engineering Guide for Equipment Designers in 1954, which

spread the already established statistical values into private areas, thus contributing to the popularization and intellectualization at the grand scale. This established physical criteria for referable (or should be referred) appropriateness in numbers/statistics.

As seen in <Figure 4>, Henry Dreyfuss's "Designing for People (1955)", which systematized the performance of ergonomical measuring research, is "scientific-statistical measurement on human bodies and activities" and "systematic analysis on the labor efficiency related to user and environment,"<sup>3</sup> thus received big interest and attention from then-industry and design world" and the effects are clearly present today, institutionally or conceptually.

- 3 See Murrell, H. "How Ergonomics Became Part of Design" in Hamiton, N.(ed.) (1985, chapter 5, n.5.13, 72-6): Woodham, J. M. (1997), p.180.

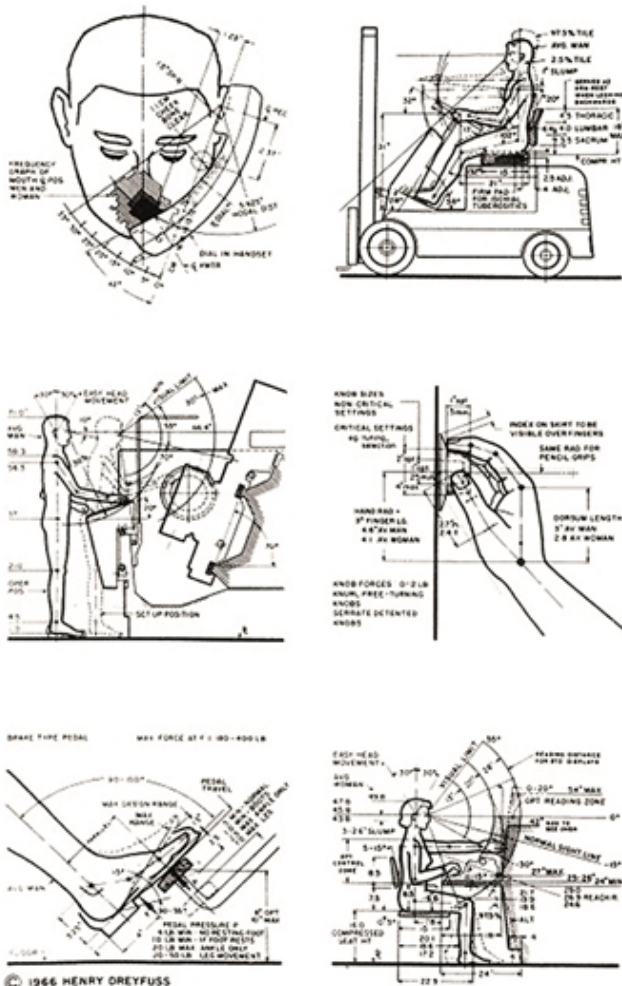
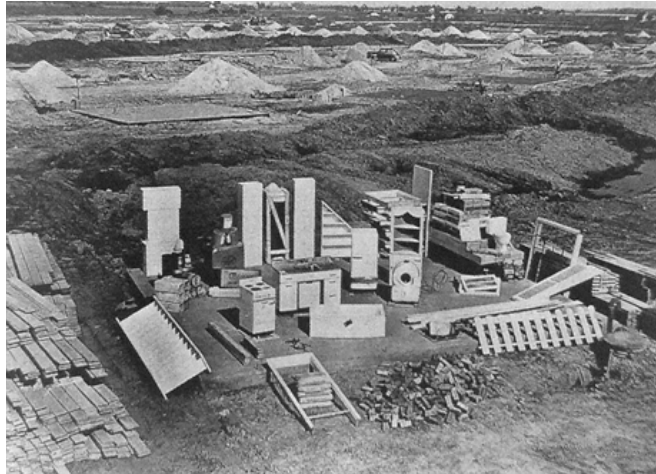


