

Multimodal Analysis of User-generated Images On COVID-19

Saba Lucas

Abstract

Communication is like the air we breathe; its roles in the family, society, nation and the world at large cannot be undermined. With technological innovations and advancement, social media pull large number of people for communication and information sharing. Trending issues, local, or foreign, receive comments, criticisms, and debates via the social media. Interestingly, communication is not limited to words alone. Especially on the social media, there is great use of images and memes generated by users to communicate as these help to save time and catch attention than mere words. Most messages and reports on the social media come with pictures and the two, texts and words, make a complete message. Multimodality is used as the theoretical framework to analyse six purposively selected user-generated social media images and memes. Multimodality makes it possible to look at the interaction between verbal captions and visual images since the words users generate together with the images reinforce each other; meaning is complete when both verbal and visual elements are put into consideration. The study found out that user-generated social media images and memes provided an opportunity for users to make comments and even criticize perceived socio-political or religious ills humorously and implicitly. Thus, it behoves on readers to engage social media visual products textual-visually to derive meaning holistically.

Key words: Multimodality, Picture, Meme, Social Media, Readers, Visual, Text, Information Linking, Composition, Dialogue,

Introduction

The Coronavirus disease (Covid-19) broke out in December, 2019 from the city of Wuhan in China. As it spread, it adopted the status of an epidemic initially and eventually became a

pandemic as it spread to different parts of the world and the whole world is now grappling with it as they battle to prevent further spread and casualties, and to discover a cure for it. The novel Corona virus at the moment formed the theme of local and global discourses. The social media particularly is a washed daily with discourses on it with the attendant conspiracy theories, misinformation and disinformation, discovery of 'fake' drugs and cures, the global efforts expended per time at curbing and finding a cure for it, and locally, how it is being handled by the Nigerian government etc. All these elicit comments, opinions and sometimes heated arguments among social media users. Also, the social media is agog with a lot of criticisms by users. Government, State and Federal, are often recipients of these criticisms as users who are displeased at any time about government's approach to the pandemic often come hard on government. One major tool for criticism on the social media is the use of images and memes. These images and memes are well designed to bear the producer's message to the social media community, including government itself. Interestingly, these images and memes usually come in texts and pictures and to elicit full meaning from them, it is imperative to look at them holistically; the texts and images used. In order to do justice to the multimodal images and memes collected from the social media by the analyst, the theory, "Multimodality" was adopted to analyse the selected data. This is because Multimodality is appropriate in analysing multimodal texts. Thus, the use of this theory will afford the analyst the opportunity to look at the images and the texts used in order to have complete information.

Studies abound in the use of multiple modes in billboard advertisements. According to PanLi (2015), scholars such as Hopkins (1923) and Rotzoll (1985) have long studied the significance of visual modes in advertising with great interest.

Also, some scholars look at it from various other perspectives, such as psychology (e.g. Kosslyn & Alper 1977, Rossiter 1980), consumer research (Mitchell & Olson 1977, Rossiter & Percy 1978), and marketing management (e.g. Zubcevic & Luxton 2011). Saba (2013) also looked at the multimodal nature of billboard adverts by using a blend of semiotics and pragmatics as the theoretical framework.

The uniqueness of this research lies not only in its deployment of Multimodality theory which is apt for analysing multimodal texts, but also in its use of data on the Coronavirus which being emergent, has very few literatures on it. The aim of this study is to show the interrelatedness of both texts and visuals in multimodal texts. Specifically, it looks at how the visual and verbal captions cohere thematically. Thus, this study contributes to the few available literatures and the global discourse on the novel Coronavirus pandemic from a linguistic perspective.

Theoretical Framework

Mode and Multimodality

According to Gunther Kress, multimodality is canonical in writing studies, and he defines mode in two ways. In the first, a mode “is a socially and culturally shaped resource for making meaning. Image, writing, layout, speech, moving images are examples of different modes.” In the second, “semiotic modes, similarly, are shaped by both the intrinsic characteristics and potentialities of the medium and by the requirements, histories and values of societies and their cultures.” Thus, every mode has a different modal resource, which is historically and culturally situated and which breaks it down into its parts, because “each has distinct potentials [and limitations] for meaning.” For example, breaking down writing into its modal

resources would be syntactic, grammatical, lexical resources and graphic resources. Graphic resources can be broken down into font size, type, etc.

