THE SKETCH NATION: PSYCHOLOGICAL EVALUATION OF ARCHITECTURAL APPRECIATION THROUGH THE MEANS OF URBAN SKETCHING TOWARDS INCREASING PUBLIC AWARENESS OF SUSTAINABLE DEVELOPMENT

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ABSTRACT

The theme of the research will resolve around the two main subject, the art of urban sketching and architectural narrative through the study of psychology, philosophy and anthropology. The title is suggesting a development of the 'sketch nation' as a way to increase architectural appreciation and awareness on sustainable development of the public societies by engaging them with the sketching culture in their community. In this way, they will be more aware of their surrounding & social responsibilities towards a better approach of Sustainable Development Goals (SDG) coined by the United Nation (UN). The research concentrates on how does urban sketching relates to develop the knowledge of architecture in public societies towards increasing awareness of sustainable development.

The evaluation is done through analyzing theory of perception in cognitive psychology and cross-referencing it with the 'urban sketching manifesto' to understand the process of how an urban sketcher absorbs their surrounding while sketching in an architectural setting as well as understanding how an architectural built informs the end ends user to highlight on the efforts implemented for sustainable development.

Keywords: *Sketching, cognitive psychology , sustainable design, architectural design, architecture, visual culture, visual art, visual communication, media graphic*

1. INTRODUCTION

This paper is resolve in several main components. The first part starts to introduce the structure of the paper, definition of terms as well as the methodology of the research to narrow down and clarify the scope of the research topic.

The second part of the paper introduces the relation of the topic with literature reviews from psychological and anthropological perspectives on visual perception shall draw greatly upon several great researchers; Ian E. Gordon, Richard Gregory and James Gibson as well as reference from critical evaluations by Saul McLeod. The second part of this chapter will then continue with the literature review of Rudolf Arnheim's (1970) book on Visual Thinking that leads the theories of visual perception into the context of it's relation with the environment and arts. It is an essential topic to be discussed towards understanding more of visual perception by differentiating the distinction between the imagery information and the thinking process.

The third chapter puts the act of urban sketching in the context of the argument to specified the scope of research is to draw or sketch 'on location' or 'live' in an 'architectural' or 'urban' settings that is going to be the core of this chapter. There is two distinct main aspect of perceiving the environment, the ''visual field'' of the perceiver of the environment and the ''field of view'' of the perceiver of the environment. These keywords share a quite similar terms but they are distinct from each other, the way perception works.

This paper aims to understand the first 4 clause from the Urban Sketching Manifesto through psychological studies and theories by renowned psychologist and anthropologist. This attempt is done to evaluate the potential of the activity as a way to nurture the public community towards getting the most of an architectural setting and development of their own understanding towards their own culture and encourage participation of the users into all efforts of sustainable developments by designer, architects, landscape architects, urban planners, developers and all participating in the movement.

Definition of Terms

Below are a number of terms that will be repeatedly used and need to be clarified before further reading is done;

1.1 Urban sketching:

The 'urban sketching' term is always referring to the term that has been introduced in December 2009 by the Urbansketchers organization globally through the Internet with a list of 8 manifesto or essential rules that has been translated into more than 10 languages in the website to define it. The term ''manifesto'' is referring to the list of these conditions as follows;

#1. We draw on location, indoors or out, capturing what we see from direct observation.
#2. Our drawings tell the story of our surroundings, the places we live and where we travel.
#3. Our drawings are a record of time and place.
#4. We are truthful to the scenes we witness.
#5. We use any kind of media and cherish our individual styles.
#6. We support each other and draw together.
#7. We share our drawings online.
#8. We show the world, one drawing at a time.

1.2. Sketch nation:

The term 'sketch nation' developed by the author as the aims of the output of this research paper referring to a group of people or a community that practicing the act of urban sketching and gain knowledge (consciously and unconsciously) from the environment they are in and hypothetically having higher appreciation of architecture and sustainable developments.