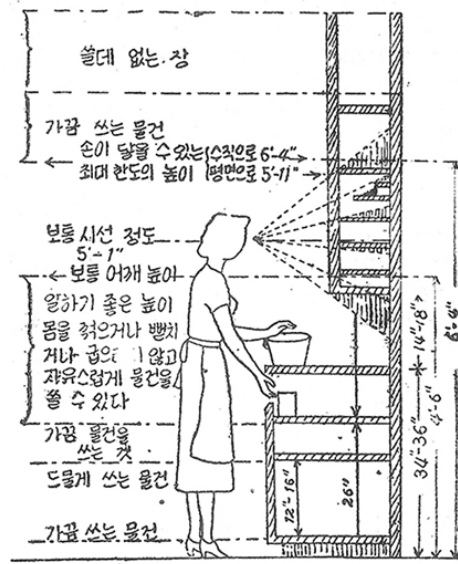
Figure 4 Enumeration and Generalization on the Human bodies' Form, Scale and their Moving Line

According to Murrel (1985), “such statistical approaches through numericalization/quantification are receiving attention from the design world and the industry world across the country and have produced a numerous number of relevant associations, educational courses in universities, and international conference within a short period of time,” and, as such, have had a big impact on forming design related statistics, statistical knowledge, and different frameworks of evaluation.



**Figure 5** Components of "Levitt Home" around 1950

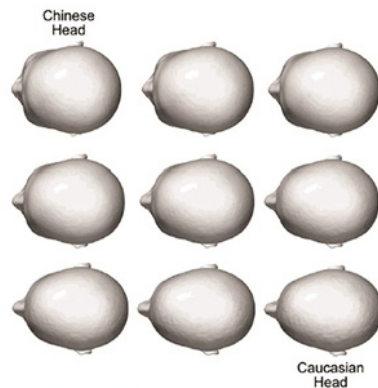
<Figure 5> is a photo that records basic components (gas range, laundry washer, refrigerator, storages, all-in-one house facility, white fence, etc.) to be distributed to one of the ‘Levitt Town furniture units’ which is considered to frame American style middle-class culture, being displayed before assembly. This is an example that shows how social patterns through numbers and statistics become realized by regulating habitat and scale of living. According to Woodham (1997), (in the process of interpreting the productivity of incubating new culture) “《Fortune》reported in October issue of 1952 that each house with four rooms was being produced every 16 minutes from the Levitt factory in Long Island.”



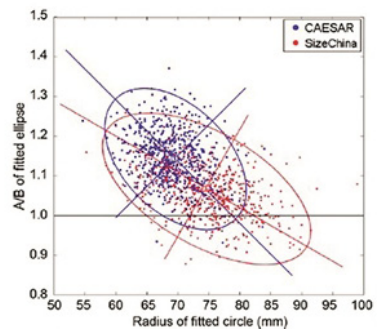
**Figure 6** Appropriation of Design/Statistics knowledge on/by Korean textbook in the early 1960s

On the other hand, “<Figure 6>, titled ‘height of furniture for 5 feet and 4 inch individual to use conveniently during work’, emphasized the importance of efficient kitchen design to provide and thus improve on modern life. The ergonomic knowledge formed in statistical approach in the 1950s led us to look at the patterns of Korean society in the 1960s. Such grounded statistical approaches and attitudes work significantly for

today’s design thinking and approaching, performance, and knowledge utilization methods and thus provide various data required for pursuing design rationality, efficiency, and objectivity. More specifically, these outcomes implement the order of things that reflected the “statistical analysis” in the past and constitute one side of today’s statistics of analyzing and interpreting different forms of cultural production.



**Fig. 6.** The demonstration of differences between Chinese head and Caucasian head.



**Fig. 11.** The plot of the A/B of ellipse and radius of circle from the fitting models for all contours.

**Figure 7** Statistics/Ergonomic Data Archiving for the New Asian Bike Helmet Design Developing

<Figure 7> is one of the statistical data, 'SizeChina Project' announced by Roger Ball's research team in Hong Kong Polytech University in 2010.