Iedema (2003) posits that the term multimodality was introduced to highlight the importance of taking into account semiotics other than language-in-use, such as image, gesture, and so on. The increase in film, image, sound, internet and others undoubtedly accounts for the new emphasis and attention in the multimodal representations around us in order to at a goal look at the interface between the semiotic resources deployed and the texts, their cohesiveness, and how this generates information that may not be completely deducible if they are separately analysed. Doing a study on multimodality is to work on data that have both linguistic and paralinguo-semiotic elements. The theory therefore aims at offering a way of examining, for example, how language and image work together (Kress and Van Leeuwen, 1996; Eggins and Iedema, 1997) or how gesture and talk co-occur (Martinec, 2001). Multimodality, then, provides the means to describe a practice or representation in all its semiotic complexity and richness.

Multimodal Discourse Analysis framework was developed by Kress and Van Leeuwen (1996) as a grammar of visual social semiotics. Visual social semiotics is functionalist in the sense that it sees visual resources as having been developed to do specific kinds of semiotic work. Kress and Leeuwen give the tenets of MDA as; Representational (Experiential) meaning, Interactive (Interpersonal) meaning and Compositional (Textual) meaning appropriate for analysis of Multimodal texts. According to Jones (2012), Multimodal Discourse Analysis is an approach to discourse which focuses on how meaning is made through the use of multiple modes of communication as opposed to just language.

This study is based on Leeuwen's (2005) elements that are used to achieve cohesion in multimodal texts, namely: composition, information linking and dialogue. These are used as tools to analyse the selected data.

Composition: Composition has to do with semiotic modes that have to do with space. It is based on arranging elements, people, things, shapes, etc in or on a semiotic space in such a way as to achieve a balance. 'balance' is looked at from the position of 'the meaning it helps to make visible.' (Arnheim, 1974:27).

The elements of a picture or page layout are balanced on the basis of their visual weight. This 'weight' derives from their perceptual salience, which, in turn, results from a complex interaction, a complex trading-off relationship between a number of factors: relative size; sharpness of focus – or, more generally, amount of detail and texture shown; tonal contrast – areas of high tonal contrast, for instance, borders between black and white, have high salience; colour contrasts – for instance the contrast between highly saturated and 'soft' colours, or the contrast between red and blue; placement in the visual field – elements not only become 'heavier' as they are moved up, but also appear to be 'heavier' the further they are moved towards the left, due to an asymmetry in the visual field; perspective-foreground objects are more salient than background objects and elements that overlap other elements are more salient than the elements they overlap; and also quite specific cultural factors, such as appearances of human figure or a potent cultural symbol, which may override pure perceptual salience.

In symmetrical compositions, balance could be achieved through the following:

- Up and Down

- Left and right
- Front and back
- Given and new
- Ideal and real
- Centre and margin

Information Linking: Maruyama (1980) sees this ‘isolationistic’ view of information, as he calls it, as symptomatic for an equally isolationistic view of society, in which ‘only the individual elements are real’, ‘society is merely an aggregate of individuals’, and ‘each question has its answers, unrelated to others’. It can also be linked to the increasing tendency in all information media to package information in strongly framed, individualized, bite-size morsels. In what Maruyama (ibid.:29) calls ‘contextual information’, the value of information lies in its relation to its context: information can only be interpreted in the context of other pieces of information and of specific communicative interests and purposes. Information linking explores how items of information, whether verbal, visual or otherwise, can be and are meaningfully linked to other items of information. In relation to the new media, ‘links’ are often seen as having value in themselves, again in terms of ‘the more information, the better’. But the links between items of information not only have cumulative but also cognitive value. They link information in terms of such cognitive categories as causal or temporal relationships, and it is these categories that make items of information meaningful in relation to each other. The items of information in ‘how to do’ texts – for instance, recipes – may have some meaning on their own but the information only becomes relevant if the items are linked in terms of the needs of people who want to find out how to do something – for instance, prepare a particular dish – and that means that

they have to be placed in the chronological temporal framework of a step-by-step procedure. Without a temporal connection between the separate items of information, the recipe is, in practice, meaningless.

