**Analysis of Vision and of its Constituents**

1. **Introduction**

Studies on physics and the studies on the Mind have been converging since the beginnings of Quantum Mechanics, some saying inexorably so, much to the comfort or discomfort of some people, be they scholars or laymen.

In this study I will propose that the *relationship* between Mind and Vision can enable us to draw certain conclusions relevant to one aspect of what *constitutes the Mind and Vision*, thereby affording us a better understanding of what these two phenomena of the ‘I’ or the ‘Self’ and Vision are.

In seeking such an understanding, I have created *novel symbols* that will facilitate and speed up our understanding of this subject. I will propose that just as it was necessary for G. Boole to create a new symbolic language in order to uncover an existing reality, so too, have I found it necessary to create new symbols/notations from which we can analyse our subject-matter with finer distinction and in a greater time-saving manner.

Clearly, I am aware that any person who creates novel notations risks being admonished for his/her vanity and pretention, and, indeed, one can say that any set of notations can be dispensed with, yet I have chosen to keep them simply because, as stated, they facilitate one’s understanding in a **speedier** manner than if one were to go through a purely linguistic route of explanation.

In this paper, the following propositions will be put forward:

1. To discuss what are the functional constituents/ingredients/components of Mind and Vision.
2. To establish the salient characteristics of the relationship between Mind and Vision.
3. To propose that these constituents possess an inherently *abstract* quality, plus an understanding of what this phenomenon of *abstraction* is.
4. It will be proposed that an understanding of this abstract phenomenon will, in turn, lead us directly to an understanding of a concept of the *void*, of the nothingness and why the latter is so fundamentally significant for our study and understanding of what Mind and Vision are.
5. I seek to show that these phenomena, the constituents of Mind and Vison, and the relationship and interaction between Mind and Vision will allow us to uncover a unity in functional properties and attributes between the same Mind and Vision in question are and that, in turn, will allow us to achieve a greater, clearer understanding of what the self/’I’ is.
6. And finally, we shall see a similarity in functional properties between Mind and Vision as there is the principle of equivalence between mass and energy, gravity and acceleration.

This is the first of my papers on this subject matter, and as such it is an introductory study on Mind and Vision, and it should be viewed from that analytical light and perspective.

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1. **Analysis of Vision**

In this part of the study, I will seek to explain how Vision is of critical importance if we wish to understand the nature of Mind.

We shall see that it is the *abstractness of Vision [optics]* in itself that is the contributing factor to the overall understanding of what the Mind is.

To begin our study of what I call the *fundamentally* *elusive* quality of Vision, I begin by asking a simple question:

When we see an object [say, a cat], what do we actually see?

I propose that what we see is an *abstract image* of the observed entity, the cat. These two concepts, the ‘abstract’ and ‘image’ are key elements in this study and, as such, must further be defined.

Firstly, why do I say **‘Image’***?*

Because the visual perception of any observed entity are dependent on the following factors:

1. Visual perception of any observed entity is dependent on what *species* the Observer is.
2. Visual perception of any observed entity is dependent on the differing and changing *optical accuracies/deficiencies* of the Observer.
3. Visual perception of any observed entity is dependent on *the age and health* [or lack thereof] of the observing agent.
4. Visual perception of any observed entity is dependent on the stationary and changing *speeds* within which the Observer observes the observed entity.
5. Visual perception of any observed entity is dependent on the stationary and changing *distance/s* between Observer and observed entity.
6. Visual perception of any observed entity is dependent on the stationary and changing *angle and height/elevation* from which the Observer observes the observed entity.
7. Visual perception of any observed entity is dependent on the stationary and changing *degree of awareness and unawareness* the observing individual has as he/she observes the observed entity.
8. Visual perception of any observed entity is dependent on the stationary and changing *mood/s* of the observing agent.

Thus, if we allow a bee, an eagle, a human and a worm to see our cat, they will each see an immeasurable number of differing Visions, noting that in each instance they are all *unlike* Visions.

Why?

