The semiotics of pictogram in the Signage Systems

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Abstract:
The purpose of this research is to investigate the printed RFID
In the signage systems, the most important concern for people who design pictograms is to ensure that they will be understood by the greatest possible number among the addressed people. Therefore, the institutions who want to promote the use of pictograms as an iconic signs on a rational basis are now making efforts to define design and interpretation methodologies of the pictogram.
The aim of this paper is to highlight the importance of studying the semiotics of pictogram and its role in the signage systems and clarify the extent of the impact of cultural determinism and the surrounding changes on the interpretation of pictogram. The study problem can be demonstrated in the following two questions: to what extent can the study of pictogram's semiotics help the designer in choosing the graphic Elements of pictograms which are involved in the construction of meaning into the signage systems?, how do the surrounding changes affect the meaning of the pictogram?, and how do the cultural determinisms affect the appearance in which the pictogram appears?. The study follows an inductive approach, and "Descriptive-Analytical Methodology". It reached to the understanding of a pictogram's characteristics and features. It analyzed the advantages of the usage of the pictogram's "iconic" form and the role of the pictogram's surrounding in interpreting its meaning. The cultural determinisms also affect the "appearance" of the pictogram, where any difference of cultural context can entail differences in the representation without changing the core meaning of the pictogram itself.

Introduction:
Semiotics can help "make us aware of what we take for granted in representing the world, reminding us that we are always dealing with signs, not with an unmediated objective reality, and that sign systems are involved in the construction of meaning. Based upon the wide use of the semiotic approach in various fields and its specific application in the iconic signs such as pictograms, It appears that with conscientious application semiotics can serve as an effective theoretical foundation for information design. It helps explain the job of signs and categorizes them to symbolic, indexical, and iconic according to each's way of indication. (1)

Throughout history, Humans have attempted to communicate with signs for thousands of years, and the use of pictures to convey messages has evolved to the modern pictogram. A pictogram is an iconic sign that helps improve all communication process especially signage systems. It is not just any means of communication; rather, it conveys a very specific message and meaning. It replaces written indications and instructions and increases the users' awareness of the information they are subjected to, generally by serving as an "instantaneous memorandum". (2)

Although these pictograms are universal icons, subtle changes occur to them according to the cultural background they are used in. Different cultures demonstrate different shapes of pictograms that the inhabitants of this culture accustom with, still maintain the basic form of the pictogram further achieving the goal of the signage systems.

The Research's Problem is demonstrated in the following questions:

1- To what extent can the study of pictogram's semiotics help the designer in choosing the graphic Elements of pictograms which are involved in the construction of meaning into the signage systems?

2- How do the surrounding changes affect the

meaning of the pictogram?

3- How do the cultural determinisms affect the appearance in which the pictogram appears?

4- The research aims to:

5- Highlight the importance of studying the semiotics of pictogram and its role in the signage systems.

6- Clarify the extent of the impact of cultural determinism and the surrounding changes on the interpretation of pictogram.

1- The role of pictogram in signage systems:

1-1 The description of pictogram:

Pictograms constitute a particular branch of pictorial signs, the use of which has expanded continuously throughout the course of human history. It is thought that the first written symbols were pictorial representation of objects. (3) (p. 18)

Nowadays, pictograms play an increasingly important role in our daily life. They are very useful for communication in signage systems as they are more illustrative than text. They can contain more complex information than text in highly compressed form. (figure 1) (4)

Figure (1-a)   Figure (1-b)

Figure (1) Using text and pictogram in "Emergency exit" sign (4)

A lot of specialists put several definitions for the pictogram from their own points of views, some of which are referred to as follows:

- Collins Dictionary: Pictogram is another word for pictograph. Pictograph is a picture or symbol standing for a word or group of words, as in Chinese writing.

- Otto Neurath: Economist, philosopher and co-founder (with Charles M. Morris) of the international Encyclopedia of Unified Science in The Hague, Neurath developed the international System of Typographic Picture Education (ISOTYPE). He describes the pictogram as an element of a system of absolute validity.

