Signs and Symbols as a Communication strategy: A semiotic study of highway codes in Nigeria

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Abstract

Highway Codes comprise signs and symbols mounted or drawn on the roads or road sides, and they form important aspects of road descriptions. These signs and symbols are usually the combination of linguistic and non-linguistic elements, used for the purpose of giving specific instructions and information to road users, with the aim of avoiding incidences of collision of activities on the roads in the course of usage and ultimately, to prevent road mishaps. However, it is discovered that negligence on the part of road users has reduced Highway Codes to mere decorations. Also, it is noted that many road users often assume that they are familiar with the art of driving, and know the roads well enough. Thus, they are nonchalant with driving and pay little or no attention to the Highway Codes, which to them, especially the commercial drivers, in Nigeria, are just mere road adornment. Consequently, the objective of this research is to identify selected Nigeria Highway Codes and analyse the components; especially, the non-linguistic sign sand symbols used as signifiers of specific information about road usages. It also examines the communication components identified in the Highway Codes to show the synergy between the signs and the linguistic imprints and how they all correlate to make communication effective. Using semiotic approach, this work discusses the Highway Codes, as signifiers, which control the psychology of the road users and make the interchange of roles effective among them. It also examines how the Highway Codes can effectively enact principles and creeds through the use of iconic symbols. The research work discovers that the Highway Codes are not put into effective use by the Nigerian road users, mostly due to the fact that attention is not paid to the codes as part of the driving philosophy that users must imbibe. It therefore recommends that deliberate efforts must be made by the officials of the road safety commission, Nigeria and those in charge of issuance of driving license to ensure that drivers not only pay attention to the Nigeria Highway Codes but also religiously adhere to the creeds they represent.

Keywords : Highway, Symbols, Communication, Road, Codes

1. Introduction

Road is a form of connectivity creation within the vast space that makes up the society. The conception and creation of roads show human ingenuity at maintaining contacts and links. As defined in the Nigeria Highway Code, subsequently NHW code (2008, p. 1), road is "a path established over land for the passage of vehicles, people, and animals. It provides dependable pathway for moving people and goods from one place to another."

The need for connectivity makes the road network so complex, as there exists different types, such as private drive pathways, two-lane highways, dual carriageways, expressways, all having their complexities, such as T-junctions, roundabouts, interchanges, intercessions, U-turns, etc. NHW Code (2008). One of the ways in which genuine and effective result of the process of interconnectivity is ensured is the use of Highway Codes. In order to make the use of the road so easy therefore, different Highway Codes that form part of the road education are presented inform of images/signs, symbols and signals to serve as road user's guide. Highway Codes or traffic signs are used to provide information to regulate, warn, and guide road users in a traffic system. Dewar, R. E. and Olson, P. L. (2002, pp. 421-458). These signs convey messages in words or symbols and are erected to regulate, warn, or guide road users (motorists, and pedestrians e.t.c). Makinde, O. O. and Opeyemi, D. (2012, p. 608)

The International Commission of Illumination (CIE) (1988, p. 3) describes sign as a device that provides a visual message by virtue of its situation, shape, colour or pattern and sometimes by the use of symbols or alpha-numeric characters, which is used to transfer information. Also, sign is defined by the U.K. Department of Transport, (1991, p. 4) as an integral part of the road environment that can include not only upright signs giving warnings and instruction to traffic, speed limits, directions and other information, but also road markings, traffic light signals, motorway matrix signals, zebra and pelican crossing and cones and cylinders used at road works. The term signs and symbols as used in this work refer to an observable substance, the mental image of which is associated in our minds with that of another image or concept. It is a form that is marked by an intention to communicate something meaningful. Guiraud (1975). It is for this reason also that Wales (1990, p. 419-420) avows that "signs have no significance…unless users recognise them as signs. This means that the meaning of