Because, as we just stated, each species will see differently and secondly, each Observing agent will see constantly differing visions, since Vision itself depends entirely on the aforementioned factors mentioned above. Therefore, each individual image is itself constantly changing, contrasting and conflicting at each observed moment and at other times they are similar in their appearance, depending on the factors mentioned above.

Hence, we can say *there is no one, unified, united, single Vision* of our observed cat.

One can say that an Observer only sees **Images** – that is, representations or impressions of the observed entity within a specific time-frame and given the physiological and mental conditions of the Observer in question.

One can therefore say there is *no unity* in the observed Vision by our one Observer of the one observed entity in question.

Secondly, why the term *‘abstract’?*

I propose that whenever we observe any entity we are seeing a mass, a collection, an amalgamation of *voids,* of *nothing’s* or nothingness. By voids or the nothing, I mean that which cannot be seen, that which we cannot relate to, recognise, discern, observe.

Let us experiment here: observe any object [again, our cat]. If I were to ask you, “What do you see?”

You will say, “I see a recognisable cat.”

Now, I ask you “Can you now please *focus on one specific point on the cat*, and while doing that, I specifically ask you *not* to think of anything else except on what I’m asking you to do - in other words, to fully concentrate on the one and only point on the cat, while at the same time clearing your Mind of everything else while you endure that exercise.”

So, you now concentrate on one specific point on our cat.

I now ask you, “What do you *now* see?”

You may answer, “I am solely seeing or focusing on the one point of the cat and on nowhere else.”

What if I now ask you to *define that one point,* and ask you to describe for me that one tiny observed point, or “What is *it* exactly that you see when you only focus on the point on the cat and on nothing else?”

And here is the point – *for as hard as you may try, you cannot define that one point of the cat, you cannot relate to or define or recognise what it is that you are seeing, precisely because you are observing, in essence, nothing that is relatable, meaningful, discernible, recognisable or definable*.

So, you try again. And yet, no matter how hard you focus on that specific point on the cat, you will still *not* be able to recognise, relate to that particular point, *because, in essence you are seeing the nothing, the void*. No matter how much and how hard you focus your Mind on that one point, you cannot relate to or define that image.

In other words, your Vison is seeing precisely what I have been alluding it - the void, ‘the nothing’, I was discussing previously. You are observing a nothingness, you are experiencing a vacuum, you are interacting with a void, a nothingness which is the absolute and strict antithesis of the definable and recognisable whole of the image of the cat you were first viewing.

So, can it be said that whenever we strictly and only focus on one point on an observed entity we must necessarily see this nothingness, this void? Yes, indeed, for whenever we focus on one point on a viewed entity and we do not permit our Mind to be distracted by anything else, we can then necessarily ‘see’ only a nothingness, a void and it is for this reason that I use the term ‘abstract’ in describing the Vision in question.

Let us now elaborate on what is meant by abstract.

In using that term, I mean any perceived entity that is indefinable, indescribable, immeasurable, elusive, hazy, formless, blurry, and - perhaps most importantly for the Mind - *that which in itself cannot be seen or understood or comprehended or recognised or related to in any meaningful way*.

Further, by logic, all perceived objects/entities are made up these ‘nothings’ because it is from these nothings/voids that ultimately, we see the recognisable viewable, relatable whole cat.

Let us now employ three acronyms to facilitate our study.

Observer – [ob]

Observed Entity – [oe]

Focused Observed Point – [fop – when the viewer views one point on the viewed entity and on nothing else whatsoever].

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Let us return to the question of *what exactly is it that we see* when observing an object.

Observe a blank white piece of paper.

In all probability, any paper no matter how new and fresh will have within it a degree of contours, creases, ridges, bulges, bending and shadows within it. Now imagine a paper with *none* of these physical enhancements, or defects - no contours, creases, no shadows; one that has a plain, smooth texture with strictly one hue of the same white colour.

What do we now see?

We see a smooth, plain white paper.