Dialogue: The logic of dialogue Multimodal cohesion can also be looked at in terms of interactional dynamics, of dialogue. Particularly through the influence of Vološinov, dialogue has become a central concept in social semiotics. According to Vološinov there is, alongside the semantic logic, another more emotive and interactive kind of logic, the logic of dialogue. He wrote (1986 [1929]: 38) that ‘alternating lines of dialogue’:

Are joined with one another and alternating with one another not according to the laws of grammar or logic, but according to the laws of evaluative (emotive) correspondence, dialogical deployment, etc., in close dependence on the historical conditions of the social situation and the whole pragmatic run of life.

Methodology

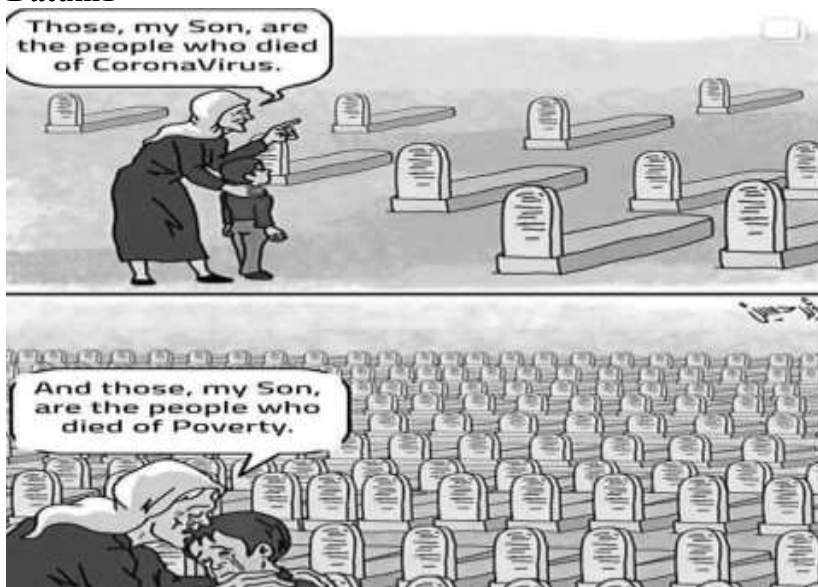
The data for the study were retrieved from Facebook. These are Facebook images and memes that are generated by users on the Covid-19 pandemic. They were selected through purposive sampling technique. The analysis is based on Leeuwen’s (2005) elements that are used to achieve cohesion in multimodal texts namely; composition, information linking and dialogue. Thus, the study looks at how the selected data which are multimodal in nature (as they are designed using texts and pictures) are cohesive textual-semiotically. Simply, it is an investigation into how the words and semiotic resources deployed in the selected multimodal Facebook images and

memes on the Covid-19 make up the message of the producers to readers.

Data Presentation and Analysis

The selected data are presented and analysed below to bring to the fore the cohesiveness of the texts and semiotics using Leeuwen's (2005) analytical tools of composition, information linking and dialogue.

Datum1



Composition: The participants are a woman and a boy. Their relationship is clearly stated in the picture, mother-son. The picture is composed using a top-down asymmetric approach. The top part and the down both have to be considered in order to achieve complete meaning.

Information linking: Information from both the verbal caption and visual resources have to be linked in order to achieve complete meaning. This is important as what is said in the above picture is not complete without the visual

presentation. The verbal linker ‘and’ is used to connect the top to the down part. ‘And’ is a conjunction which means “also” or “in addition”. The use of “and” in the above datum directs readers to read the top part first before the down part. This top-down direction shows the progression of information in the datum. Also, there is information linking of one of the key messages which is “death”. “Death” is mentioned in the verbal caption and it is also shown visually using the semiotic resource of “graveyard”. More important in the picture, is the comparison made between the novel Coronavirus and hunger which the participants (the woman) points the child to. This comparison is fully understood and graded visually. The top part shows the graves of those killed by the Coronavirus while the down part shows the graves of those killed by hunger. The visual count of the graves places hunger above the Coronavirus in term of the number of casualties. It is pertinent to note that the use of the verbal linker “and” at the down part places more attention on the down part than the top and by extension, more attention is given to hunger than the virus. The information is clear; hunger has killed more people in Nigeria than the Coronavirus. Again, it is noteworthy that implicitly, the government is accused of not living up to their responsibility in terms of providing jobs for the masses and supporting agricultural production for availability of food. The government should not focus on eradicating the Coronavirus rather, it should focus on eradicating poverty and enhancing the living standard of the people.