- Otl Aicher: Graphic designer and co-founder of the Ulm College of Design, Aicher suggest: "The pictogram must have the character of a sign and should not be an illustration." (3) (p. 10)

- The following section is a description that highlights the pictogram's visual function in the signage systems:

- "A pictogram is an image created by people for the purpose of quick and clear communication without language or words, in order to draw attention to something". If we extrapolate the statements inherent in this description, we perceive four tasks and four aims:

First statement: 'created by people –'	- **Resultant task:** A pictogram is not a natural phenomenon, but is created artificially. Therefore it cannot be learned or instinctively understood by natural means, but depends on an agreement between the human sender and the human receiver which must be learned or universally acknowledged. - **Aim:** If the widest possible understanding is to be achieved, a pictogram must be as self-explanatory as possible. In order to convey the message, a symbol must be found that will be typical of the subject and can easily be associated with it through common experience.
Second statement: '- an image – for the purpose of quick and clear communication '	- **Resultant task:** A pictogram must be quickly and clearly recognized and understood. - **Aim:** Not only must the content of the pictogram be a characteristic symbol for the intended message, but the visual form too must be simple, typical and associative enough to permit quick and clear identification.
Third statement: '- communication	- **Resultant task:** A pictogram should be understood independently of writing, words, and

without language or words –'	language. - **Aim:** A transposition without writing or language, with easily associated symbols that are universally known from common history.
Fourth statement: '- in order to draw attention to something -'	- **Resultant task:** A pictogram is not meant to offer a complex explanation, but it should point to one clear and concrete fact. Such facts may be: - Information. - Direction. - Prohibition. - **Aim:** A pictogram must always convey one fact. If there is more than one, it cannot be interpreted quickly or clearly enough. If, for example, a number of different activities are forbidden in a car park, the different bans should be visualized through separate pictograms. Each ban should be represented by a pictogram drawn from the same system.

(3) (p. 24)

1-2 The usage of pictogram in signage systems:

Signage systems are visually oriented information systems used to guide people's passage through the physical world; road signs on a highway, station identification signs in a subway and overhead signs in an airport are all common examples of signage systems. They consist of signs, maps, arrows, color-codings systems, pictograms and different typographic elements. In the following section, we will discuss the particular use of pictograms in signage systems and how does it work to fulfill major functions in achieving the systems' goals. (5)

In signage systems of the different public institutions, pictograms are used:

1- To replace written indications and instructions
2- To express regulatory, mandatory, warning and prohibitory information, when that information must be processed quickly (eg. road traffic signs)
3- When users speak different languages (ie. non-natives) or have limited linguistic ability (eg. people with low levels of literacy or little education), or have visual problems (eg. older people)
4- When there is a legal obligation to inform, and for the user to comply with information, mainly for safety purposes (eg. use of dangerous materials at work).

As pictograms work to fulfill the functions needed in signage systems, some advantages come to surface proving the efficiency of the use of pictograms in signage systems. These advantages are:

1- Identification is more precise from a single glance, at a greater distance, and at a greater speed than with words: an image is processed in parallel and therefore more quickly than words, which require serial processing. Thus, they can serve as "instant reminders" of a hazard or an established message.
2- Pictograms have a higher resistance to cognitive interference: an image, memorized and recalled as a single unit, would resist interference better than a text made up of several parts.
3- They improve understanding of warnings for those with visual or literacy difficulties.
4- They can make warnings more noticeable or "attention grabbing", and they can improve their legibility.
5- They capture users' attention for words sometimes fail to.
6- They Increase users' awareness of risk, generally by serving as an "instantaneous memorandum".
7- A pictogram can also be better stored in memory due to dual encoding, that is both visual and symbolic
8- In addition, pictograms are more easily processed at a distance compared to textual information. (6)

2- Theoretical Foundation of semiotics in pictogram:

2-1 Understanding the different approaches of the semiotics of signs:

The most basic unit of representation is the "sign". A sign can be defined as anything that can be used to stand for something else. (7)

Signs take the form of words, images, sounds, odours, flavours, acts or objects, but such things have no intrinsic meaning and become signs only when we provide them with

meaning. The
basis of semiotics is found in this definition of a sign, in that, the sign does not have intrinsic meaning, it only has meaning that is assigned to it.

We interpret things as signs largely unconsciously by relating them to familiar systems of conventions. It is this meaningful use of signs which is at the heart of the concerns of semiotics.

In order to lay a theoretical foundation and understanding based on semiotics, it is beneficial first to briefly summarize its historical development. Ferdinand de Saussure and Charles Saunders Peirce, are considered pioneers in the development of semiotics.