And now, I ask you - what is being seen when we strictly and solely focus on one specific point on the observed paper [fop] while not allowing your Mind to be distracted by anything else? I propose that in this situation, the Observer [ob] sees the *‘nothing’*, the void I have been discussing.

Why?

Because there is *functionally* nothing the Observer can see or relate to that is recognisable or definable within that observed point. Without any reference, without any contrast, without any differences between and within the context of the observed fields, one cannot see - anything. This is the same situation, as a moving person who cannot measure his/her speed without a frame of reference.

But what about the surroundings, the settings, the noises, the smells, the sounds, the ambience, the scenery, the climate, the temperature and the general environment of the Observer - do *they* not create a visual distraction?

Yes, they do, so now let us imagine our Observer floating in a white coloured limitless arena/space which has a uniform colour, and again, with no contours or patterns or differing hues, and with no borders, walls or any other thing except for the whiteness discussed.

We now ask our Observer friend, “What do you see?” I propose that he/she will *have to* say, “I see nothing, nothingness, void.” Notice that in this case, we do not need the Observer [ob] to focus on any one point [fop] precisely because his entire surroundings are of the same monotone unvaried texture and quality.

And, by definition, he sees an *infinite number* *of voids*.

Why?

Because everywhere he focuses on or wherever he looks, he sees the exact same singular void/nothingness and since this specific singularity is physically everywhere, therefore they must be infinite in number while noting that all these viewed/observed voids possess the exact same *non-functional properties* as each other and the latter is the exact strict opposite of any viewed entity that does have functional physical properties.

Let us go back to the observed void [focused observed point] in the observed entity such as the cat – recalling that the cat is in itself nothing more than the sum total or the amalgamation of these very voids themselves.

Why?

Because as we have seen, the structure and properties or the fundamental, inherent constituents of any viewed focused object is the nothing, the void and it is precisely from these nothings/voids that ultimately evolve into a perceivable, recognisable image and one that can be recognised, one that can be visualised in a humanly meaningful sense - as, the cat.

This ‘nothingness’ I describe is key to our study and in the next papers, we shall develop its properties in much greater scope and depth.

Further, perhaps this void we speak of is somewhat akin to the nature of the electron, wherein its properties too are undecided and imprecise because of their inherent uncertain nature, or to be more precise, its properties.

This then is our *paradox*: whereas we can only measure the location or the momentum of an electron but never both, we find that the constituents of vison *cannot* be defined *at all* and yet, of course, it is precisely from these meaningless, indefinable, un-relatable voids that there eventually emerges the opposite image, which is a recognisable, relatable, meaningful one before our eyes.

But *what* exactly is this nothingness?

When discussing matters or phenomena of the minute, language may fail us for when we focus our eyes upon one viewed focused point, [fop], we see only vague, meaningless images and since they certainly have no boundaries or limits or borders, it is strictly speaking wrong to speak of ‘points’, but for linguistic purposes one must employ one term or another and I have chosen to rely on that one for the sake of simplicity and argument.

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Let us ask another question now: when we are *not* looking at anything and when we are not thinking or imagining or visualising anything in our Minds – what, in those circumstances, do we then see?

Suppose you are *vacant-minded*, momentarily blanking out and not relating to anything in your outside world and anything in your Mind, when your Mind is completely idle, vacuous, blank, unused, disengaged from everything, void, what *exactly* is it that you would then be seeing?

I propose that when we blank out, we would again see the nothing, the void, the nothingness - exactly as that which we ‘see’ when we observe a single point on a viewed object [fop]. The two images are in fact, functionally, exactly the same.

Let us think about that specific situation: what do you ‘see’ when you blank out?

My answer, is that you must necessarily see nothing. For if you do view something then, by definition, you are not in a blanked-out state of Mind. And when you think of what exactly is the image and the experience of the nothing we experience during the blanked-out state, the answer appears to be that that it is the strict and total negation of any *Vision* and the strict and total negation of any *thought* and of the strict and total negation of any *sensation/s* or *feeling/s*, and that, in turn, is the exact definition of the void or the nothing.