1.3 Visual perception:

The term generally refers to the theories and studies by psychologist, philosophers and anthropologist about the ability to interpret the surrounding environment by processing information that is contained in visible light. The resulting perception is also known as eyesight, sight, or vision. However, there are further arguments of the terms through the readings.

2. THE PSYCHOLOGICAL STUDIES OF PERCEPTION

In order to identify and justify the role of urban sketching towards architectural appreciation and knowledge development, the research started to look from the very fundamental process of the action; seeing. By the term 'urban sketching' to be able to see is the most vital stage as this will be the very first source of knowledge production contextualized in this dissertation.

In reference from the list of the ''urban sketching manifesto'' clause #1, 'We draw on location, indoors or outdoors, capturing what we see from direct observation', this paper starts with understanding how the mind works in perceiving images and how our brain accept the visual data (both direct and indirectly) through research done by psychologist and philosophers.

2.1 Theories of visual perception; Psychological studies

The first one is Ian E. Gordon (1989) whose written the book of the Theories of Visual Perception about theorizing in perception, with particular reference to vision that was aimed at advanced undergraduate psychology students but the way he write in such manner that could benefit to students in related disciplines whose interested in the phenomena of seeing, but who lack formal training in experimental science.

General theories of perception have a wide range in styles and language. Gordon (1989) has this explained with a simple diagram of a perceiver in an environment (Figure 1), which shows various regions that are commonly delineated by researchers.

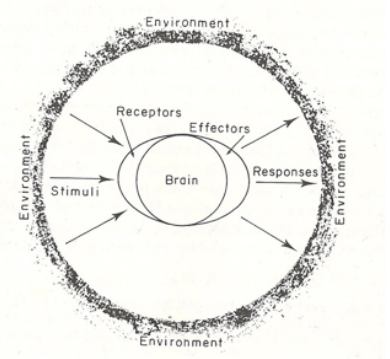

Figure 1 : The regions of interest to perceptual theorist. (1) The environment, (2) incoming stimulation, (3) receptor surfaces and peripheral sensory nervous system, (4) the brain, (5) peripheral effector processes, (6) motor responses by the perceiver.

[Source: Gordon, I. E. (1989) Theories of Visual Perception. Great Britain: John Wiley & Sons.]

Through this simplified diagram, relation of the perceiver and the environment can be easily identified. It is then possible to be taken further to incorporate and test urban sketching and knowledge production into the system.
The formal study of visual perception let us understand better how these thing works from psychological, anthropological perspective as well as philosophical discussions of the best scientific minds from the past as and present as the book describes research which have won the Nobel Prize. (Gordon, 1989)

'Perceptual effects tend to be highly reliable. A demonstration that has worked in the laboratory will not fail in front of an audience. As the subject matter of perception seems to be inherently interesting, the phenomena highly reliable and easy to demonstrate, the teacher is in a most fortunate position. Perceptual experiment tend not to be very complicated (although the equipment may be) and students can quickly learn to appreciate even the most advanced pieces of research.' (Gordon 1989: xi)

One of the first things human beings learn for most of us when we first born was the ability to open our eyes to see, to identify and to learn and to gain information from our visual capabilities. It would be a dull person who did not respond with wonder when shown some of the remarkable things, which the sense can do. To be trained to observe perception at work in daily life can have a permanent effect on one's awareness. That would be one of the biggest potential that inspired this dissertation paper. By realizing the capabilities of one's observation techniques would allow them to unlock our attention and appreciation towards architecture.

What we see will generally get into our brain to be process into an idea or information, connects with memories and information from one's brain past and interpreted into perception that will be potentially encrypted in someone's mind as a knowledge. To be able to get the ideas and knowledge on paper through drawings and sketching multiplies the potential.

Theories of visual perceptions are commonly different from one another. There are many theories within area of visual perception that can be categorized as specific or local. Color, movement, acuity and depth perception are some of the example of specific theories concern. They are usually different to one another. (Gordon, 1989)

The idea of reviewing on the theories of visual perception is not so much on developing a new theory, but more on to incorporate an idea into the existing theories; to create a model of a research field which incorporate sketching into theories of visual perception.