signs has to be learned by the community, and their values can change. Wales observes further that the fact that the values of signs can change over time further indicates the arbitrariness in the relationship between the signifier or significant ("the form or concept") and the signified or signifier (the thing or idea referred to). (p. 420). The Highway Codes, like any other codes, are forms of social contract, they are set of rules or conventions that members of a group agree to follow for their mutual benefit or convenience. In semiotics, a code is a set of shared understandings among users about the relationship between signifiers and signified. According to Wales (2001), codes are systematic sets of rules that assign meaning to signs, i.e., to "things" that stand for, or refer to other things in meaningful ways. Broadly speaking, semiotic codes may be signifying and /or behavioural, among others, and these include Morse code, secret codes, the binary code of computers (one sand zeros), musical codes, codes of algebra, traffic lights, dress, scents, taste (in culinary practice), gesture, etc. (Eco 1976; Sebeok 1994; Wales 2001). To them, signifying codes may be explained as system of signs governed by rules agreed upon (explicitly or implicitly) between members of the using culture. Semiotics is concerned with the phenomena of signs in all their abundance and variety: acoustic signals, road signs, verbal signs, gestures, - in short, signifying objects and artefacts of virtually every size, shape, colour, and substance. Louis Hébert (2011). It is in this light that this research uses semiotics, as the scientific study of sign for the purpose of communication to the study of the Nigeria Highway Codes as signs and symbols used for the purpose of communication to the road users in Nigeria.

2. Methodology

Since the element of study in this work is the (signs), that is, the highway codes, mounted, pasted or drawn on different parts of the road; it is important to know the interrelationship of the signs on the road and the road users and the intended meaning. To be able to achieve this, it is equally important to use a methodology that allows for relating the images and pictures used assigns to the intended meaning. This is because; the signs are not just there, but for the purpose of communicating with teeming road users, in order to make road usage effective and road safety achievable. To carry out this study, the methodological technique of semiotic analysis is employed. This is because of the need to determine the meaning of the various signs and the importance of the use of the signs for the road users. Using semiotics approach to the study of signs and symbols, the selected highway codes are analysed to relate the signs and symbols as effective signifiers to the information that the highway codes are meant to give. It also examines the linguistic elements imprinted on some of the signs, where they occur, the colour, the shape and the images used in the selected symbols and their linguistic correlates. The data examined in this research are some of the Highway Codes or traffic signs commonly used on Nigerian cities and intercity roads. Other linguistic texts that sometimes accompany these signs and symbols, normally written at the base or imprinted on the symbols, have also been observed as they provide useful contextual information on the Highway Codes. This is important because the signs so selected are those that can easily be seen by road users on daily basis in the course of road usage either as a driver, a commuter, motorcyclists, riders or apedestrian.

3. **Result and Discussion**

The study discovers that even though, Highway Codes do not have general meaning, they mostly have specific meanings and this meanings are usually instructional and they are learned over a period of time long enough for them to be part of the linguistic knowledge representation of the road users. Highway codes, just like the road monuments, are basically iconic signifiers. Although, they may include some linguistic symbols, which Bathes R., (1979, p. 39) describes as a form of anchorage, in the case of the relationship between pictures and words. It is also discovered that the linguistic correlates of some of the highway codes identified in this study are learned by road users so that overtime, the mental images are imprinted in their minds. This is because the signs and symbols used as road signs are capable of being suggestive as they have no direct cultural or social correlates, yet, they are capable of displaying connections to social, cultural and natural structures. The Highway Code is an institutional object, regulated (and usually 'owned') by official authorities whose role will very often be clearest in the restrictions they impose on the use the road (prohibitions, speed limits, warnings, and so on). Kress consistently calls this a social semiotics (Kress 2009). Social semiotics deals with observable actions and objects that have been drawn into the domain of social communication (Halliday, M. A. K. 1978, Van Laureeen &Thibault, P.J. 1991). They are signs and symbols though, but they are signifiers and the road users are consciously, culturally and socially bound to them. The signifier is the physical form of an object; what we see, touch and smell in the objective and shared reality. The signified is the content, the meaning of the object; what we experience, think and feel when we interact with theatre fact. Sara I. H. (2002, P. 4). Signs in social space tell us a lot about the users of the space; how users interact with signs, how users influence and are influenced by them and how they help to tell stories about the cultural, historical, political and social backgrounds of a certain

space. One of the recent branches of scholarship that has taken signs in public space as their object is the Linguistic Landscape studies (Landry & Bourhis 1997; Gorter 2006; Backhaus 2007); Linguistic Landscape is concerned with languages being used on signs in public space. Signs in social space tell us a lot about the users of the space, how users interacts with signs, how users influence and are influenced by them. The Highway Code is situated within the road which can be described as a public space meant or designed for connectivity.

