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## SCENARIO: The User Profiles Methods Applied to Product Design

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# SCENARIO: The User profiles methods applied to Product Design

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## Abstract

This paper presents SCENARIO (System of Speculative Conception of New Environments related to the Individual and the Object), developed in the Ph.D. thesis called "Design future-oriented, focused on the individual and trend analysis", (2005). SCENARIO is a project instrument created with the objective to help the designer to comprehend both the profile and the user necessities, so that the former is capable of designing more adequate objects to the contemporary context. The objective is also to create conditions that allow the verification and validation of the designer's project proposal through the use of metaphors built on trend analysis. The project is composed of three phases: Phase 1 – Identity; Phase 2 – Projections and simulations; Phase 3 – a possible history. Considering theory references from psychology and anthropology, it discusses methods of data collecting and treatment using phenomenological reduction techniques and participative living. The result can be applied to the conceiving of objects more adequate to the necessities of contemporary users.

This research is based on the assumption that the complexity presents today, after so many changes in all segments of society in recent years. Nowadays the user-individual must be considered the centre of the whole projetual process and Design must consider its vocation for innovation and for the future. The approach utilized in this paper considers the object in its scenario and the individual as a character in this story, to be told using multidisciplinary elements which have their origin in psychology, design, marketing, anthropology and sociology. The second assumption is that it will happen starting from the analysis of the social tendencies and the comprehension of the user/consumer's necessities. We believe that only from the understanding of the object's role in society and its participation in the construction of the individual's everyday life is possible to project new objects that will suit both necessities and expectations.

The theoretical framework is established from the summary tables, establishing relationships between areas of knowledge, the authors used and tool projetual proposal.

## Keyword

Human-centred design; User-centred design; Phenomenology; Design process; Industrial Design

Designing for other people is a very difficult task, mostly when one does not know whom one is designing for. When commissioned to design a new object, one has the opportunity to meet its future owner, so it is possible to talk to the client and know his preferences. Thus it is possible to make a unique and personal project based on data provided by the subject himself.

Mass consumption opened a gap between the designer and the end user, firstly by mass production itself. When trying to get closer to the end user, the designer realizes how difficult it is to work for whom he does not know. For this reason

companies invest on consumer and marketing research, trying to understand who these people are, creating data banks where their tastes, habits and customs, even manias, can be classified. But even then the designer is still left with the same problem described above: the knowledge from the subject obtained through indirect data, mediated by marketing, provides inaccurate information about the users and their necessities.

This present research is based on the hypothesis that, after so many changes in all segments of society in recent years, it is very difficult to continue designing new objects as it was done until the eighties. Nowadays the user-individual must be considered the centre of the whole projectual process and Design must consider its vocation for innovation and for the future. Therefore differently from Marketing, which strives to understand what the consumer wants to buy, the designer, on the other hand, should foresee the product conditions before, during and after the commercialization and ownership of it. For the designer, the commercialization is just one rapid moment in the process of the use of the object, which relates to just one part of the relations between the object and the individual. The approach utilized in this paper considers the object in its scenario and the individual as a character in this story, to be told using multidisciplinary elements which have their origin in psychology, design, marketing, anthropology and sociology.

We believe the development of new products in view to innovation will consider the socio-cultural aspects involved in its production. The second hypothesis is that it will happen starting from the analysis of the social tendencies and the comprehension of the user/consumer's necessities. We believe that only from the understanding of the object's role in society and its participation in the construction of the individual's everyday life is possible to project new objects that will suit both necessities and expectations. It is fundamental, bearing such an objective in mind, the use of adequate instruments that allow us to comprehend and to contextualize the product in its initial stage.

### **A new methodology for the creation of new products: searching for a new expertise**

Baudrillard (1993) said at 1968 in his book *The system of objects* that it is not possible to describe the everyday system of the objects through a purely technological analysis. "*The system of the objects can only be described scientifically as we consider it, in the same movement, as resulting from the continuous interference of a system of practices on a system of techniques*" (Baudrillard, 1993, p.16). When new objects are designed, the classic methodologies consider them as elements isolated from the rest of the world, circumscribed to a briefing given by the client, as if it was absolutely autonomous. People forget that such an object has a complex symbolic function in post-industrial society and that its success will depend much more on its synergy with the society/culture than on its technological possibilities.