In order to do that, identification of the origins of the theories is vital. In the book, Gordon highlights several origins on how the theories of perception are formed. The two main origins that could be related with the aims of this paper are classified into two ways; ''from above'' and ''from below''.

2.1.1 Top-down process of visual perception

Theories that developed "from above" are those, which are more hypothetical; a constructivist (indirect) theory of perception. The thinking is really more important than the experimental research as the experiments are just for demonstrations rather than source of new hypotheses. Psychologist Richard Gregory believes that perception involves making inferences about what we see and trying to make a best guess. Prior knowledge and past experience, he argued, are crucial in perception. When we look at something, we develop a perceptual hypothesis, which is based on prior knowledge. The hypotheses we develop are nearly always correct. However, on rare occasions, perceptual hypotheses can be disconfirmed by the data we perceive. (Gregory, 1970)

'…a philosophical belief that something must be the case; that the fundamental nature of human perception or thought is such that certain experimental outcomes are only to be expected; they are merely confirmations of a theory which depends upon some reasoned capacities or behaviour.' (Gordon, 1989:3)

An example of such that could be related in production of knowledge through visual perception is when an event photographer actually did some research before arriving at the location of the event such knowing the layout of the of the settings or studying the flow of the program in order to capture the best moment from the best angle possible. However, the challenge to get the shot is still there as the plans and the program timings are just a mere plans and not certain. The photographer still needs to adapt to the situation of the actual environment in order to get the shot he imagined. This shows that he already have the idea of the knowledge creation before he even arrived at the location. When he arrives at the event location and start to shoot according to plan, he just need confirmations by finally capture the photo as plan but of course, he still needs to adapt with the unpredictable behaviour and changes of plans. The operation is not guaranteed to e exact as what planned but it might as well lead to a different or better result.

Richard Gregory proposed that perception involves a lot of hypothesis testing to make sense of the information presented to the sense organs. Our perceptions of the world are hypotheses based on past experiences and stored information. Sensory receptors receive information from the environment, which is then combined with previously stored information about the world, which we have built up as a result of experience. (McLeod, 2007)

2.1.2 Bottom-up process of visual perception

James Gibson (1966) argues that perception is direct, and not subject to hypotheses testing as Gregory proposed. There is enough information in our environment to make sense of the world in a direct way. For Gibson: sensation is perception: what you see if what you get. There is no need for processing (interpretation) as the information we receive about size, shape and distance etc. is sufficiently detailed for us to interact directly with the environment. (McLeod, 2007)

'In one tradition the curiosity of researchers is triggered by the discovery of a new phenomenon. As more is learned about the phenomenon it becomes possible to offer explanatory hypotheses. These become broader, stimulating the search for related phenomena and tying them together. Eventually a theory emerges. This Baconian approach to science was endorsed by one of the founders of experimental psychology, Gustave Fechner (1801-1887), who recommended that in the study of aesthetics one should start 'from below'; in other words, do simple, analytic studies from which general patterns may emerge.' (Gordon 1989:2)

This bottom-up method of this theory development can be related with the most common way of knowledge development where knowledge is developed bits by bits from small information. This way, the knowledge development builds up from just plain observation without any knowledge (or less knowledge) into the production of new knowledge. This process is also known as data-driven processing, because perception begins with the stimulus itself. From the retina to the visual cortex the processing is carried out in a single direction, with each successive stage in the visual pathway carrying out ever more complex analysis of the input. (McLeod, 2007)

For instance, sketching lines by lines enables the sketcher to appreciate details by details of the certain building through the process of drawing. Attention given towards the details of a building; arches, columns, door, windows, etc. When the artist actually took some time to depict it had given more opportunity for him to capture the information. As he sketch more details, the development of curiosity in his mind will grow and lead him to more inquiries where he started without any knowledge of the building.