1- In Saussure's approach a sign is made up of the signifier, the form which the sign takes, and the signified, the concept which the sign represents. The relationship between the signifier and the signified is called signification. Saussure's work dealt primarily with linguistic signs, but the principles can to a large degree be applied to visual signs as well.

2- Charles Sanders Peirce, who was developing his theory of semiotics at the same time as Saussure, considered a sign to be made up of the representaman, the form which the sign takes, the interpretant, the sense made of the sign, and the object, that to which the sign refers. The interpretation between the representaman, interpretant, and the object is referred to as semiosis. The three components can then be represented by the semiotic triangle shown in (figure 2):
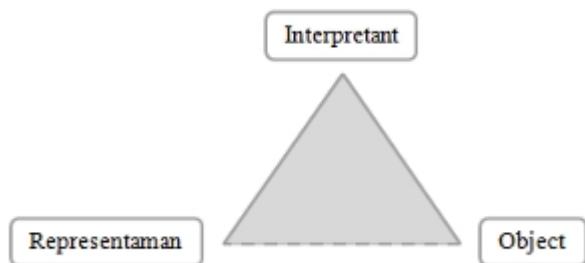

Figure (2) The dotted-line represents the fact that there is not an observable or direct relationship between the representaman and the object. (1)

2-2 Semiotics' aspects of signs:

In addition to the three components that pierce considered, He focused on three aspects of signs: their symbolic, indexical, and iconic dimensions (figure 3) (8)
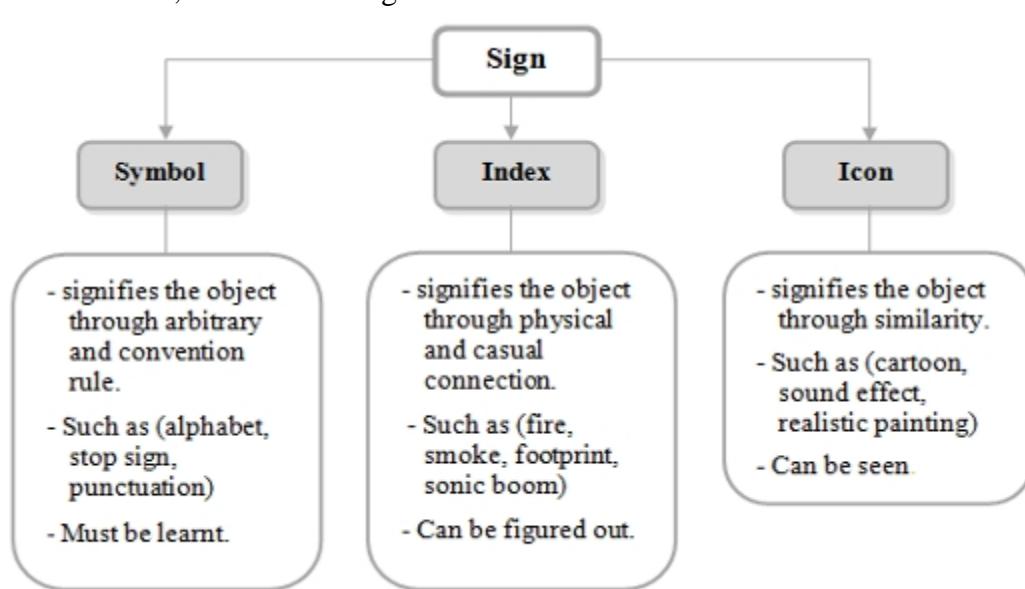

Figure (3) The three aspects of signs. (9)

Every sign can be classified according to the object it aims to represent:

- Either first, by partaking in the characters of the object. We then call it an Icon.
- Secondly, by being real and in its individual existence connected with the individual object. We then call it an Index.
- Thirdly, by more or less approximate certainty that it will be interpreted as denoting the object so we then call it a symbol. (10)

2-2-1 Symbolic Signs:

A symbol has no logical meaning between it and the object. For instance, if we look at the symbol

of the red circle and line below in (figure 4), every time we see it, it gives us the sign of prohibition. As everyone knows, the most common symbol for forbidden thing and certainly the most recognizable is the red circle and line symbol. But, why is this symbol in particular shown like that? As, it was written before, symbols may not have any logical meaning to its object represented. The red circle is only assumed to be the sign of prohibition and has become a symbol passed on in the society during ages.

Figure (4) "No" symbol.