Savoia (in De Masi, 1999, p.361) says that

So does the market change profoundly. The technological development determines the continuous flow of new products into the market and a strong increase in the consumption of similar and alternative goods; the potential users stratify much more than in the industrial economy. Limited and restricted personal choices, of the kind "either this or that one" and the uniform and standardized shopping behaviour which characterize the consumption for the whole post-war period until the mid 60s, gave place to a

multiplicity of styles and orientations of strongly individualized choices. The consumer's universe is not an indistinct aggregate of society and publicity for the mass market, where few product choices satisfy few homogenous tastes, but a highly diverse system in which it is possible to identify segments of consumption behaviour, of rentability.

The consumer becomes a determining element in the market and a client, not an administered being anymore. In a market where the absolute rapidly becomes obsolete and where there is no time for deeper thinking, the discourse seems to be lagging behind action. This feeling comes in part from some analytical characteristics of design which have remained stable for a long period in modern history and which, differently from advertising or marketing, have not been adapted to the dynamics required to act in our contemporaneous society.

The requisites of a new methodology for the development of products that would consider the user as the centre of the projectual activity could be divided into two: attitudinal and technical necessities. By attitudinal necessities we understand the elements present in the projectual act or in the designer's posture before the problems that lie in the projectual process itself, generating an approach concerned with the way the professional stands before the new object and its context. By technical necessities we understand the instruments used to gather and to analyze the socio-cultural data and the user as well. Such instruments are to be used by the designers during the projectual process.

From the perspective of the concept of attitudinal design, the designer's posture during the project has great influence on the final result. Utilizing an analogy between the designer's relation with the user and of the psychologist with his patient, we can understand that some points proposed by psychology can help to design and to minimize many projectual problems. The main point refers to the distancing necessary to have a critical perspective on the problem to be solved. It is very common, and many authors, including Papanek, Wachsmann, and Munari, that the designer has a natural tendency to get too involved with the project, thus losing the necessary critical perspective to evaluate the solutions proposed, have already emphasized it. Wachsmann goes as far as to suggest, in his method *Team Work*, the change of teams in the different stages of the project, which would allow an external point-of-view on the problem.

Another very harmful tendency for the project is what we call "self-project", in other words, the tendency the designer has to design for himself. In this case, there are two preferable situations: the designer should either work in a segment where he is a designer and also a user or where he does not have any kind of involvement with the segment in question. In the first case, the involvement happens because of the nearness and knowledge of the object to be designed, which make the process of self-project easier. Thus, by a metonymical tendency, the designer ends up believing that what suits him will also suit everyone else. In the second case, the ignorance of the particular field will bring a desirable distance, but it is also a cause of lack of information and of involvement. Without an adequate research, one might be caught in the trap of working with distorted and stereotype information, be it from the common sense or from preconceptions so deeply rooted in the culture that one does not even realize he is using it. In this last example, there is a tendency to make a worse version of the self-project, because more than using mistaken information, one is inspired by the things he would do in that situation without a proper technique to approach the situation.

The elements referred to above indicate the necessity of finding a more adequate reference in theory, one that would permit to minimize such problems, facilitating

an empathic attitude from the designer and reducing the problem of self-project. Psychology and Phenomenology have provided concepts and techniques to better understand the subject-user as a unique individual in the design process. How can one work with the user-centred design if one continues to think about the user only in quantitative parameters? For the last sixty years ergonomics has contributed to enhance the relations between users and objects, their spaces and activities. However, this quantitative analysis has not shown itself adequate enough to describe the complex relations of the contemporary subject with his environment. The greater the number of options offered by the market and the more hedonistic the individual's attitude, the more it will be necessary to have adequate instruments to better understand his necessities.

We shall demonstrate the main concepts utilized to lay the groundwork for the proposal here presented. After the theoretical structuring, the objective will be to facilitate the use of it, translating the abstract concepts into operating praxis.

### **A multidisciplinary approach**

Marketing was the first to study the user psychology, understood by it as the consumer, based on theory references from psychology. However, due to the nature of the discipline itself, the main focus of all the Marketing studies in the last forty years has been to establish behaviours that emphasize product consumption. Consequently, the adoption of concepts from Psychology has not always been the most adequate one concerning the thoughts of the theoreticians in psychology. Design, on the other hand, has studied the user according to his anthropometric and biomechanical relations, aiming at a better adequacy between the objects and the human body in the exercise of its functions. In this case, Psychology has not become adequately present in such activity. However, more than just perform tasks, objects establish emotional bonds with the subject, even to the point of causing emotional dependency. Thus the incorporation of the concepts from psychology, not mediated by Marketing, can afford us the possibility of a better approach to the user's necessities.