Dialogue: The top-down asymmetric approach aforementioned has an implication. It communicates the Coronavirus situation in Nigeria in comparison with a situation confronting the masses even before the emergence of the virus which is heightened by the lockdown situation occasioned by the Coronavirus. The poverty situation in Nigeria is comparable to

no other in the world. This is further heightened by the lockdown situation occasioned by the novel Coronavirus thus, the dilemma between which to ‘treat’ first, the virus or hunger confronts the people. Obviously, from the visual presentation of the victims of the Coronavirus and those of hunger, hunger needs more attention since it kills more than the virus. This further implies that the Nigerian government has not lived up to their responsibility of enhancing the living condition of the masses even before the outbreak of the virus, and now that the virus is on ground, casualties are recorded for both the virus and hunger with hunger taking the lead with a huge margin.

Datum 2



Composition: Three of the participants are foregrounded. The other participants are backgrounded and come behind the foregrounded participants. One of the three foregrounded participants is a medical doctor shown on medical gown with hands gloved and a face mask. These are protective equipment to prevent contagion as the doctor attends to patient. A man is lying down before the doctor who is holding an injection to inject the man with but is hindered by a woman who puts a cutlass to the throat of the doctor. The picture hinges on racial issue. The doctor is not a black person as every other participant but a white man. There is the front-back composition approach. The foregrounded resources are put in front while the backgrounded resources are behind. This is to visually point readers to the occurrence at the front first before the one behind. The essence of the backgrounded resources (unity or solidarity) is to achieve what the foregrounded resources do, resistance.

Information linking: There is the use of semiotic relay-extension of information provided in the verbal caption. The semiotic composition and verbal caption provide the information that the whites represented by the white doctor, want to test the Coronavirus vaccine on Africans however, while the verbal caption informs readers about refusal to test the vaccine on Africans, the semiotic composition through the backgrounded resources provides further information. The backgrounded resources constitute a group of people whose hands are connected one to the other and lifted as a show of solidarity. Thus, while the verbal caption states the writer's refusal to have the vaccine tested on Africans, the backgrounded semiotic resources calls on all Africans to unite to collectively fight against it. This way, there is proper textual-semiotic information linking making the information cohesive. Surprisingly, the foregrounded resource taking an

action against the vaccine testing is a woman. The fact that a woman is presented with so much confidence to do what African ancestors could not do and what men of her generation could not also do cannot be overlooked. The intention may not be to portray the female gender as more confident than male but to inform readers that everybody is required in this 'fight'. Seeing a woman boldly confronting a man can ginger women to join in the 'fight' and will challenge men to rise up.

Dialogue: There is comparison between the present generation and their 'ancestors'. The verbal caption states that the present generation of Africans is different from their ancestors. From the textual-semiotic presentation, the difference is shown through refusal of foreign or racial domination of Africans by the whites. This comparison implies that the African ancestors allowed the whites to dominate them without resistance. This might be a reference to the colonial activities of the whites on the African soil; subjugation, exploitation, slave trade etc. This comparison is not just to stop the vaccine test on Africans but to inform the whites that no form of domination or subjugation would be tolerated. The socio-historical perspective quickly brings to mind the humiliation, dominance and savagery meted out on Africans during colonial era. It is reported that Africans suffered slavery and exploitation in the hands of the colonial masters before they were able to gain freedom. However, the so-called independence only ushered in a new and more subtle way of colonialism; neo-colonialism, as the whites have always seen Africans as less humans and tools to be used to achieve their goals. This is the reason why a vaccine produced by the whites would rather be tested on Africans. Also, looking at the socio-historical perspective, the issue of vaccine testing came in the heat of the global pandemic, the Coronavirus. The virus which broke out in Wuhan, China in December, 2019 spread to

different parts of the world, initially in the form of an epidemic, then transformed into a pandemic. As the virus continued to claim lives globally, doctors all over the world grapple to find a vaccine for it. After a long time, some samples of vaccine were developed and needed testing. Some white people planned that it should be tested on Africans. Africans then unitedly fought against it. Social media creations like the datum above not only informed readers about the vaccine testing plan but motivated the people to rise against it.