Prof. Ball and his colleagues maintained that “if we look at the head of typical white men from above, the area ratio is 1:0.74, whereas that in the Chinese people 1:0.86” and “as the existing western bike helmet was suitable for the white men in Europe who has an oval-shaped head, it was not suitable for Asian people who have round heads and who occupy close to 4/5 of world population.” They carried out data archiving and analysis project to scan 2,000 heads from six provinces in China in order to ‘solve such problems.’ This is the case that can identify the role that ‘statistical approach and subsequent data presentation’ plays in interpreting the ‘appropriateness of design approach to solve problems.’

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#### 4. If so, statistics?

The knowledge established according to statistical approach and objectification/topicalization acquires values as information and maintains and develops them in the process of analyzing “current situations and problems’s and identifying (modern) future trends.” It is not too much to say that the specific practices from the dimension of operating real concepts in recognizing all situations constituting and driving ordinary lives and forming such disputes (for example, “sanitation”, “disease”, “security”, “education”, “risk management” against accident and disaster of various sizes, “economy” and ‘administrative’ approaches to such constituting ‘factors’ and ‘elements,’ “establishing an identify for community/others and setting up structural characteristics”, and “maintaining and developing national system, establishing improvement plans”) are all based on numericalized data and probabilistic judgement. Hacking (1990) furthers this grand dissection of society through statistics, positing the following:

Probability and statistics crowd in upon us. The Statistics of our pleasures and our vices are relentlessly tabulated. Sports, sex, drink, drugs, travel, sleep, friend – nothing escapes. There are more

explicit statements of probabilities presented on American prime time television then explicit acts of violence (I'm counting the ads). Our public fears are endlessly debated in terms of probabilities: chances of meltdowns, cancers, muggings, earthquakes, nuclear winters, AIDS, global greenhouses, what next? There is nothing to fear (if may seem) but the probabilities themselves. This obsession with the chances of danger, and with treatments for changing odds, descends directly from the forgotten annals of nineteenth century information and control.<sup>4</sup>

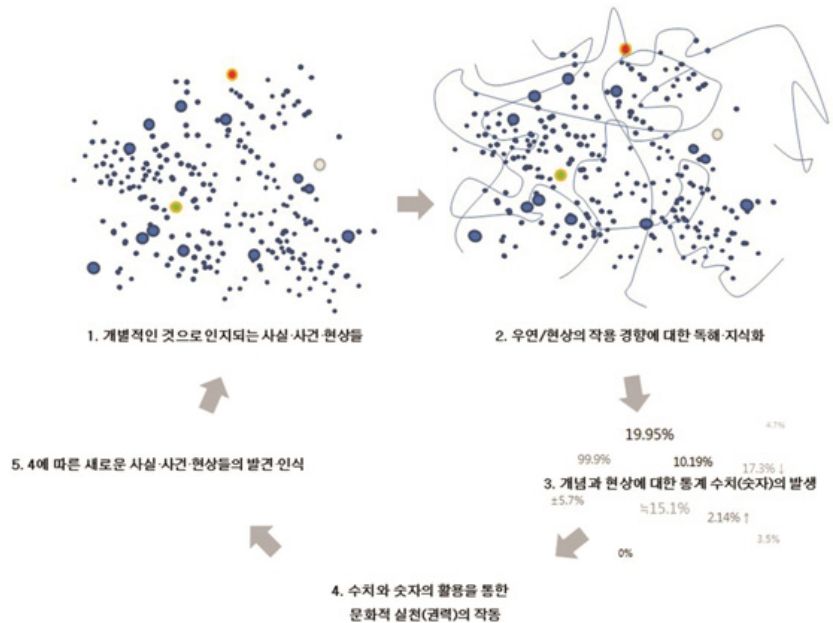
The concretization and development of statistics and the sciences of it revealed through numericalization led us to reach the level of recognizing and understanding of today's world, and this was supported by the following three major cultural fluctuations from an epistemic context. In light of this analytical framework in the vein of Hacking (1990), we can identify the following three tenets: First, it's the divine and religious attitude that "everything in the world happens within the time and place designated by omniscient and transcendental existence" or faded and weakened determinism associated with the thought that "everyone has a destiny from birth," which is simple but fatalistic. Chance, which is caused by direct and indirect and stratified multiple action in all situations and variables, has been considered as superstition believed by those who are "foolish" in the era of rationality, but became "elements" always accompanied in the process of pursuing for rationality and efficiency in the 19th century (in other words, "variables" to be controlled). Second, a certain level of regularity toward human behaviors, in other words, rules were "discovered" through numericalization and quantification of society with the development of national control. Such new types of laws were conceptualized in terms of probability regarding humans and their nature and surrounding events and accompanied with the concept of "normalcy", "norm" and "deviation from normalcy and norm like suicide, crime, dissipation, mental disorder, prostitution, disease, etc. The final one is "avalanche of printed number."