Another example, if we look at the Red Cross symbol in (figure 5), we can observe the arbitrary nature evident in its history. Standing for an organization found in 1863 by five men from Geneva, Switzerland, to aid wounded soldiers, the symbol is the inverse of the Swiss flag (a red cross on a background, rather than the Swiss white cross on a background). As such, it borrows the country's signification of neutrality in times of war. In other words, the meaning of one sign was assigned arbitrarily to the meaning of another. (11)

Figure (5-a) "Red Cross" symbol

Figure (5- b) Using "Red Cross" symbol in hospitals – Japan (12)

2-2-2 Indexical Signs:

An index is a sign that is directly connected in some way (existentially or casually) to its object. It has some connection or association with its

referent and usually sends a message or illustrates information. For example, a sneeze signifies a cold, a smoke is an index of fire and symptoms are indices of diseases. (9) Another example is the weather-cock (figure 6). It is fit to be taken as an index of the wind for the reason that it is physically connected with the wind. A weather-cock conveys information; but this it does because it faces the very quarter (direction) from which the wind blows. (10)

Figure (6) A weather-cock sign

Most of traffic signs are index signs, because, they give information which relates to a particular action. Traffic signs or road signs are signs placed at the side of roads to provide information to drivers. For example, (figure 7), a picture of a "No U turn" traffic sign, is simple to analyze, because its meaning is obvious. Whenever we are driving in a road and face this sign, automatically, we know that we may not turn because it is prohibited. If we do so, we are going to face further penalties. Although the elements of the design are obviously related to the intended information needed to be delivered, this sign is considered an index not an icon because the U-shaped arrow is not the thing forbidden it's the car's motion in a U-shaped direction. Icons, as will be explained in the following paragraph, are pictorial demonstrations of the information needed to be delivered. (9)

Figure (7) A "No U turn" traffic sign. (9)

2-2-3 Iconic Signs:

An icon is a pictorial representation of something, a sign which refers to the object it denotes merely by virtue of characters of its own, and which it

possesses. It is a sign that physically resembles its object that it looks or sounds like it. (13)

Thus, an icon takes its identity from its imitation of the signified, and stands for itself. The degree of correspondence with the signified is called the degree of iconicity, while the degree of divergence is the degree of abstraction. The icon is therefore directly dependent on the thing it designates. (3) (p. 14)

What the iconic sign really reproduces is a generalized visual representation of a concept, which may always be recognized through its different tokens. It is not a fully featured miniature of an object of the real world, it is a familiar shape. (Figure 8) displays examples of such iconic types for man, car or house. Visual signs such as photographs, pictograms or maps are good examples of icons. (14)

Figure (8) Basic iconic examples (14)

2-3 Pictogram as an iconic sign:

A pictogram is a stylized figurative drawing that is used to convey information of an analogical or figurative nature directly to indicate an object or to express an idea. It forms part of our daily lives through their use in medication, transport, computers, signage systems etc., because they indicate - in iconic form - places, directions, actions or constraints on actions in either the real world or virtual space. Since icons are analogues of what they represent or indicate, therefore a pictogram is considered as a part of the iconic signs. (6)

This concept is confirmed by the definition of Herbert W. Kapitzki, the Professor of Visual Communications at the University of the Arts in Berlin who says: "A pictogram is an iconic sign that depicts the character of what is being represented and through abstraction takes on its quality as a sign." (3) (p. 10)

A pictogram also can be illustrative or diagrammatic when a symbol is applied to it. For example, the "No smoking sign" below in (figure 9) always reminds of a very important message "You are not allowed to smoke in this place". So, it really is warning us that we are not allowed to smoke or if we smoke we are going to face the law. In essence, in this sign we see a picture of cigarette that is lit up and a red line drawn on it to show that cigarette is extremely prohibited in a particular place. (9)

Figure (9) "No Smoking" sign (9)

3- Semiotics and the interpretation of pictogram:

3-1 Internal articulation in pictogram:

The pictogram always displays internal elements. It is actually the very presence and configuration of the internal elements which allow the pictogram to be recognized. Some elements have a specific importance because they are "more" characteristic of the pictogram (figure10); if they fail, the pictogram fails to be recognized; if they are there, it is recognized. (14)

Figure (10) Much more important to the recognition of the simple shape
of a human face, to provide eyes than to provide ears. (14)

This means that, the pictogram should be very simple and straight to the point. Only then can a pictogram assume its full symbolic value. As well as taking longer to interpret, a pictogram that is too complex in form loses its representative value. (3) (p. 16)