Some characteristics of this research have shown the phenomenological approach to be the best indicated, for it allows the understanding of the user's experience from his own point-of-view, utilizing at the same time inductive and deductive processes. Adequate to solve the problem of objectivity in cultural research (Vargas, 1985), Phenomenology is the most suitable method to be used where it is not possible to establish direct relations of cause and effect between the elements of study, as is the case of study in this paper. In the case of cultural research, the author indicates that the evidences take the place of verifications, therefore creating no need for an experimental conclusion, which is actually not possible due to the mutant character of the object of study. Assuming that the comprehension of the user's necessities is more important than its explanation, the truth criterion becomes the evidence of the conclusion, consisting of the understanding of the user and his relation with the world around him. Thus, there cannot be a conclusive answer, but only evident possibilities.

Some concepts and authors of the humanist psychology have also proven to be of special significance, which we shall describe below as a differentiated alternative to work with the user-centered design methodology.

#### ***The user as a character***

A designer's claim to know the user thoroughly is at best naïve and derives most of the time either from his arrogance or pure ignorance combined with a superficial approach based on common sense.

This present work is based on the concept of the user as a character in a play, a human being represented according to his multiple facets. We agree with the psychologist C. Bollas (1998) when he says it is not possible to fully comprehend the character in all his manifestations. The author asks: "*will I ever know the character which the other is? Who the other really is? Will I have the means to transcribe the other's subjectivity to a palpable place?*" (Bollas, 1998, p.39). For Design, the subject is collective and will become individualized from the moment he identifies with the object, buys it and starts to use it, incorporating the object in his daily life and in his character.

Therefore we shall work with the concept of a "group of psychographic profiles" which can be described as a group of characteristics particular to an individual or to a group. Thus starting off from the personality, that is, from the Real Self, the objective is to find a group of characteristics to compose a profile.

If we understand the real problem present in the individual and in his environment, the object will be the only and obvious response to this well-defined problem. And thus the animated object becomes an extension of the subject himself, representing him. It is important, for that matter, which we work on data that have been obtained from the items presented in this paper. Hence the elaboration of what we call "character profile bank" is a vital step for the correct application of the instrument thus proposed.

Such profile bank aims at grouping the descriptions of individuals obtained from data collecting and transforming them into cards that can be referred to by designers at the start of a project to define a group of desirable characteristics for the user in question. The observation of everyday life in combination with interview techniques allow one to find the necessary elements to see beyond labels and stereotyped views on the user, a major problem for the development of good projects.

This idea is based on the Jungian concept of "persona" (as cited in Fadiman & Frager, 1986, p.53), defined as

the form through which we present ourselves to the world. It is the character we assume; through it we relate with the others. The persona includes our social roles, the type of clothes we chose to wear and our style of personal expression.

We are also utilizing Adler's concept of the individual as a unified whole (as cited in Fadiman & Frager, 1986, p.76), the visible part of the individual Ego that can be seen partially by means of the analysis of his daily life. In combination with it we utilized the self-concept of Carl Rogers (2001) that represents the view the person has of him or herself.

Considering the concept of character, we can say: "the user are many", in reference to each of the characters the former represents in the scenario of everyday life. Thus, we have established as a basic principle that there is not one person, the user as an individual, a single entity, but a character that plays a role, a part of this individual's history in the contemporary scenario.

Therefore, if there is not an only individual, there cannot be an only description that represents him in his quotidian and neither there is a product that can satisfy all people. Thus, the technique presented below strives to reveal the character in his scenario by means of a phenomenological approach. In this "plot", the missing part is the object, which shall be designed so as to allow the maximum congruency between the three elements, namely the individual, the character and the user, constructing thus a possible history.

The character is, consequently, what he shows to others, and also a point we can start from to understand the user as a person. Originally devised by an author, the character must be capable of being played by many different actors, thus possessing well-defined personality traits that allow the comprehension of his self. The user will play the character, when identified with his profile, and the latter will represent the former as a possible facet.

## **Instrument Structure**

### ***An approach based on the phenomenological reduction and on participative experience***

SCENARIO is a project instrument created with the objective to help the designer to comprehend both the profile and the user necessities, so that the former is capable of designing more adequate objects to the contemporary context. The objective is also to create conditions that allow the verification and validation of the designer's project proposal through the use of metaphors built on trend analysis.

The project is composed of three phases: Phase 1 – Identity; Phase 2 – Projections and simulations; Phase 3 – a possible history.