In other words, during a blanked-out state of Mind, there is absolutely and strictly no Mind acting and there is no Mind interacting and there is no Mind functioning whatsoever and with anything, and so during and strictly within that state of Mind, the Mind is functionally itself acting/being exactly as if it were non-existent.

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1. **General and Abstract Vision**

Thus far we noted that *any object* we perceive is:

1. An ***Image***, and in using that term, we mean there does not exist a one exact and same image of the observed entity.
2. We noted that there is ***no unity of Vision*** for any observed entity, just as there is no one image of, say, a flower or cat or anything observable. So, if we observe a cat, we need to note that there is no one image or reality of that same observed cat. In fact, there are an infinite number of images, some look alike while others conflict with others and at the same time each and every one of these images are themselves continually changing. The images of the observed cat are therefore *infinite* as perceived by the Observer and since there is no one viewed picture of the cat there is no unity of the Vision/picture of the cat in question and that phenomenon of Vision, is the same for any observable entity, and hence there is no unity of Vision whatsoever for any observing organism.
3. Any object the human views is necessarily ***abstract*** because it is composed, it is created from an infinite number of indefinable, unrecognisable, non-figurative, borderless formless, vague, shadowy, intangible, imperceptible and unobservable points or areas and that all of these points or areas do not and can never allow the observing human to perceive them or to relate to them in any meaningful manner as one would when perceiving the greater, recognisable parts.
4. It from these infinite number of abstract voids that a whole image evolves into what is perceivable and recognisable for what it is. Thus, from an infinity of voids arises a meaningful whole Vision.

Now we must talk about the difference between what we see outside our Mind and what we see within our Mind.

We start our differentiation in the types of Vision here by dividing them into two types: that which we see/experience/interact with *outside* our Mind we call general abstract Vision [or gav] and that which we see/feel/visualise/experience *within* our Mind we call mental abstract Vision, [or mav].

**General abstract vision [gav]:**

1. ‘General’ because it denotes any observed entity that is *not* within our Mind but outside and nothing specific or focused [fop] within that observed entity.
2. Abstract because the essence of all that which is perceived is abstract, a matter we have already discussed.
3. Vision [V], is that which is being seen/viewed.

**Mental abstract vision [mav]:**

1. ‘Mental’ because it is what is viewed, imagined, thought of and visualised *within* our Mind only and not what is beyond our Mind.
2. Abstract because the essence of all that which is perceived is abstract, a matter we have already discussed; further, this mental Vision is *necessarily more abstract* than the general abstract Vision precisely because it is entirely viewed/observed/experienced within the Mind.
3. Vision, is that which is being seen/viewed.

We can now proceed in using novel notations for our discussion on this subject matter.

When an **Observer [ob]** views an object or an **observed entity [oe],** and if/when that observed entity is *not* in his Mind, we can write the following:

$1. [x\_{r}^{α+}$] :R: [$oe\_{1}$] = [$gav\_{1}$]

The above states that Observer [x], and *only* *relative to* [$x\_{r}$], who is also fully aware and conscious [$α^{+}$], in relation to [:R:] the observed entity $[oe\_{1}$] is seeing the observed entity in question which is a Vision of the general abstract Vision type [gav]. Since the observed object is not in his Mind but outside his Mind, we denote that by using the letter ‘g’ for the general observed object, [e.g. the cat] and the [oe]. Therefore $x\_{r}^{α+}$is viewing a specific general abstract Vision, [gav], the cat. [It will soon be seen that the $oe$ can be dispensed with.]

Now imagine our Observer imagining a cat in his Mind, in which case we can write the following:

2. [ $x\_{r}^{α+}$] :R: [$moe\_{2} ]$ → $[mav\_{1}$]

Or, the observing person, [x] and only relative to observing person [$x\_{r}$], who is also fully aware and conscious [$α^{+}$], in relation to [:R:] the observed object [$oe\_{2} ]$ sees the mental Mind image of the cat, or $[mav\_{1}$] The [m] in front of the [oe] denotes that this perceived image is from the Mind and not from outside his Mind. [Again, it will soon be seen that the $oe\_{2}$ can be dispensed with.]