(Figure 11) shows an example of the internal elements of the pictogram. In figure (11-a), the very simple combination of elements is spontaneously interpreted as a human face. Figures (11-b), (11-c), and (11-d) show that the internal components are not themselves characteristic of the pictogram: the circle alone, or the smaller arc of circle alone, or the dots alone, are not enough to signify the visual face. Only a precise spatial combination of all of them triggers this interpretation.
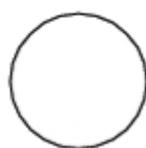

Figure (11) (-a)   Figure (11) (-b)

Figure (11) (-c)   Figure (11) (-d)
Figure (11) Internal elements to recognize the
simplest "Face"

If small crosses replace dots, at the same position in the spatial configuration, they are still interpreted as "eyes" (figure 12).

Figure (12) crosses and spirals resemanticized into eyes

This type of phenomena has been studied in detail by the Gestalt psychologists, who explained them in terms of shape perception that things look as they do because of the field organization and what the human perception first sees is the overall shape of a face, and the interpretation of one element as a mouth, and of another element as an eye, comes afterwards, as a consequence. (14)

(Figure 13) shows the difference in the way to express the same meaning "Toilet". In (figure 13-a) the designer depend on the changing in the state of hands and legs in the design for each the man and the woman with a comic way. In (figure 13-b) the designer focused on the difference between the body building of the man and the women. He express them through two reversed triangles. In (figure 13-c) there is another way to express the man and the woman. The designer foucused on the face of the man and the woman with adding two triangles as a tie for the man and as a hair trinket for the woman. (figure 13-d) On the other hand shows the standerdized pictogram for the meaning "Toilet".

Figure (13-a)

Figure (13-b)

igure (13-c)

Figure (13-d)
Figure (13) The difference in the way to express the same meaning "Toilet" (15)

3-2 The degree of the interpretation of pictogram:

There are three degrees of the interpretation of pictogram we will explain them in the following points:

- The open interpretation: An open interpretation offers no clear message. Possible reasons for open interpretation might be a lack of prior agreement, or differences between the sender's sign repertoire and that of the receiver. A pictogram being used in the wrong context may be another cause.

- Clear interpretation: Clear interpretation is essential to create an unambiguous reference to the context: the right town, the right spot, the right size, the right height, the right light. If these conditions are not fulfilled, a pictogram may be either misunderstood or not actually seen.

- Complete interpretation within a system: A pictogram is part of a chain, or system. In combination with other pictograms from its system, its interpretation can be completed. Only through its links to the rest of the system can be closed pictorial language become visible to the receiver and revealed in its full context. (3) (p. 17)

3-3 The surrounding changes of pictogram:

Images of pictogram in the form of an icon with a high degree of abstraction are never meant to be self-explanatory but denote a piece of information that is only connected with the sign when both are linked together.

The context of the pictogram plays an

especially important part. Without it, an icon or symbol simply cannot be a pictogram, for only in its context can it convey a concrete, usable message. If the surroundings change, the meaning of the pictogram will also change. For example, a 'no smoking' pictogram in a room has a different meaning from one that you might see in this book, or on a fence, on a tree,
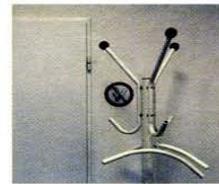
or in a town square (figure 14). The pictogram in the room makes it clear that smoking is forbidden in that room, but in a book it certainly does not mean that the moment you open the book at that page you must stop smoking. Seeing a 'no smoking' pictogram on a fence could lead to confusion as the parameters are unclear.

A fence offers no clear meaning either, as far as the spatial context is concerned.

In a book, the pictogram has a completely different function. It simply quotes itself. Its effect is not imperative but indicative.

The 'no smoking' pictogram can only be fully understood within a clearly defined space – a room, for example.

If a 'no smoking' pictogram is stuck on a tree, the meaning is unclear. Is smoking forbidden under the tree? How far does the ban extend? The spatial reference is not set out.

Figure (14) The surrounding changes of pictogram and the change of the meaning. (3) (p. 24)

3- 4 Cultural determinism in pictogram:

It is at the level of cultural semiotics that the problem of iconicity can now be formulated. Since the iconic type is being a cultural representation to which the iconic representation is conventionally linked, any difference of cultural context can entail differences in the representation. Moreover, when icon is beginning to be used as a language, it has to invent codes to be able to express something more than what it can flatly represent; and these codes are strongly related to their cultural environment.