The following summary describes the structure and theoretical basis for the instrument proposed. Subsequently we shall discuss the methods for data collection and treatment.

Based on the premises described above, we have opted to work based on an only structure that can be repeated for all techniques, thus making it easier to organize, understand and utilize the presented concepts. For all instruments a synoptic table is presented displaying the references utilized in each of the techniques and proposed procedures. In this proposed structure, we indicate:

- the objectives and desired results,
- the procedures adopted,
- the techniques that should be used,
- the profile of the best suited professional for the stage (or procedure),
- a content model to be presented at the end of each of the stages.

Thus we understand that the application of the instrument is more easily effected during the project, once all procedures have been displayed in a comprehensible language for the designer and demonstrated through examples, boards and tables. The main point-of-view will be summarized in the item "commentaries". The works of Marconi and Lakatos (1999) and of Chizzotti (2001) have been used as reference for all the techniques and questionnaire structuring.

The four instruments of the Stage 1 – Identity are an attempt at collecting and treating the data that allow us to "go to the things themselves", to reflect the experience "[...] considering that human experience is always the source of all conceptual elaborations"(Forghieri, 1993, p.5-11). To minimize the effects of an analysis based on stereotypes and preconceptions the observer might have in relation to the subject, the "preconceptions" technique has the objective of preparing the observer for data collecting.

In an effort to know objectively the subject and the elements of his quotidian, the observer writes a descriptive text on his impressions about the subject (his quotidian, physical appearance etc). The result of such a qualifying analysis should make

evident the observer's prejudice in relation to his subject. By contrasting this text with the subject's description of himself and with a third person's description of the same subject, we can establish the elements which grant us the identification of the self-concept, indicating the three dimensions of the self: who he is, how others see him and how he sees himself. In this stage we can also recognize some elements of the individual's unfoldment, very important for the design of objects.