We said earlier that the constituents of any observed entity is made up from an infinite number of voids, of nothing.

So now *if* we wish to say that person [x] is observing an observed entity, we can write the following:

X {a]

so:

$3. x\_{r}^{α+}$ {$gav\_{1}$}

Or, the observing person [x], and only in relation to [x], is observing an object outside of his Mind, our cat, denoted by general abstract Vision number one. [If he were imagining the cat in his Mind, we would simply change the [$gav\_{1}$] for $[mav\_{2}$]. ]

We can now add more to our discussion. If [x] is looking at the cat *but without focusing* on any particular point, spot or area, we can further say:

$4. x\_{r}^{α+}$ {$gav\_{1}^{0}$}

So, ($gav\_{1}^{0}) d$enotes the total Vision [of the cat], while the [1] indicates that this particular Vision is the specifically observed and whole cat that is recognisable and not any one other specific point of the observed object.

The [0] above the [1] is to express the *emotion* this vision invokes on our Observer, and it is one of neutrality, since it does not evoke any interest or disgust, hence the zero, written symbolically, exactly as an electron is ‘–‘, while the proton is ‘+’.

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**Constituents of Vision [CoV]**

**Constituents of General Abstract Vision**

So, what of the **Constituents of Vision [denoted by CoV]** in question?

We have already discussed the Vision in our minds and the Vision that we perceive outside our minds. We call this Vision (V). So, let us say the perceived cat in front of us, or the [gav], is $[V\_{1}^{0}$].

The zero indicates the cat evokes no interest or emotion upon the Observer and so we symbolically write zero, and the number (1) indicates the specific cat that is being seen.

But, now, this $[V\_{1}^{0}$] must have its constituents. What is it composed of, in terms of vision itself?

So, now let us re-arrange our symbolic equation by saying this: if, as we have seen, the constituents of any perceived object are made up an infinite number or areas of voids, then we can denote these voids of Vision as the $V^{0}$. The ‘zero’ merely symbolises or indicates that this Vision is physically unobservable, that it is an unobservable entity. This $V^{0} $is exactly that which is ‘seen’ during the [fop] or when one is focusing on one particular area/point/region.

Let us keep the emotional value [or the number above the V] of the perceived object only as per the symbols of the [gav] and the [mav].

We know that the ‘V’ stands for Vision, but what about the elements or the constituents of the Vision itself?

In our study, we note that in all phenomena, there are degrees of abstraction, there *are levels or degrees of abstraction*, just as there are degrees and shades in all phenomenon in life, such as colours, sounds, textures, heat, motion, temperatures, emotions and so on.

Since, we are discussing Vision, we now need to express our understanding of these differing levels of abstraction. In other words, we must denote the degree/s of abstraction as per the Vision in question.

So, if we begin with the general observed entity outside of our Mind as being or having a ‘+1’ status, then whatever is greater than ‘+1’ is of greater optical accuracy, whereas anything below ‘+1’ [such as $V^{-1}$ or $V^{-2} ] $denotes that which is *less* viewable, recognisable, definable or is of greater abstraction. [Similar to using the number ‘7’ in the pH7 as being defined neutral while all that is above pH7 is defined as alkaline and less is defined as being acidic].

So, what are the Constituents of General Abstract Vision?

We have noted that when an Observer is watching an object, not in his mind, or our cat, he sees the following:

Me1:$ x\_{r}^{α+}$ {$gav\_{1}^{0}$}

We write [$gav\_{1}^{0} ] $because the cat is creating no flavours or emotions for the Observer, and that is why we put in the [o] and we put in the [1] because the Observer is watching one cat in specific and no other cat.