Datum 3



Composition: The participants are a man, a bag of gifts and a family comprising the father mother and two children. The man is taking a photograph of himself and the family. The face mask won by the man is a semiotic resource that informs readers that the datum is produced amidst the Coronavirus pandemic that started in December, 2019 in China.

Information linking: The family is poor as indicated in the text and shown visually as the family is eager to collect the gift by stretching their hands. The datum shows a young man who wants to give the family gifts to cushion the effect of the pandemic, taking picture of himself and the family however,

this is seen as showing off and it is condemned. The text “please when you help the poor ones leave your camera at home” indicates that people are being cautioned not to support the poor with the intention to show off to people that they have provided help. This must have come as an observation that when people provide help to the poor, they go along with their camera, take pictures and post them on social media for people to see possibly to receive commendations from people.

Dialogue: The socio-historical perspective relates to the Coronavirus pandemic that started in Wuhan, a city in China and spread to other parts of the world. As the virus spread, and as doctors the world over grapple to find a vaccine for it, government of different countries imposed lockdown on schools, offices, businesses and restricted movements. One of the attendant effects of the lockdown was the inability of most people to access food since majority of the people in Nigeria particularly eat from daily earning. Countries with buoyant economy provided palliatives for the masses to cushion the effect of the lockdown. For countries like Nigeria, even though government on few occasions was reported to have given palliatives and corporate bodies and well meaning Nigerians contributed to the government to help procure test kits, ventilators, provide palliatives for citizens among others, this did not suffice possibly on account of the large population and the large number of low income earners in the country. Thus, it became imperative that those that are well to do should support neighbours, friends, family members and relatives who are financially incapacitated as a result of the lockdown. The above datum shows a man providing a helpless family with gifts. That the family is poor is also shown visually as the children are seen stretching their hands to collect the gifts from the man.

Datum 4



Composition: The participants are a woman and her three children in a house and a policeman outside the house in a car. The children are captioned as saying, ‘MAMA WE ARE HUNGRY’ while the policeman is captioned as shouting, ‘STAY AT HOME’.

Information Linking: There is the use of semiotic anchorage referred to as elaboration by Halliday. The children are captioned as saying, ‘MAMA WE ARE HUNGRY’ and they are shown crying. There is visual elaboration of that verbal caption. They are not just hungry but very hungry as they are shown crying as a result of hunger. The verbal caption tells readers that the children are hungry while the semiotic anchorage elaborates it that there is so much hunger that the children cannot help but cry to their mother for food.

Dialogue: Socio-historically, this datum is produced in the heat of the Corona virus Disease that ravaged the world. It originated from Wuhan in China in December, 2019. Its origin

was shrouded in controversies. To some, it was a result of a lab experiment gone bad. Another version was that it was deliberately created by China to depopulate the world. To some, it was created by China to decimate the economies of other nations and place itself as the foremost in world economies. As the disease spread, countries exercised lockdown on businesses and restricted movements in order to prevent further spread of the virus. The effect of the lockdown order is what is brought to the fore in this datum. The datum above has some implications. The "STAY AT HOME" order was issued by government and enforced by security agents as seen in the above datum. This does not only show that there is hunger as a result of lockdown but it portrays the government as being insensitive and inconsiderate to the effects of the lockdown on the masses. This is a subtle call on government not to just impose lockdown but to provide palliatives for the citizens to cushion the effect of the lockdown.