The judgment of typicality which is made on certain features depends on the natural and cultural. A case of cultural variability could lie in the levels which given cultures "choose" as being basic. A good example of this phenomenon is for example the two pictograms representing 'man' and 'woman' for international public information (figure 15). They can be distinguished by the shape of the silhouette, not based on morphological differences, but on traditional clothes: the man is apparently wearing trousers, the woman a skirt. No other differences appear. This graphical opposition is of course entirely based on a culture where a clothing code clearly stipulates trousers for men and skirts for women. In this, it is already lagging a couple of decades behind our present cultural habits.

What about its relevance for a society where this opposition does not exist? Let us compare with prehistoric rock paintings, where the representations of men and women would differ by salient anatomic details; or with ancient Egyptian paintings, where the distinction would mainly lay along the line: skirt and bare chest for men vs. dress and covered chest for women; or again with traditional Chinese painting, where both men and women wear ample gowns, but are mainly distinguished by the beard and hairstyle. (14) In the same way, typical French people will tend to represent the concept "bread" in the form of a long loaf (baguettes being the most common presentation of bread in France), while the German will more likely picture it round. Many other such examples can be found, illustrating the fact that the way a given society impregnates and transforms its environment influences the iconic types it produces. (figures 16,17). (14)

Figure (15) Standardized pictograms for men and women (14)

Figure (16) Pictograms in some Muslim
Countries:
Women are defined by the veil and men by
men caps. (16)

Figure (17) Indian representation of men and
women (17)

A red cross composed of two intersecting lines of equal length and width is a symbol that changes to a pictogram after a period of time. In non-Arab countries, this symbol stands for a politically neutral organization dedicated to emergency relief in times of war or disaster. Two symbols stand for a neutral organization that provides relief in times of war or disaster. The relationship between this meaning and each of the two forms is arbitrary. There is no meaning inherent in the cross or crescent (figure 18) significance is established solely through their use in cultural practice. Two different identities are necessary because various countries associate the symbols with ideas unrelated to the organization's work. (18) Because any cross has cultural associations with Christianity, the organization operates as the "Red Crescent" in Arab countries. (11)

Figure (18) "Red cross" and "crescent" sign
(11)

Analytical Study:
**A signage project system for the University
college of Gjøvik in Norway:** (19)

Figure (19)

Figure (20)

Model (1):

Figure (21) A pictogram that represents the "Library"

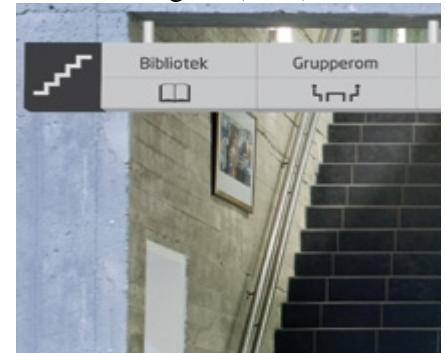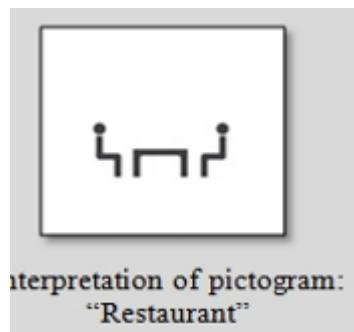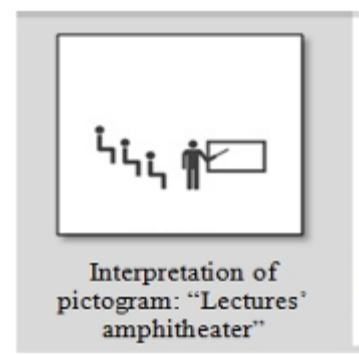| 1- The signifier and the signified of pictogram:	- The signifier: an open book. - The signified: This place is the "Library".
2- Semiotics' aspects:	- The element in this pictogram is an icon.
3- Internal articulation in pictogram:	- Using the open book confirms the meaning of "A library".
4- The surrounding of pictogram:	- In the context of the surroundings, the relation between the open book's pictogram, either on the floor (figure 19) or on the sign hanging from the ceiling (figure 20), and the stair's pictogram conveys the same message: "Upstairs, there is a library".