In the case of urban sketching where most drawings usually involve direct observation on location drawings, Gibson's theory suits more to explain the knowledge production relation with urban sketching. However, the top-down theories are still applicable as past knowledge and beforehand information does help the sketchers to produce informative sketches.

2.2 Visual Thinking: Intelligence of Visual Perception

This second primary text review developed from a chapter in the book Visual Thinking by Arnheim, R. (1970) Visual Thinking titled The Intelligence of Visual Perception where he discussed about the significance, the importance as well as the potential of Visual Perception in knowledge production.

This topic relates to the ''urban sketching manifesto'' clause #2, 'Our drawings tell the story of our surroundings, the places we live and where we travel' to identify the capability of the mind, through the visual perception to accept the information from the surrounding and process it as the output of an urban sketching rather than just depicting the image, tells a story or convey information.

In reference to Gibson's (1966) direct theory of perception, he believes that the environment contains enough information to make sense of the world in a direct way in which, he also believes the information we receive from the environment doesn't need for processing as it already has sufficient details. However, Arnheim (1970:1) begs to differ as he said '…in order to cope with the world, must fulfill two functions. It must gather information and it must process it.'

The ''process'' mentioned by Arnheim is referring to the thinking process. This is what this paper are mainly interested in order to understand how knowledge is harvested from the environment and relate the process to appreciation of the surrounding. Both of them agreed that the environment contains information but the argument here is whether does it needs to be separated because when it comes to practice, it does not. Do they divide the sequence of the process into mutually exclusive domains, as do the functions of the woodcutter, the lumberyard, and the cabinetmaker, or those of the silkworm, the weaver, and the tailor? Such a sensible division of labor would make the workings of the mind easy to understand. Or it seems.

2.2.1 Reasoning the perception; towards the superior faculty of reasoning

Most popular philosophy insists on the division between perceiving and thinking process. Most of them believe that a thinking process could not be rely on perception because perception is just a raw sensory data that is not clear to be accepted as a factual information or a message, but it is still an absolute necessary as a knowledge could never be complete without them (sensory data). Arheim (1970:2) adds that since the medieval years, the rationalists of the seventeenth and eighteenth centuries such as Duns Scotus derived the notion that '…the messages of the senses are confused and indistinct and that it takes reasoning to clarify them.'

Visual perception or the images perceived here is been seen as incomplete or unprocessed information that needs a process of reasoning, to make clear and to be identified as a message, for it to have a meaning. However, Arnheim also stated that Alexander Baumgarten gave new a discipline of aesthetics it's meaning by asserting that perception just as reasoning could attain state of perfection. He nevertheless continued the tradition of describing perception as the inferior of the two cognitive powers because it supposedly lacked of distinctness that comes only from the superior faculty of reasoning. The looseness of the perception made itself a potentially generator of the ''higher'' cognitive level when it go through a reasoning process.

2.2.2 Perception as cognition

As we understand the potential of perception, what does its role as the act of knowing? How can there be intelligence in perception? What kind of cognitive process could perception contributes? Arnheim (1970:13) explains that:

My contention is that the cognitive operations called thinking are not privilege of mental processes above and beyond perception but the essential ingredients of perception itself. I am referring such operations as active exploration, selection, grasping of essentials, simplication, abstraction, analysis and synthesis, completion, correction, comparison, problem solving, as well as combining, separating, putting in context.

By cognitive, it meant all operations involved in the receiving, storing and processing of information: sensory perception, memory, thinking and learning.

This use of term conflicts with one to which many psychologist are accustomed and which excludes the activity of senses from cognition. It reflects the distinction I am trying to eliminate; therefore I must extend the meaning of terms "cognitive" and "cognition" to include perception. (Arnheim, 1970:13)

The cognitive process is what to be seen now as the closest to the act knowledge production of one's mind from the surrounding. It is clear and proven now, that visual perception is also visual thinking and one who perceive the environment visually have the potential to harvest information from it.