Datum 5



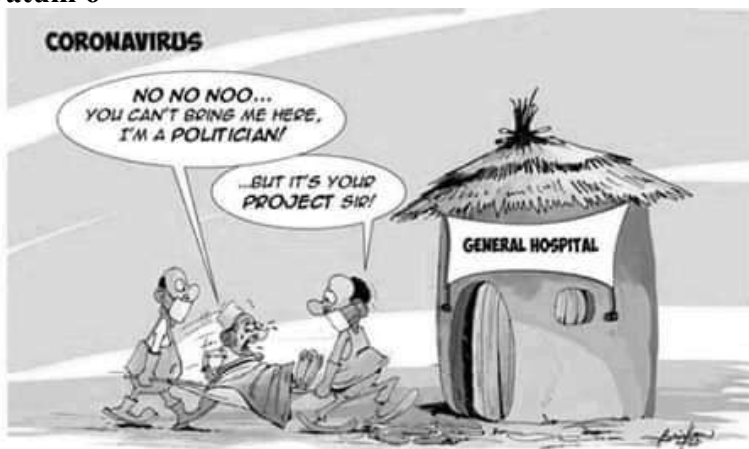
Composition: The participants are women on hospital bed with their new born child. The text at the top and the semiotic presentation below combine to form a top-down approach. In term of information linking, this is semiotic anchorage because the semiotic presentation below elaborates the information borne by the text above.

Information linking: The text “9 MONTHS AFTER LOCKDOWN” connects properly with the semiotic presentation of women with their new born child. This is the use of semiotic anchorage to elaborate the information borne by the text. Any thing could happen after 9 months of lockdown thus, the use of semiotic anchorage to elaborate. The word “9” used to modify “months” connects properly with the semiotic presentation of women in a hospital ward with their new born child. Women carry pregnancy for nine months before delivery. The information being communicated is that the result of the lockdown will see more populaton being injected into the world through child birth since couples no longer go to work and would have all the time to themselves.

Dialogue: Socio-historically, the word “lockdown” was used during the Coronavirus pandemic which started in 2019. As the virus continued to spread without any vaccine for it yet, government of different countries declared lockdown directing everybody to stay at home to prevent further spread of the highly contagious plaque. The implication in the above datum is that the lockdown period which forces everybody to stay at home has created sufficent time for couples to fulfil their conjugal duties to each other especially in “the other room” the result which after nine months is the birthing of a new kind as shown visually. Not that women were not giving birth before the outbreak of the virus and declaration of lockdown,

but a huge increase is implied. This is shown visually with many women with their new born child.

Datum 6



Composition: The above datum shows three participants; a man who identified himself as a politician, being stretchered by two nurses robed in Personal Protective Equipment (PPE) and wearing nose mask into a hut labelled as 'General Hospital'. Salience is achieved by foregrounding some of the resources. 'CORONAVIRUS' and 'GENERAL HOSPITAL' are foregrounded by making them bolder than other texts. This is done to inform readers that Coronavirus has connection to hospital; anybody infected with coronavirus is taken to the hospital to be treated thus, we see the politician who is infected being stretchered towards the hospital. There is left-right asymmetric composition using the foregrounded words "CORONAVIRUS" and "GENERAL HOSPITAL". "CORONAVIRUS" appears at the left side while "GENERAL HOSPITAL" appears at the right. This left-right approach is also borne visually as the infected politician is being carried by nurses from the left to the right where the

hospital is located. As aforementioned, this left-right composition portrays the severity of the COVID-19 and the end point of the patient is the hospital. This explains that people who are infected with Coronavirus virus do not stay at home but are taken to the hospital where they are attended to. Apart from the treatment they receive at the hospital, it also serves as a way of isolating infected persons from other people in order to prevent others from contracting it. The Coronavirus is reported to have a high contagion rate and symptoms don't show immediately thus, people are advised to keep physical distance from others.

InformationLinking: There is proper information linking both verbal and semiotic in the above datum. The verbal linker 'but' is used to create a connection in the discourse among the participants. The verbal caption "NO NO NOO...YOU CAN'T BRING ME HERE. I'M A POLITICIAN." is uttered by the politician and was replied, "BUT IT'S YOUR PROJECT SIR". The linker 'but' is used to connect the discourse. 'But' is a conjunction that shows contradiction to the preceding expression. The verbal caption shows the politician protesting that he is a politician and therefore, should not be brought to the kind of hospital depicted above. Using the linker 'but' is to counter the politician's position that a politician should not be brought to that kind of hospital whereas, he was the one who established it as a project.