**Phase 1**

**Identity - The character construction and his scenes**

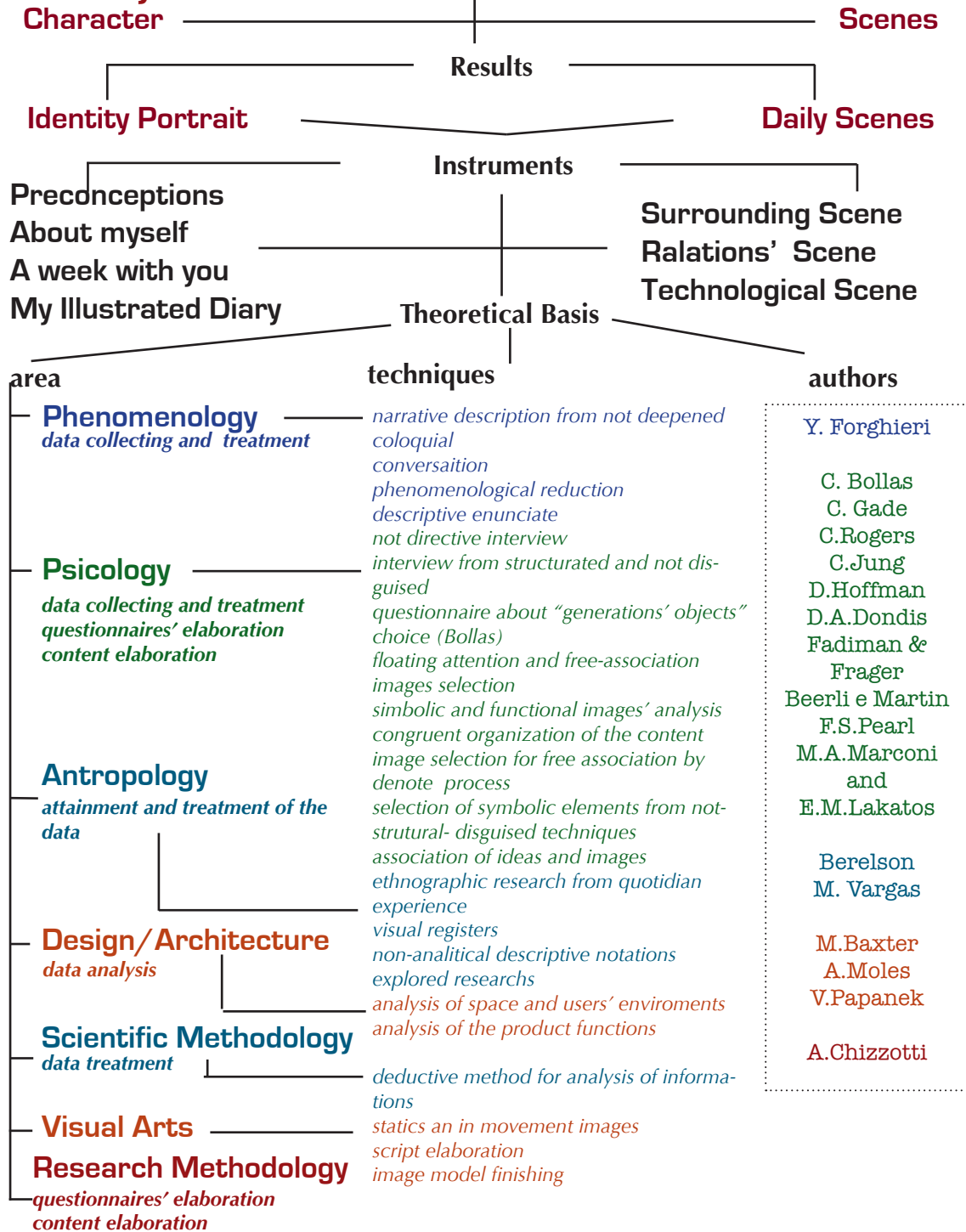


Figure 1: Synoptic diagram: theoretical structure of the 1<sup>st</sup> phase



### ***About myself***

The aim of this technique is to establish different profiles by means of interviewing different people. At this point it is important not to use any directive type of interview so that the interviewee can express himself more freely. A structured questionnaire can be used, mostly in what refers to the individual's cultural values and habits, but as long as the structure is evident. The interviewer should follow a pre-established itinerary. The desired result is a descriptive narrative about the individual and a definition of his socio-cultural profile using client-centred therapy techniques. It is important that the designer works together with psychologists for the objective is not a consumer profile but as said before, a socio-cultural one.

### ***A week with you***

This technique aims at building the character's profile from the experience of daily situations, where all aspects of the quotidian can be better observed. As a complementation of the previous technique (About myself), the same person should participate in this second part of data collecting. The underlying principle is that the main difference between the immediate quotidian existence and its theory is that the latter is always partial and limited, which cannot include the totality of the contrasting aspects experienced (Forghieri, 1993). Bollas (1998) says that "*the observation of the subject in his space allows the construction of a metaphor which enables me to come closer to what I want to say about the nature of the human character*". (Bollas, 1998, p.40). The combination of experience and participant observation associated with the fluctuating attention technique is a way not to emphasize any present element and to give the same attention to all presented data. Although it seems to be contrary to all the proposed principles of the participative experience technique with a phenomenological approach, we consider that the use of a directive itinerary will allow the researcher to focus on important aspects for the designer.

This experience shall be done with various different subjects, randomly chosen among common members of society without any privilege or demographic criterion. Following, there must be a detailed analysis of the quotidian habits, establishing a comparison between the information obtained in the "About myself" technique and the ones obtained in the participative experience so that the incongruent point can be found and thus it can be established the difference between the real self, the ideal self and the social self. The identification of the observer's personal characteristics allows the suspension of judgments of value about the user; therefore one should avoid any qualifications. The suspension of the observer's personality characteristics and personal tastes is capital to avoid a subjective reading of the elements present in the quotidian. This must be described following a personal itinerary, a card to be filled where the main points considered detrimental to the observation and the description of the quotidian can be identified.

### ***My Illustrated Diary***

The last technique in the construction of the character is called "**My illustrated diary**". Its main goal is to organize the data obtained from the experience "A week with you" and to formalize them to be further consulted and presented. The data obtained by the researcher in the previous technique are organized so as to allow simple reference to the information obtained. The facts and images obtained should be selected and analyzed bearing in mind two main criteria: the search for congruency between the elements present in the observation and their capacity to be representative on the construction of the quotidian (understood here in its two aspects, the connotative and the denotative). The image selection needs special

attention and should consider the semantic and symbolic criteria pointed out by Hoffman (2000), Persi (apud Fadiman & Frager, 1986) and Dondis (1991). The connotative aspects shall be utilized to find the structural patterns that may be visible in the images and which indicates us symbolic or subjective values depending on their repetition in different situations, what configures a pattern to be observed. No list should be made before analyzing the images. On the contrary, reading the images should be the starting point on the discovery of the elements so as not to look for the confirmation of a previous theory about the individual, but to establish a profile based on a structured provided by the very individual. The data obtained in the experience “A week with you” should be described on paper in details and using colloquial language, with the intention of sharing that experience. After the written description one should try to establish the differences and similarities between what was described and what happened.