3. ON-LOCATION SKETCH: PERCEIVING ARCHITECTURAL ENVIRONMENT

As mentioned in the previous chapter about training oneself to observe perception at work in daily life can have a permanent effect on one's awareness. By realizing the capabilities of one's observation techniques would allow them to unlock their attention and appreciation towards architecture, towards their environment as well as developing one's individual quality. One's will become conscious of their environment, more perceptual process, thus they will be able to do more cognitive processes to generate more information and knowledge.

Figure 2: Sketching On-Location

From the diagram of the perceiver in an environment discussed earlier in the topic of general model of theories of perception (Figure 1), the environment dominantly represents a big part of the diagram, enclosing everything else. This shows how significant it is.

The act of urban sketching as the context of the argument to specified the scope of research is to draw or sketch 'on location' or 'live' in an 'architectural' or 'urban' settings that is going to be the core of this chapter.

There is two distinct main aspect of perceiving the environment, the ''visual field'' of the perceiver of the environment and the ''field of view'' of the perceiver of the environment. They might sounds the same, share a quite similar terms but they are distinct from each other, the way perception works.

3.1 The Visual Field : Information of the environmental events

In reference to the ''urban sketching manifesto'' clause #3, 'Our drawings are a record of time and place', urban sketching concerns about the place or ''environment'' one's in and believe that the ''environment'' contains information as well as stories that needs to be represented at the time the drawings is produced. Campanario (2012:20-21) described this clause as follows:

> In the same way a diarist dates a journal entry, urban sketchers often date their drawings, sometimes going as far as to write down the exact hour and minute at which they were completed. It's a way to prove that we've ''been there, done that." A sketch captures a moment, a unique experience that can't be repeated. And because we took time to create it, instead of snapping a photo in an instant, the sketch has the power to bring back much sharper memories.

So far, there are not much discussed about the environment itself. The point of observation and the source of illumination could change, but the stream did not flow, the pebbles did not roll, the leaves did not fall, and the animals did not scurry about. The environment has been described as shaped and textured and coloured, as well as illuminated by the moving sun, but as if frozen (Gibson, 1979:93). Let us now bring the environment to life. We are looking at the environment as an ecological event. Which is not static and always change in general through time.

3.1.1 Buildings: Static Changes

Buildings are part of the environmental event. Environmental event is always moving and changing. So do buildings move?

From the book How buildings learn: what happens after they're built, Brand (1997:2) mentioned a fact that have brought a strong compliment to the argument:

> The word "building" contains the double reality. It means both "the action of the verb BUILD" and "that which is built" – both verb and noun, both the action and the result. Whereas "architecture" may strive to be permanent, a "building" is always building and rebuilding.

A building could change by itself in an ecological event without any imposed force to its physical built. A building surface could change in a natural way through natural phenomena, which causes by chemical reactions. As (Gibson, 1979:93) wrote:

> …Substances differ in chemical inertness, or the degree to which they resist reactions with agents like oxygen in the medium is, the more its surface and its composition will tend to persist. Substances also differ in their readiness to evaporate or sublimate, and this too affects the persistence of their surfaces.

Buildings with materials such decaying untreated wood surface or corroded exposed steel could easily evidence the changes through this process. Information such the age of the building could be extracted though visual perception this way.

3.1.2 People: behavior changes the environments

> 'Ecological event, as distinguished from microphysical and astronomical events, occur at the level of substance and the surfaces that separate them from the medium.'(Gibson, 1979:93).

Some substances have different rigidity and different degree to which their surfaces resist deformation. Surfaces of smokes or clouds at one extreme differs from solid substances such buildings, which have their own resistance to deformation. The reshaping of surface requires force, the amount of force depending on the substance, so usually building surface doesn't deform easily (Gibson, 1979).

Building surfaces are more likely change when there are human interventions on the substance that sometimes changes the surface of the building. Changes of people's behavior and needs can effect the building functions for example, it could change how the façade looks like, and sometimes the changes leaves traces and evidences which we could read visually, sometimes subtle and sometimes obvious (Figure 3).