Highway codes reflect and regulate the structure of the space in which they operate. Sociological, cultural, sociolinguistic and topological features of the space will determine how signs look and work, and signs will contribute to the organization and regulation of that space by defining addressees and selecting users and by imposing particular restrictions, articulating norms of conduct and so on to the selected users. Traffic signs tell about traffic regulations, special hazards and other road conditions, construction areas speed limits, etc, NHW CODE (P. 62). The highway codes are never neutral; they always display connections to social structure, power and hierarchies. The reason for that is that public space itself is an area (and instrument) of regulation and control, of surveillance and power and its neglect may attract punishment and sanctions. Every sign tells a story about who produced it, and about who is selected to consume it. In that sense, every Highway Code points backwards to its creator, and forward to its addressees. The social and political class, in the quest to ensure control on the space as a social value, create codes which select audience thereby organizes an interaction between the road and the users. Kress' work consistently pushes this agenda, and the fundamental impact of his work is that he brought signs and the study of signs into another theoretical field of force than that of mainstream semiotics. To him, signs should look at, not for themselves, but for what they teach about the social processes in which they are embedded and in which they play a vital role. In line with this, Van Leuween sees sign as semiotic resources. semiotics resources are signifiers, observable actions and objects that have been drawn into the domain of social communication and that have a theoretical semiotic potential constituted by all of their past uses and all their potential uses and an actual semiotic potential constituted by those past uses that are known and considered relevant by the users of the resource Van Leeuwen (2005:4). Communication in the public space, consequently, is communication in a field of power and authority. In this regard, this research sees signs as constructive of social reality, subject to and reflective of conditions of creation and as, real social agents having real effects in social life. Although the images and the roads are two different forms of values, both must be synchronised by the users in order to make the use of the roads effective. Highway codes are usually signs encoded in colours, shapes, symbols used as semiotic elements. These signs are subdivided into information, facility, or service signs; direction, position, or indication signs. The sign systems generate meanings and their intricate networks encode all aspects of social life(Doubravová 2002). (Fiske 1989), identifies four numbers of codes: the regulatory codes, analogue codes and digital codes, presentational codes, denotational codes and connotational codes. He describes the regulatory codes as the one controlling behaviour, such as traffic code, and signifying (communicative) codes. The signs examined are categorised into types: the regulatory, informative, warning, and the stop signs. The signs are in different shapes and colour demarcations to depict specific message or give specific information or instruction and they are divided into priority signs, prohibitory or restrictive signs, and special regulation signs. Also, informative signs guide road users while they are travelling or provide them with other useful information. Shapes are attached to specific peculiar level of meaning which users will have to learn and take into their consciousness. NHW Code (2008).

Semiotics is concerned with everything that can be taken as sign. According to UmbertoEco (1979, p. 7), semiotics is concerned with everything that can be taken as a sign. Semiotics therefore studies not only "signs" in everyday speech such as traffic signs, symbols or pictures but everything, which "stands for" something else. This also includes our material culture such as buildings, furniture and products. The signs and shape has information about the function or functions attached to each of the codes. Answering the question on how does space organize regimes of language, (Blommaert, Collins & Slembrouck (2005, p.198) observe that semioticaly, we just have to replace 'language' by 'signs'. For example, shapes like circle, rectangle, octagon, lines etc and they all give specific information/instructions. Also, danger warning signs warn road users of a danger on the road and notify them of its nature while regulatory signs notify road users of specific notifications, restrictions or prohibitions with which they must comply.

Some of the Nigerian Highway Codes and the meaning(s) attached to them are shown below:
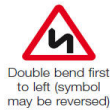
To indicate that road user is approaching a bend. The direction of the bend is indicated.

This is a prohibitive sign. Where this sign occurs, it gives instruction to motorist not to make a right turn.

This is a prohibitive sign. Where this sign occurs, it gives instruction to motorist not to make a U turn.

This is a warning sign usually mounted at intersections. Where this sign occurs, it gives instruction to motorist that they must stop at the intersection.

This is a prohibitive sign. Where this sign occurs, it gives instruction to motorist not to make a complete stop.

This is a warning sign. Where this sign occurs, it gives instruction to motorist on their speed limit of 80km/hour.