### Three stages for the process

The first stage is the *Data analysis and interpretation: My Diary*, which is the material collected during that process. The second stage is called *Data verification with the subject: reading the diary*. Presenting the diary for the subject is his ascertainment of the meanings attributed to his objects (both internal and external). The individual should also make observations on the points which he does not agree with the facts occurred and which are consequently not representative of his reality. Thus the user is included in the process in a client-centred approach, from the three dimensions pointed out by Rogers (2001): listen, understand and accept. Firstly, listening to the client’s ideas about his own difficulties; then accepting the client as capable of understanding his own problems and, finally, understanding that the modifications can be directed by him, as well as the goal setting.

It is implicit in the third stage, *Content review and final redaction: My diary – definite version*, a critical point-of-view from the researcher. It is important that he compares his original notes, his first report and the subject’s observation to proceed to the elaboration of a possible description that characterizes what was presented. The material in *My illustrated diary* will work as the basis for the creation of an identity portrait.

#### Phase 1

## Identity - The user as a character

instrument

### Identity Portrait

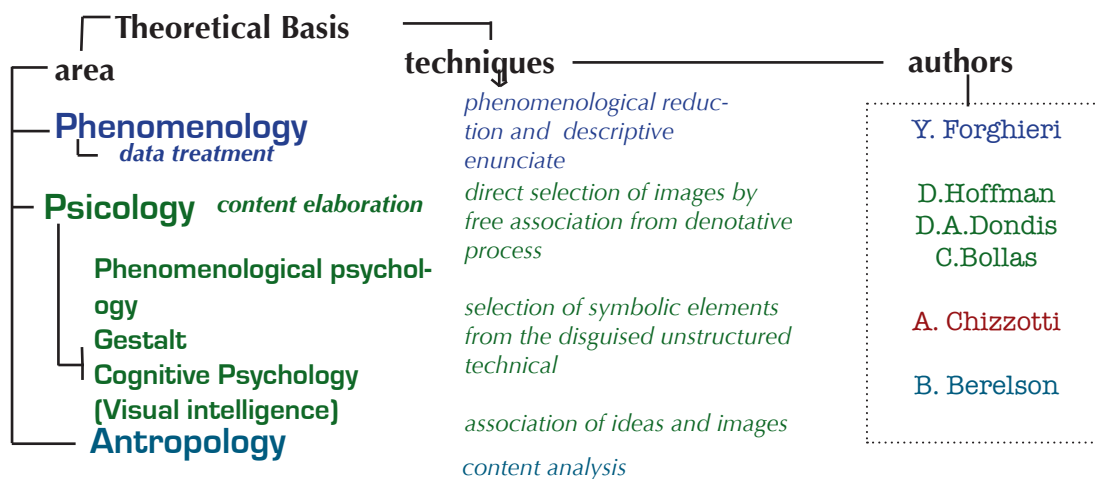


Figure 2 – Synoptic diagram: Identity portrait

## Daily Scenes

The instrument **Daily Scenes** aims to put the character in context, from the insertion of images and objects taken of the **Identity Portrait** elements for building scenes and ambient. It is constructed by overlapping the 3 scenarios, the surrounding scenery, and the relational scenery and technological scenery. Work as a database, information that should be considered available and upgradeable to put the character in your environment in order to identify situations the closest to the real.

The overlap of the elements of the 3 previous scenarios, which should contain some descriptive text and visual elements, creating an imagistic model to facilitate understanding of current events and its aftermath

This model serves to mimic what happens in real life, validating the understanding of the theories presented (Vargas, 1985, p.172). The scenario as imagistic model should work also from the use of metaphor, trying to make sense of all the relations that can be established. The creation of a model imagistic daily scene allows us to “specialized” and understands the elements of this so that we can thus understand the future, the construction of the scenario projections.