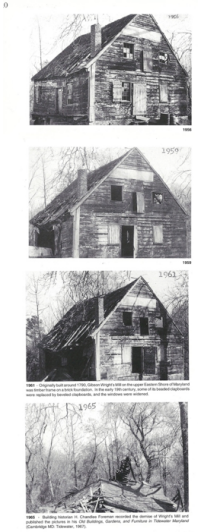

Figure 3 : WHO BUILDS IN WOOD build a shack – adaptable now, gone soon. No other material is so easy to work, and none is so vulnerable to neglect, except maybe adobe. Once roof and windows of Wright's Mill were open, even its sturdy timber frame construction could not save it from the effects of constant moisture. To insects and fungus, wet wood is food.

No matter the building was imposed a change on it either through human activities such renovation or demolition, or naturally through chemical events like decomposition, building will always change over time it will never return to the exact same condition (Figure 4).

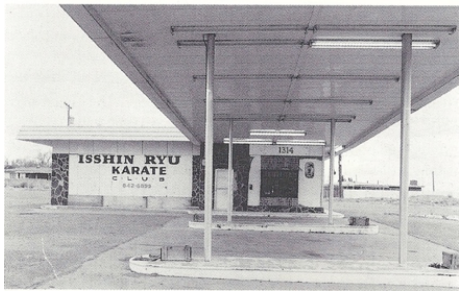

Figure 4 : 1992 - LIKE A MOUSE IN A COW SKULL, one specialty makes a home in another specialty's husk. Gas station such as this one between the airport and the freeway in Albuquerque, New Mexico, are basically disposable buildings, left standing while the landlord waits for a big real estate score. Meanwhile, why not get some rent from the karate club? It looks not bad as a dojo – lots of parking, and no neighbors to complain about the shouting.

3.1.3 Places: sense of place and time

We are talking about the building as a whole – not just whole in space, but whole in time. The distinction between objects that are attached to the ground such as the building itself and those that are not, such people or animals should also be remembered in connection with ecological events. The detached object can be moved without breaking the continuity of its surface with another surface, but the attached object cannot. Note that that an object can be resting on a surface of support, in contact with it, without being attached to it (Gibson, 1979).

This shows that the dynamic environment could be either permanent or temporary structure and they create a series of temporal events that happens in results of the collision of events. It could be perceive from a lot of different perspectives, creating different visual fields of ecological events.

Ecological events are various and difficult to formalize. It definitely needs 'a higher cognitive level', previous knowledge and experience to it perceive as a knowledge information as been mentioned in the previous chapter. When we attempt to reduce them to elementary physical events, they become impossibly

complex, and physical complexity then blinds us to ecological simplicity. 'For there are regularities to be found at the higher level, regularities that cannot be encompassed by the simple equations of mechanics and physics' (Gibson 1979:100).

''Regularities'' mentioned is what to be understood as a ''sense of place'', creation of a familiar or a recognizable place in time. As mentioned by Lynch, K. (1960:2) in The Image of the City, 'we are not simply observers of this spectacles, but ourselves a part of it, on the stage with the other participants. Most often, our perception of the city is not sustained, but rather partial, fragmentary, mix with other concerns. Nearly every sense in operation, and the image is composite of them all.'

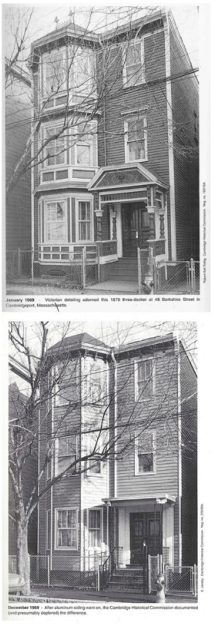

Figure 5: ALUMINIUM SIDING hides sins and gains only the illusion of lower maintenance. Clem Labine, Founder of the Old House Journal, condemns it because it is irreversible: "It's the difference between taking a Queen Anne house and painting it purple is totally reversible act. If you put aluminum siding on the same house, the installer may have to take an ax and chop off ornaments and things that don't fit tidily under the siding. If someone later goes to all the trouble to rip off the siding, they don't have the original house there. Its been considerably mauled.