Model (2):

Figure (22-a)

Figure (22-b)

Figure (22) A pictogram that shows the way up to the "Restaurant"

Figure (23) This pictogram represents a "Restaurant"

1- **The signifier and the signified of pictogram:**	- The signifier: two people sitting opposite to each other with a table between them. - The signified: This place is the "Restaurant".
2- **Semiotics' aspects:**	- All the elements in this pictogram are icons.
3- **Internal articulation in pictogram:**	- Using the people sitting opposite to each other along with the table between them suggests that this is a place for eating, or a "Restaurant".
4- **The surrounding of pictogram:**	- The existence of the pictogram beside an escalator suggests that a person needs to use the stairs to reach the restaurant located upstairs.

Model (3):

Figure (24) A pictogram with its surrounding that shows the door to the lectures' amphitheater"

Figure (25) This pictogram represents "Lectures' amphitheater"

1- **The signifier and the signified of pictogram:**	- The signifier: Sitting people, a person with a stick in his hand, and a horizontal rectangle. - The signified: This is the place where students take their lectures in.
2- **Semiotics' aspects:**	- The "Sitting people", "person with a stick in his hand" are icons. - The "horizontal rectangle" is a symbol.
3- **Internal articulation in pictogram:**	- Using the outline of the horizontal rectangle suggests the meaning of a white board. - The descending zig zag orientation of the people highlights their nature as students receiving a lecture. - The stick which the person holds classifies him as a "professor"
4- **The surrounding of pictogram:**	The pictogram is hanged beside the door of the lecture's amphitheatre to deliver the following message: "This is the door

that will lead you to the amphitheatre in which you will receive your tutoring."
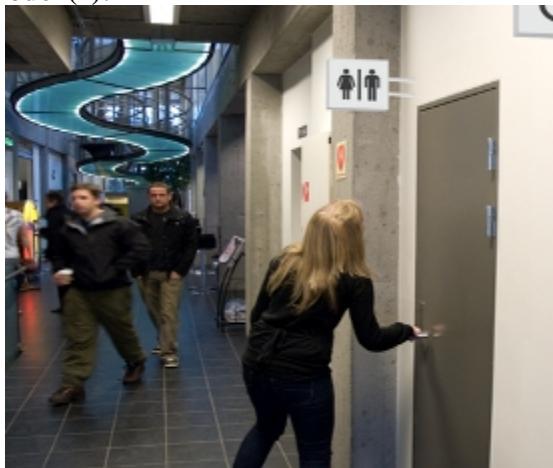
Model (4):

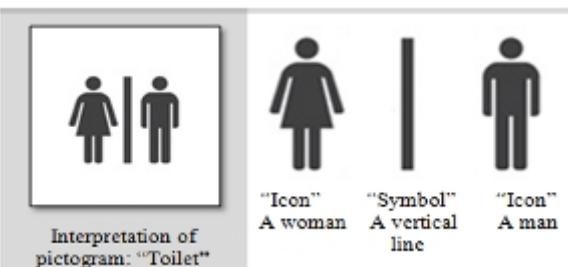Figure (26) A pictogram that represents the way into a toilet.

Figure (27) This pictogram represents a "Toilet"

1- **The signifier and the signified of pictogram:**	- The signifier: a woman, and a man with a vertical line in between. - The signified: This place is the toilet.
2- **Semiotics' aspects:**	- The "Woman" and "Man" are icons. - The "vertical line" is a symbol.
3- **Internal articulation in pictogram:**	- The designer illustrated the difference between the body building of the man and the women. He focused on the woman's dress to differentiate between her and the man. - The position of the vertical line further emphasizes the meaning of

"separation".

4- **The surrounding of pictogram:**	In the context of the surroundings, the meaning of pictogram conveys a message: "Behind this door there is a place assigned for women's toilet and another for the men's".