### Phase 1 **Identity - The user as a character** instrument Daily Scenes

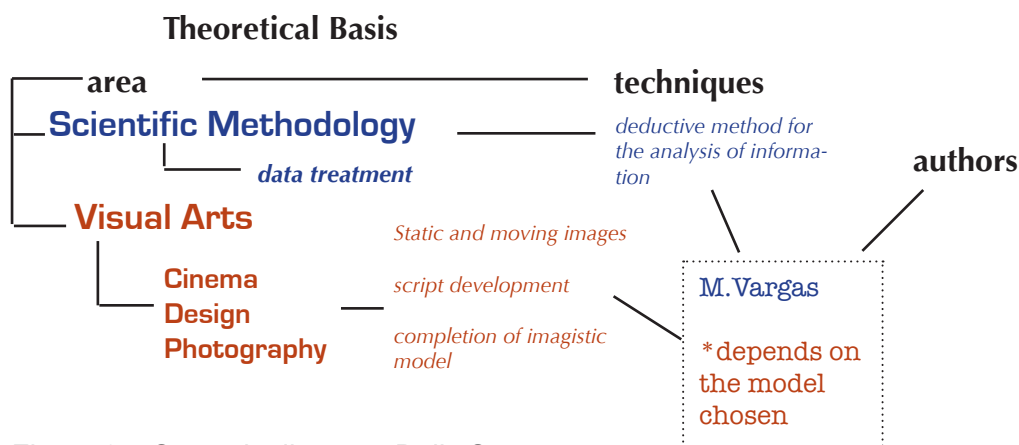


Figure 3 – Synoptic diagram: Daily Scenes

## Projections and Simulations

This second stage, called **Projections and Simulations**, provides the application of data obtained in the previous step to create a model that can somehow simulate future scenarios for the implementation of the object. Thus, in one step is simpler because the data has been collected and are available for consultation. Therefore, it is one-step application.

Considering the claims of Bell (1976), Popcorn (1997) and Naisbitt (1998) that this shows us the way of the future, the main work in this step is the analysis of trends and opportunities from the creation of situations of simulation, order to test possible paths chosen by identifying the elements that characterize the changes found in the readings of the daily.

Thus, counter to reality and future prospects in the search, from a close eye on the trends of the components that characterize contemporary changes that may indicate the future directions. Taking advantage of the daily readings, the reconstruction of the repertoire indicates a scenario where simulations are possible and projections from the use of analogies and metaphors. Thus, the object is the result of needs identified in everyday life, and not born a priori.

**Phase 2**

**Projections and simulations**

Title

**Analysis of opportunities and trends**

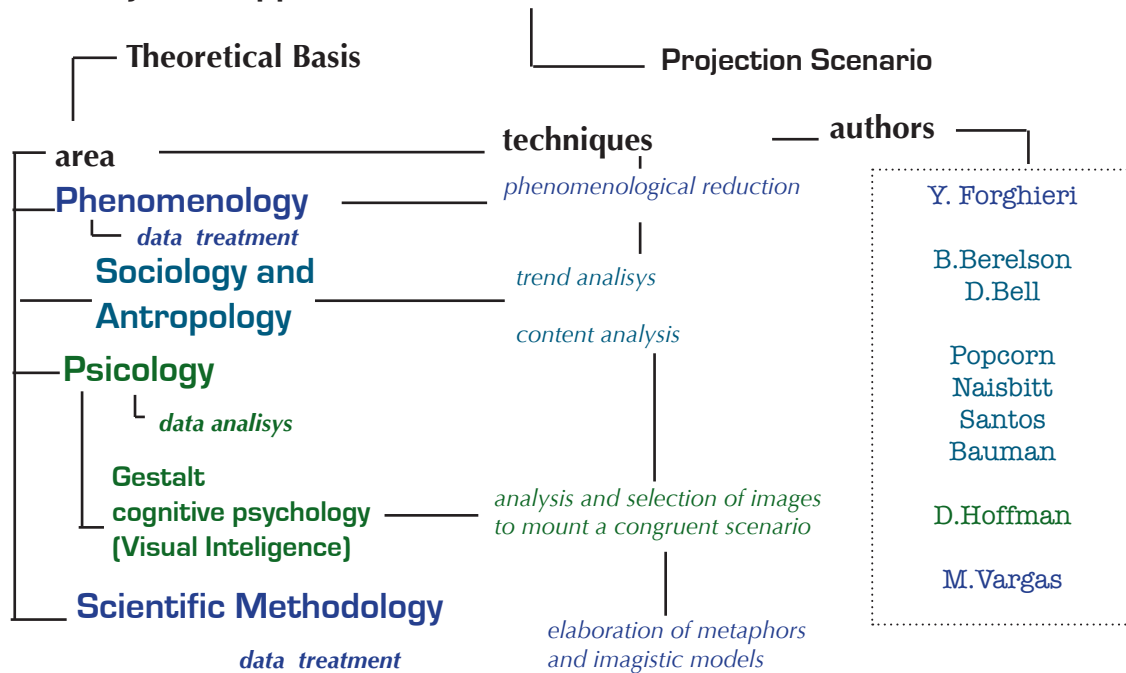


Figure 4 – Synoptic diagram: Projection and Simulation

**A Possible History**

This third and final stage, called **A Possible History**, is a description of the new daily. This is the synthesis of the whole process, where the application of data from all previous steps, formalized to create a model that can, somehow, describe the everyday future, with all the consequences this may entail.