As "the image" is a results of the collision of complex fragments, the "sense of place" of it could possibly be perceived and recognized from ecological events in several conditions as summarized by Gibson (1979);

1. *Recurrence and Nonrecurrence.*

'There is always some degree of recurrence and some degree of nonrecurrence in the flow of ecological events. That is, there are cases of pure repetition, such as stepping motions of the escapement of a clock and the rotation of its hands, and cases of nonrepetitional or novelty, such as clouds formations and the shifting sandbars of a river. Each new sunrise is like the previous one and yet unlike it, and so is each new day. An organism, similarly, is never quite the same as it was before, although it has rhythms. This rule for events is consistent with the general formula of nonchanged underlying change.'

Events with a consistent discipline that always unchanged of place and time creates a sense of place such an orange themed coloured café in an office building during the lunch hour every working day. An image or a sketch of a crowded people bringing trays and foods with orange background contains rough information of the time and place that invites a spontaneous guess that most probably the image was taken at the café between 12am and 1am on a working day. Every little details are the fragments that contributes to the perceived information and knowledge.

2. *The Nesting of Events.*

'The flow of ecological events consists of natural units that are nested within one – another episodes, subordinate ones and superordinate ones. What we take to be a unitary episode is therefore a matter of choice and depends on the beginning and the end that are appropriate, not on the units of measurement.'

Place making from the nesting of unitary episodes of events usually gives a significant identity to a place. Long before The Stevenson Square of the Northern Quarter of Manchester turned all hip and happening as an artistic hub where all the art galleries, cafes and shops we have now, it was a place of hard graft, either for mill workers and weavers, or for those selling

their market wares. Until in 1886, a man called Fred who had a bright idea and a cracking beard. Working in a cotton mill he noticed that the cotton was being transported in baskets. This gave him the idea for a business – he would import the cane to make them. Fred Aldous has grown over the last 128 years but it still does what Fred started – supplying materials to people who make things. It started off with just three products, now it stocks more than 25,000 arts and crafts products and sells to customers all over the world. With its laser cutting studio, Risograph printer and photography studio, Fred Aldous has become a hub where makers and creative can hire out these spaces to produce their work. Now, The Stevenson Square become an attraction for small and big art-based businesses and now perceived as the art hub in Manchester. (Arts & Crafts Shop - Fred Aldous - Discover - Visit Manchester - The official tourism site for Greater Manchester, online).

3. The affordance of events.

'Some natural events demand or invite appropriate behaviours. Some have what I called affordance for animals, just as do places, objects, and other animals, and others involve a change in affordance of the place, object, or other animal.'

One of the best example is how Market St. in Manchester is significantly well known with series of street performers from a lot of different disciplines; musicians, dancers, stand-up comedians, artists, etc. The nature of the street which always crowded with people who are there for leisure and lenient law in support with the city council which allowing buskers to perform without the need of any license had invited a lot of street performers as it is being perceive as the best place to do so (Council, online).

The visual field being discussed here should not be confused with the "field of view". As the term, the "visual field" means a kind of introspective experience contrasted with the naïve experience of the visual world (Gibson, 1979).

3.2 The field of view: Optical Information for Self-perception

Clause **#4** of the "urban sketchers manifesto", **'we are truthful to the scene we witness,"** emphasis that artist who practice urban sketching interpret the reality before them through their own point of view. Being truthful doesn't mean drawing every window in the building or keeping lines straight. Each artist is free to infuse each sketch with his or her personality, while keeping the essence of what he or she sees. (Campanario, 2012)

This clause concentrate on the individualistic aspect of perception where the concern about point of view a person on what one can see and what do one wants to see.