This is a warning sign. Where this sign occurs, it gives instruction to motorist that vehicles cannot be parked in the area.

This is a warning sign. Where this sign occurs, it alerts motorist that they are approaching a roundabout.

This is a warning sign. Where this sign occurs, it alerts motorist that they are approaching unlevered portion of the road.

This is a warning sign. Where this sign occurs, it alerts motorist that they are approaching a pedestrian crossing lane.(

This is a mark on the road to indicate the pedestrian crossing. This is the only point where pedestrians are allowed to cross the road. Motorists must give way to pedestrian at this point. Department of the Environment Northern Ireland (2008).

This is a road work alert. Where this sign occurs, it alerts motorist that they are approaching road construction point.

Road signs typically have a vast scope but sometimes have restrictions in spatial and semiotic scope. The meaning and effect of signs, in actual social life, is unlimited or unrestricted; it is specific to the space in which they are emplaced and to the addressees they select. This means that the shapes will select audiences in relationship to the professions of the users. For example, the use of triangles and circles as shown above will generate different meaning and idea to a mathematician, different completely from what it means when used as road signs. At the same time, the same person may have to interpret the signs differently depending on the mode in which he is operating, either on his professional desk as a mathematician or as a driver on the road. People who are not familiar or not well read enough to decipher the meaning of written texts and images that go along with these representations will not understand what they mean even when they co-occur with the signs. Thus, as earlier observed in this work, the different modalities appear to have a different semiotic scope: they both reach (and select) different audiences. While everyone is the addressee of the visual sign, not everyone is an addressee of the text. The level of education, social, religious and professional background, for examples, may affect the inability to interpret or cause misinterpretation due to pre knowledge. Also, the space where signs occur will determine the interpretation it is capable of being given. For example, assign mounted in a specific location may have its meaning specific to that physical location. The (STOP sign, for example, only applies at an intersection). Also, a sign announcing a speed limit of 80km/hour as shown above will have no relevance to the pedestrians and, thus, does not select pedestrians as their addressees. This shows the fact that most signs have a specific meaning, not a general one. Also, the STOP sign as shown above will only be seen as prohibited within that are and not a continuous order for other parts of the road. Violation of the rule therefore, only applies when it is broken within the speculated area. Scollon & Scollon (2003) provide the term 'emplacement' for this: signs are placed in a specific space, and their emplacement defines their effects. In their book Discourses in Place (2003), the term is coined 'Place semiotics' to explore the ways in which the meanings of language are activated by their placement in the world. Here they draw attention to the ways in which interaction, language and space intermingle to make meaning. Signs, consequently, not only have a semiotic scope (as in point above), but also a spatial scope: they operate in particular, identified spaces, and define such spaces. Sociological, cultural, topographic features of the space will determine how signs look and work, and signs will contribute to the organization and regulation of that space by defining addressees and imposing particular restrictions, articulating norms of conduct and so on.

Scholars like Jacob et al. (1975); Ells and Dewar (1979); MacDonald and Hoffmann (1991); Laughery and Young (1991); Edworthy and Adams (1996) have argued that the symbolic images have tremendous advantages over test-based signs. They based their argument on the fact that symbolic signs can be recognised by those who do not or cannot read the language and can easily be recognised more quickly and accurately than words. This opinion is not shared in this work because, where text co-occurs with visual shapes, we can infer, from the co-occurrence that one has to do with the other: the text supports, emphasises or repeats the information contained in the non-textual, visual sign, and vice versa. Emerson and Linfield (1986) examine factors as determinants of traffic sign legibility: first were factors related to the design variables of the sign (such as character size, spacing between characters, character form, matrix format, light output, contrast, sign's conspicuity, and amount of information displayed); second were human factors (such as visual acuity and age); and last were environmental factors (e.g. night viewing, fog, and dusk). Even when the words, colours and shapes co-occur and interact as shown above, the different elements still appear to operate in different ways. They are different entities capable of different social and cultural interpretations. Kress & Van Leeuwen (1996) defined such co-occurrences as

multimodal signs and showed that the different 'modalities' (words versus shapes ,colours etc) have different 'affordances'. One can do different things with different modalities, and constructing a multimodal sign often revolves around combining the affordances of the different modalities. According to Kress (2010), affordances is what it is possible to express and represent or communicate easily with the resources of a mode, and what is less straightforward or even impossible – and this is subject to constant social work. From this perspective, the term 'affordance' is not a matter of perception, but rather refers to the materially, culturally, socially and historically developed ways in which meaning is made with particular semiotic resources. The affordance of a mode is shaped by its materiality, by what it has been repeatedly used to mean and do (its 'provenance'), and by the social norms and conventions that inform its use in context – and this may shift, as well as through timescales and spatial trajectories (Lemke, 2000;Massey, 2005).