As Hacking (1990) suggested, nation states tends to classify, count, tabulate, and present their subjects and objects by way of statistical modeling. Before the 19th century, rights to read official results

4 Hacking, I. (1990), pp.4-5.

calculated by the government were only owned by bureaucrats, whereas after the 19th century, a tremendous amount of data was printed and published, and the recognition of statistics and the numbers has become popularized. Thus, people could obtain the sense of quantification in which state and how “nature” and “society” should be, through education and training on the utilization of numbers.

The above three cultural fluctuations, in other words, “erosion of determinism,” “invention of tnormalcy,” and “avalanche of printed numbers” were later converged into industrial revolution, which triggered today’s cultural forms such as mass production and mass consumption of intangible and tangible things (as seen from section 3 of this research) that constitute one aspect of epistemic and conceptual background for design that is attributed to modern material culture.



**Figure 8** Aspect of the Circulation of Statistics (Knowledge) Creation and its Ontological Execution

<Figure 8> represents how separate (or considered as separate) facts/ events/phenomenon of “nature” and “society” are granted with mutual interaction, epistemologically through “statistics,” which helps us to “recognize a phenomenon or understand a causal relationship, through the concept of statistics – that one could discover through this systematic

methodology.

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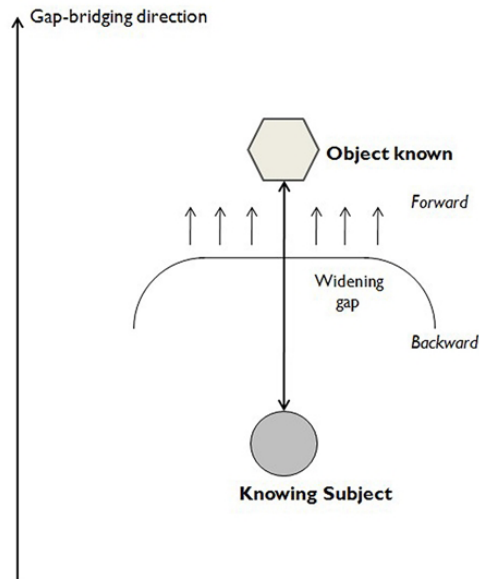
## 5. Conclusion

This study aimed to analyze and consider “statistics”, the representative data that could be most representatively utilized in performing today’s design and subsequently analyzing performance and various implications on said performance. By doing so, this paper demonstrated “historical and cultural implications and characteristics of quantified numerical data.” As we noted, statistics is a conceptual approach and practice to set up and pursue the problematic standards and analyses in determining status and analyzing as possible outcome, by quantifying and objectifying various aspects of phenomenon and then improving the probability of success in execution. Paradoxically, however, as analysis of objects (or subjects) using statistics became more concretized, subsequent uncertainty execution and abstractionism of object gets much murkier. The reason is as follows:

A certain “object”, processed as identifiable thing by a certain intention or purpose premises that a certain characteristics observed(or presumed) in a certain situation is fixed. A “problem,” which is identified as improved or controlled by a certain purpose or attitude is calculated as ‘solved’ or ‘to be solved.’ However, the existence, as a sum of real situations, is nothing more than succession of very complicated phases, as suggested by Latour (2008), Oudshoorn & Pinch (2005), Ball (2006), Scott (1999), Harris (1987), and etc. in their analytical researches and reflective works, thus causing another, new problems more ever.

<Figure 9> in the below is a redrawing of drawing plate 4.2 shown in Latour’s research(2008). The approach to know “somebody or something(object or subject) has purpose and intention anywhere/ anyhow. In the process of pursuing for ‘objectification,’ the ‘true(real)’ interaction between applicable object and subject shows epistemic/ cultural characteristics that ‘subject’ is conceptualized and invisibilized as much as its ‘purpose and intention.’





**Figure 9** Ontological/Externalistic Correlationship between Knowing Subject and Object to be known

Statistics as ‘approach for analysis’ is also reinterpretable in this context. Clearly, statistics is a concept developed to understand and control the world by identifying a certain tendency and trend under disorder, but finally it is the cause that makes us recognize our lives more unsurely in modern times, because it’s the institutionalized approach that does not reflect all variables.

As seen from the above developed discussion, numbered data depending on statistical approach have a major cultural and institutional impact on the process of pursuing for design rationality, efficiency, objectivity, and professionalism, as a certain ‘information’ or ‘criteria.’

The historical origin and cultural characteristics in such statistical approaches and numerical data and the analysis and consideration of epistemic implications have more useful values by going beyond the level of utilizing and analyzing “statistics” as unilateral data for ‘design approach for solving problems.’

Such humanistic design research aiming at analysis of cultural characteristics of numbers and statistical data seen(or considered to be seen) as facts or phenomenon and social and political implications can contribute to improving the process of reason and judgement which is

easily abstractionized from a methodological approach which pursues for ‘successful design and its implementation method’, in other words, ‘design analysis and approach reflexivity.’

At the same time, it is expected that it can contribute to design thinking that sets up and reasons cultural elements to be observed more positively, design research performing method and sophistication of methodology, and sophistication and elaboration of reason – which are difficult to achieve with compartmentalized investigation list preparation or manual presentation. By doing so, much higher level of objective thinking can be obtained, in which level the hidden side of the condition presented can be observed and reasoned.

This leads to presenting questions like follows, in order to make it possible to perform design approach and its performing method, in other words, perform design thinking and subsequent methodology more humanistically. As Prof. Lee, Sang-Wook, philosopher of science, pointed out, “humanistic training is not to learn what thinking we should have but to realize what the thinking is based on and what facts are excluded in such thinking”(Lee Sang- Wook, Hong Seong-Wook, Jang Dae-Ik, Lee Jung-Won, 2007).

First, through ‘what’ did we see ‘it’?”

Second, what made ‘it’ (seen as) issue(or problem)?”

Finally, “If so, why should (‘we’) see ‘it’ as ‘issue(or problem)’?”

On the other hand, looking for actual outcomes obtained through humanistic researches always faces certain institutional limitations. Therefore, the increased systematic ability through the sophistication of reason and consideration is reflected—unconsciously or epistemologically—into the process of raising problems, performing duty, setting up a subject, and objectifying but not identified through direct measurement.

Therefore, it is hoped that this study can be used as a useful approach to intensifying more analytical reasoning on various cultural forms that allow us to recognize a certain object, creative performance of subsequent design practices, and above all, the humanistic research capability in design activity itself as the synthesized outcome of the aforementioned.

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