The field of view by term is the solid angle of the ambient light that can be registered by one's ocular system. What will be discussed here are rather more straightforward in a sense that the discussion is about one perspective, the optical information for the self-perception. It has been assumed in the previous discussion that the point of observation for an ambient optic array is not occupied. When a point of observation is occupied, there is also optical information to specify the observer himself exclusively. (Gibson, 1979)

3.2.1 Visual Boundaries: The personal frame of view

> 'A field of view is a large visual solid angle with an envelope. The important fact about field of view is its boundaries, vague and indefinite boundaries, to be sure, but still boundaries. They are in some ways like occluding edges, the occluding edges of a window. The edges of the field of view hide the environment behind them, as those of a window do, and when the field moves there is an accretion of optical structure at the leading edge with deletion of structure at the trailing edge, as in the cabin of a steam shovel with a wide front window and controls that enable operator to turn the cabin to the right or left.' (Gibson, 1979:112)

Edges of field of view are unlike the edge of windows where for windows, a foreground hides the background but for field of view, the head of the observer hides it. As Arnheim (1970:19) describes about the human vision being selective:

> In order to interpret the functioning of the senses properly, one needs to keep in mind that they did not come about as instruments of cognition for cognition's sake, but evolve as biological aids for survival. From the beginning they aimed at, and concentrated on, those features of the surroundings that made the difference between the enhancement and the impediment of life. This means that perception is purposive and selective.

So abstractly, what it is that one sees hiding the surrounding as one looks out upon the world – not air, not nothing, but what concealed and frame the visual boundaries is one's ego. Whenever a human occupies a point of observation, about half of the surrounding world is revealed to the eyes and the head conceals the remainder. What we can see and we could not see in this context is not concealed and occluded by a surface, but by a unique entity, in which different in every individual. (Gibson, 1979)

3.2.2 Non-Visual Information: The Knowledge Cognition

The purpose of vision that had been argued through this dissertation paper is to be aware of the surroundings, the ambient environment, not merely of the field in front of the eyes. The ambient information is always available to any observer who turns his or her head. Visual perception is panoramic and, over time, the panorama is registered.

Obviously, when ones' being in an environment, the perceptual systems other than the visual system are active and that the body is a source of stimulus information for these so-called senses as well as for vision. '…information that is specific to the self is picked up as such, no matter what sensory nerve is delivering impulses to the brain…information about the self is multiple and that all kinds are picked up concurrently.' (Gibson, 1979:115)

All of these contributes toward the individual perception of the environment, including the past experiences and knowledge. All of them are a part of the cognitive process. Information about the self-accompanies information about the environment, and the two are inseparable. Ego reception (information within oneself) accompanies exteroception (information from the environment), like the other side of a coin. Perception has two poles, the subjective and the objective, and information is available to specify both. One perceives the environment and co-perceives oneself. (Gibson, 1979)

In this way, urban sketchers are being truthful to the scene they witness and in the same time, they infuse their personality and cherish their individual pride in every sketch. The drawings as we can see are just more than what meets the eye.

4. CONCLUSION

We have attempted to understand the first 4 clause from the Urban Sketching Manifesto through psychological studies and theories by renowned psychologist and anthropologist. It is proven that through an act of urban sketching have the potential to trigger the 'faculty of mind' to reach a higher level of cognition to absorbs information from an architectural setting.

Urban sketching helps an end user of an architecture setting to slow down, give attention and analyse them through their own respective background. The behavior of organisms does not take place in a vacuum, but in the world, an environment. The research questions of this paper are concern about the environment as urban-sketching are dependent on the surrounding, what can be seen, and what can be experienced. We can also understand that a cognitive process does not just coming from what they see, but also what they already knows in their memories. Each users will see it differently, but all these products of cognition should be able to be analysed through their sketches.

A sketch captures a moment, a unique experience that can't be repeated. And because we took time to create it, instead of snapping a photo in an instant, the sketch has the power to bring back much sharper memories as well as increasing the awareness of the sketchers towards sustainable development efforts by designers and local authorities. These awareness will definitely help in increasing the effectiveness of the efforts towards sustainable development through participation of the public.

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