Thus, while the visual shape of the sign is quite generally understood (the sign can be found all over the world, with the same meaning), there could also be cases where text and images are imprinted on the shape to communicate specific messages. Through these co-occurrences, we can infer the interrelationship of the entire concept that makes up the codes: the text supports, emphasises or repeats the information contained in the non-textual, visual sign, and vice versa. This work shows the way the signs and text co-occur and the way in which such co-occurrences actually function. In the examples above, images, text, signs etc. all co-occur to make the Highway Codes more instructional.

The visuals, texts and colours are used to make the Highway Codes effective by being conspicuous, thereby catching the attention of road users. It is very important that sign used on the road have to be visible objects that can easily be seen, identified and deciphered. Engel(1971) operationally defined visual conspicuity as the combination of properties of a visible object in its background that attracts attention via the visual system and is seen as a consequence. Cole and Jenkins (1982) and Cole and Hughes (1990) redefined conspicuity of the sign as the probability that the sign will be noticed by an observer within fixed time or, conversely, as the time that an observer needs to notice the sign. In line with this, Hughes and Cole (1986) stated that driver's visual attention is often attracted by advertisement and other "irrelevant" objects in those sections of the route where advertising frequency is low.

4. Conclusion and Recommendation

In relation to road usage, signs direct, inform, locate, advertise, and even entertain. Without signs, people would not know how to move around and where accidents could occur. Signs attract attention through the use of symbols, pictures and sometimes words or combination of all. Signs are interesting, not only because of the creativity of their design, but also because they have meaning.

This study concludes that the Highway Codes are very effective information for road users. It noted that the selected Highway Codes are effectively displayed in our intercity and city roads and are bold enough to attract the attention of the road users. This means that, as well as being comprehensible, a sign must be legible. A sign must be credible and accurate; the message conveyed in it should be credible and convincing to the readers so that he will act upon it(Wogalter et al., 1994; Edworthy and Adams, 1996). The message displayed in the sign, whether made up of alphabetic character or symbolic pictures must be legible at the minimum distance from which it is to be read.

The study finds that the Highway Codes used in the Nigerian roads are a combination of linguistic and non-linguistic elements, mostly non-linguistic and they are interpretative, attractive, and evocative enough to make effective, the rules guiding the use of the road for road users.

The Nigerian Highway Code, like in any part of the world, is well designed and its components, made up of signs, symbols and lexical items, communicate effectively to give information that will guide the road users.

This research work therefore recommends the following:

- o   That the road safety commission, Nigeria should ensure that all drivers have access to the Highway Codes free of charge, or at affordable price.
- o   This research work discovers that the Nigerian Highway Code is not available on the internet. In this world of internet study and education, it is strongly recommended that the appropriate authority make it available on the internet, so that, as it is the case in other countries like Ireland, etc., it will be available for road users and others that might want to use it for research purposes.
- o   The creation of the Highway Code is a very ingenious act that will go a long way in ensuring sanity in the Nigerian roads. The mounting of these signs on the road and their consistency will create lasting impression, impressions which differ only slightly from one another, impressions which take a regular and habitual course and stays permanently in the consciousness of the

road users, than does the rapid crowding of changing images. It is therefore important that there should be proper training of the road users on the meaning of the highway codes used in Nigeria.

o It also discovers that, with the effective provision of the Highway Codes, the enlightenment of all road users on their meaning and the religious study and adherence to the instruction these Highways Codes are meant to give, will go a long way in reducing, if not stop completely, the high rate of accidents on the Nigerian roads.

o Also, it is not enough for each driver on the Nigerian roads to have the Highway Codes, but the adequate interpretation of the codes should be a criterion for issuing licence to drivers, either private or professional.

o The Highway Code test should not be limited to the first timer only but there should be a refresher's course each time the license is to be renewed.

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