Dialogue: The datum above underscores some implications. The hut labelled as 'GENERAL HOSPITAL' is a public hospital established by the politician as his project. Showing the politician being stretchered towards a hospital implies that he is sick. Being a text produced in 2020, and garbing the participants with medical protective wears and face mask simply communicates that the politician is infected with COVID-19. COVID 19 is highly contagious thus the use of

protective wears and face mask to avoid contracting the virus. The building which is supposedly the politician's project has a lot of implications. Firstly, the hospital is very small to contain many sick people. Also, it is poorly built using mud and roofed with thatch. The implication is that it is a project that is not only too small to be called a general hospital but it has lost touch with modernity. Mud houses are outdated or seen only in very few rural villages. The politician's protest not to be taken in implies that he knows that the hospital lacks state of the art equipment to properly function. The socio-historical perspective shows Nigerian politicians as corrupt. It tells us what Nigerian politicians execute as projects. They execute projects that they themselves know are far below standard and they use outdated resources which affords them the opportunity to siphon money meant for projects for the benefit of all citizens. This is a subtle way of condemning the corrupt practices of Nigerian politicians who believe that politics is all about siphoning public funds meant for the development of the society for the benefit of the masses. Projects are poorly executed and substandard products used because a major part of the money meant for the project goes into their personal accounts for personal use.

Conclusion

It is an interesting venture to study multimodal texts especially if attention is paid to how both texts and semiotic resources are cohesively tied in such a way that they together express the message of the producer. In that case, meaning is not complete when one is considered without the other. Sometimes, texts bear the primary message supported by semiotic resources and sometimes, the primary information is borne by semiotic resources supported by texts, and, sometimes, they have "shared meaning". The above analysis has shown this lucidly.

It is noteworthy that texts and semiotics of the above analysed data are cohesive and both account for meaning of the analysed data. Information linking, as an analytical tool used in the analysis shows the interface between texts and semiotics. It can be argued here from the above analysis that texts and semiotics when used together are information-linked such that holistic meaning is hampered if they are considered in isolation. This study is unique not only in the theoretical framework deployed but also on the analysis of data on the COVID-19 which is a trending pandemic as the world grapple to find a cure.

References

- Arnheim, R. (1974). *Art and Visual Perception*. Berkeley and Los Angeles, University of California Press.
- Eggs, S. (1994). *An Introduction to Systemic Functional Linguistics*. London, Frances Pinter.
- Haliday, M.A.K. (1985). *An Introduction to functional grammar*. London: Edward Arnold.
- Iedema, R. (2003). *Multimodality, resemotization: Extending the analysis of Discourse as Multi-semiotic Practice*. In Jewitt, C., Van Leeuwen T. Scollon, R. and Triggs, D. (Eds) *Visual Communication*. pp 37, Sage Publications.
- Jones, R. H. (2012). *Multimodal Discourse Analysis. The Encyclopedia of Applied Linguistics*. Retrieved online on 15th May, 2020 www.onlinelibrary.wiley.com
- Kress, G. (1993). 'Against arbitrariness: the social production of the sign as a foundational issue in critical discourse analysis', *Discourse and Society* 4(2): 169–93.
- Kress, G. and Van Leeuwen, T. (1996) *Reading images: The grammar of visual design*. London: Routledge.

Martinec, R. (2001). 'Interpersonal resources in action', *Semiotica* 135(¼): 117-45.

Maruyama, M. (1980) 'Information and Communication in Poly-epistemological Systems', in K.Woodward. ed. *The Myths of Information: Technology and Postindustrial Culture*, London, Routledge.

Pan, Li. (2015). Multimodality and contextualisation in advertisement translation: a case study of billboards in Hong Kong. *The Journal of Specialised Translation* Issue 23 – January 2015.

Saba, L. (2018). A pragma-semiotic analysis of selected billboard advertisements within Minna metropolis. Unpublished M.A dissertation, Ibrahim Badamasi Babangida University, Lapai, English Department.

Van Leeuwen, T. (2005). *Introducing Social Semiotics*. London: Routledge.

Vološinov, V.N. (1986). *Marxism and the Philosophy of Language*, Cambridge, Mass., Harvard University Press.