And as we discussed earlier, since this {$gav\_{1}^{0}$} is itself composed of smaller and numberless constituents, we can say:

Me2: $ ( gav\_{1}^{0}$ { $V\_{1}^{0}+ V\_{1}^{0} + V\_{1}^{0}+ V\_{1}^{0} … \infty $ $\rightarrow V\_{1}^{+1} $} )

The above implies that cat $ ( gav\_{1}^{0}$) has its numberless constituents, and that is why add in the [$V\_{1}^{0}+ V\_{1}^{0}+ V\_{1}^{0} ] $and because they are infinite, we add in its symbol, [$\infty ] $and since these numberless constituents ultimately evolve in the mind of Observer into the recognisable cat in front of him, we put in, the [ $\rightarrow V\_{1}^{+1} ], $meaning these numberless constituents ultimately produce the final, recognisable vision of the cat itself in front of him.

The [$V\_{1}^{+1}$ ] is of course the visual entirety of the cat, while the $\left[V\_{1}^{0} \right]$ are its numberless visual constituents. We say, ‘numberless visual constituents', but of course, these ‘numberless visual constituents' cannot be seen, and therefore it’s not accurate to say ‘visual’; so, let us say, numberless *invisible* constituents.

Or, put in another form, we can say:

 Me3: ( $V\_{1}^{+1} )$ = [ $V\_{1}^{+1}$ $\{$ $ V\_{1}^{0}+ V\_{1}^{0} +V\_{1}^{0}$+ … } ] = ($V\_{1}^{+1}$)

Or when the observed cat is viewed as a whole, in its entirety, the Observer sees $[V^{+1}$] and the latter is itself made up from an infinite number of voids $[V^{0}]$ which ultimately create the final perceived image of the cat, or the $[gav\_{1}^{0}]$ or the $[V\_{1}^{+1}]$ $. $

To be more precise, suppose we write the following:

a {b}

meaning ‘a’ contains ‘b’, then we can say:

 Me4: $(x\_{r}^{α+}$ { $gav\_{1}^{0}$ { $V\_{1}^{0}+ V\_{1}^{0} +V\_{1}^{0}$+ … + … → $V\_{1}^{+1}$ }])

Therefore, we can say:

Me5: $ ( gav\_{1}^{0}$ { Σ $V\_{1}^{0}$ → $ V\_{1}^{+1}\}$ )

Or, the totality of the observed cat $ ( gav\_{1}^{0}) $contains the summation of the voids [Σ $ V\_{1}^{0} ] $which, in turn, ultimately produce the recognisable cat in its entirety.

**Constituents of Mental Abstract Vision**

Let us now speak of the mental abstract Vision, wherein the Vision is by logic more abstract than the general abstract Vision.

Thus, since we denoted [gav] as $V^{+1}$, then the [mav] must be $V^{-1}$. In other words the minus or the ‘-‘ sign, denotes that it is *more abstract* than the $V^{0}$ while the latter is more abstract than the $V^{+1}$.

So now if our Observer imagines/visualises a cat *in his Mind*, we can write:

Me5: [ $x\_{r}^{α+}$ { $mav\_{1}^{-1}$ ) }

The [$mav\_{1}^{-1}$ ] is the entirety of the imagined cat in the observer’s mind.

But, just as with the constituents of General Abstract Vision, we can also say that [ $mav\_{1}^{-1} $] has its own numberless constituents, and so we can put in the following:

Me6: { $ mav\_{1}^{-1}\{ (${$V\_{1}^{-2}+V\_{1}^{-2}+ V\_{1}^{-2}… \rightarrow $ $V\_{1}^{-1}$ }) } ]

In other words, the constituents of the cat $[mav\_{1}^{-1} ]$ must be composed of that which is more abstract, so they are denoted by $[V\_{1}^{-2}$ ] and these constituents eventually and ultimately form the recognisable visual image of the cat in the mind of our observer.

Or:

 $ ( mav\_{1}^{-1}$ { Σ $V\_{1}^{-2}$ → $ V\_{1}^{-1}\}$ )

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