Model (5):

Figure (28) A pictogram with its surroundings that represent The door into the Janitor's closet.
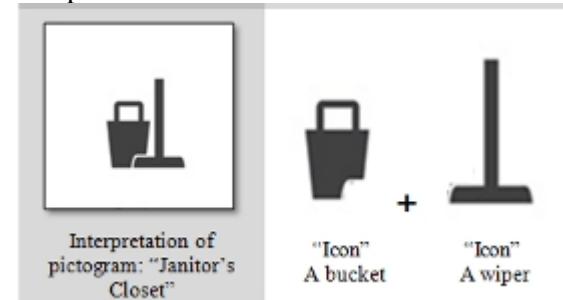

Figure (29) This pictogram contains icons of a bucket and a wiper

1- **The signifier and the signified:**	- The signifier: A bucket and a wiper. - The signified: This is the Janitor's closet.
2- **Semiotics' aspects:**	- All elements in this pictogram are icons.
3- **Internal articulation in pictogram:**	The elements put together highlight the meaning of "Janitor's closet"
4- **The surrounding of pictogram:**	The meaning of pictogram is not "The cleaning tools", instead, in the context of the surroundings, it conveys a message: "This room is the Janitor's closet that contains the cleaning tools".

Model (6):

Figure (30) The pictogram with a combination of the surrounding "Stairs"

- The Interpretation: "There are stairs in this place to go to the upstairs".
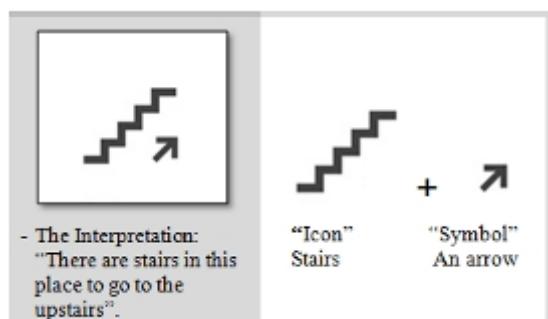
"Icon" Stairs   +   "Symbol" An arrow

Figure (31) This pictogram contains a relationship between an icon of stairs and a symbol of an arrow

1- **The signifier and the signified:**	- The signifier: Stairs and an arrow. - The signified: There are stairs in this place to go to the next floor.
2- **Semiotics' aspects:**	- The "stairs" is an icon. - The "arrow" is a symbol.
3- **Internal articulation in pictogram:**	The pictogram is easily understood due to the simple internal articulation that depends on the relation between the simple shape of the stairs and the arrow.
4- **The surrounding of pictogram:**	The pictogram is suited beside the stairs to convey that these stairs are directed upwards.

Results:

From the theoretical and analytical study of the research, the researcher found the following results:

1- A pictogram must be characterized by a number of features. They are:

- It is not a natural phenomenon, but is created artificially. It can be understood by the agreement between the human sender and the human receiver which must be learned or universally acknowledged.
  - It must be quickly and clearly recognized and understood.
  - It should be understood independently of writing, words, and language.
  - It is not meant to offer a complex explanation, but it should point to one clear and concrete fact. Such facts may be: information, direction, and prohibition.

2- The pictogram can be classified mainly as an iconic sign which signifies the object through similarity and direct relationship with the meaning.

3- The iconic form of the pictogram gives the pictogram its effectiveness in quickly and easily delivering messages in the signage systems.

4- We can add "symbols" to the pictogram in the signage systems. After frequent usage of this symbol, it turns to an icon due to the receivers' equalization of this symbol with the meaning indicated by it.

5- The intended pictogram, along with other pictograms from its system, produces a complete interpretation for the meaning. Only through its link to the rest of the system can the pictorial language become visible to the receiver and revealed in its full context.

6- The surroundings of the pictogram affect its meaning. It can convey a concrete and usable message. If the surroundings change, the meaning of the pictogram will also change.

7- The cultural determinisms affect the "appearance" of the pictogram, where any difference of cultural context can entail differences in the representation without changing the core meaning of the pictogram itself.

Discussion:

The researcher aspires on the prospects of the future that the pictogram language will prevail in all aspects of signage systems and will replace the written word gradually as a result of its immediate understanding that goes beyond the limits of different languages, and unites the understanding of

people. Still, because the pictogram system is one of the fields that promote creativity of the different signage systems, the designer's approach to a pictogram's interpretation in a system may differ due to each designer's individuality in choosing his/her own elements that still all lead to the same exact meaning regardless of the differences. This is what provides the uniqueness of each signage system according to the environment it exists in.

Conclusion:

The researcher, after the theoretical and analytical study presented in the research, concluded that signage systems designers need a clear semiotics theoretical background to be able to understand why the pictogram will be efficiently recognized, by whom, and in which surrounding. This background will put the designer in good choices for the design elements of the pictogram because The designer's open interpretation of the pictogram, which resulted from a lack of prior agreement, or differences between the sender's sign repertoire and that of the receiver, will offer no clear message.

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