The main objective of this 3<sup>rd</sup>. phase is to enable the development of user-friendly material that can describe a new daily life, from the junction of the 3 elements that build: character, settings and objects. We assume that the descriptive narrative format may be the best to assemble the story, which involves the juxtaposition of the various data obtained from previous techniques, so that one can construct a story as possible, and not an element of fiction, where the data presented leave only the imagination of author. Thus, for the avoidance attitudes romanticized in this last step, again to resort to the procedures and mitigation techniques, allowing for greater objectivity to the process to terminate.

Phase 3  
**A possible history: the description of the new daily**

Title  
**Illustrated History**

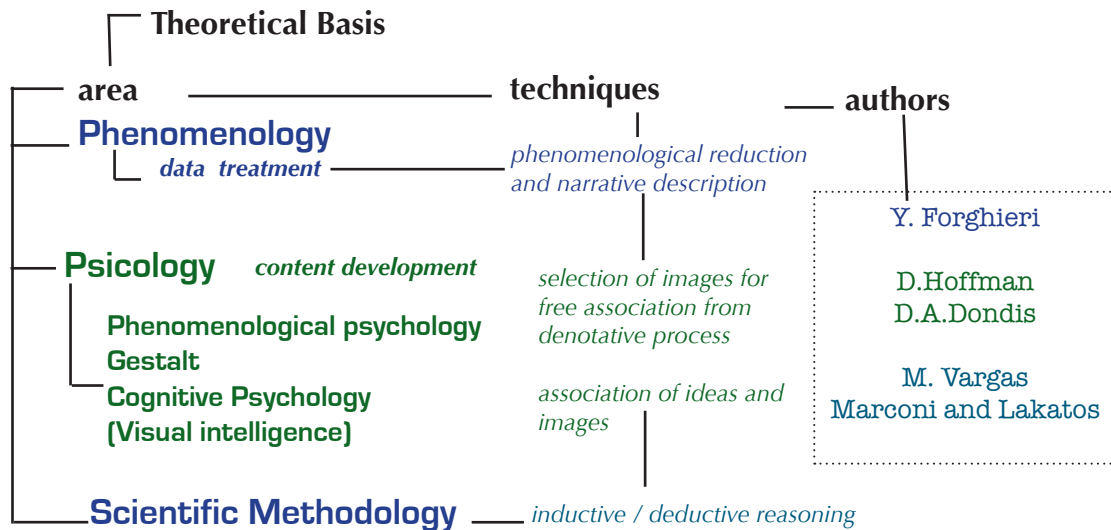


Figure 5 – Synoptic diagram: a possible history

## Last considerations

### ***Desirable characteristics for the proposed instrument***

Just like a psychologist who adopts a given line of work to help his patient live better, trying to understand all the aspects of the patient's personality, the designer should, more than just understand the user, foresee his necessities, going from the collective subject identified as a consumer to the individual subject, the character that represents him, striving for an empathic relationship that allow the ideal distance to analyze the other, to *"feel what he would feel if he were in the situation and circumstance experienced by another person"*.

The proposed phenomenological approach allows a better understanding of the subject and of his quotidian. Being an inclusive theoretical structure, it also permits an easier updating just by substituting the key elements that are described in the tables used throughout the process.

The examination derived from the distancing using the phenomenological reduction technique allows the rationalizing of the data selection according to the criteria presented by Hoffman (2000), proving itself efficient in the creation of symbolic charts that help to build a history. The proposed structure for the analysis and the description of the elements to be observed favoured the facts of the quotidian, indicated as the most important for an analysis of society.

The organization of a non-linear structure allows you to work simultaneously with the 3 elements, allowing an organization that facilitates synchronous work in multidisciplinary teams.

Thus we believe to have proposed a methodological approach that has granted the final product a meaningful theoretical consistency to be presented, discussed and revised afterwards.

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