

The Ubiquity of Dualist Interaction

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Abstract

Dualist interaction is a fundamental aspect of the universe. It concerns the one-to-one interrelationships between things that can be observed everywhere. By understanding the role of dualist interaction, we get an insight into how we became the complex, unified entities that we are. Everything that has happened to entities, and will happen to them, can be explained and understood in terms of dualist interactions. This is over and above all the physical explanations that can be given using the theories of physics, chemistry and biology. It gives us an additional view of the processes involved in our development and the development of the universe. It also gives us insights into ourselves and into the workings of our society. Moreover, dualist interactions are prior to causal explanations. We observe or are aware of a dualist interaction before we find a causal explanation to account for the connection that we have made between things.

Keywords: philosophy, dualism, interactionism, causation, mathematics, reality

Introduction

This paper examines dualist interaction and its relation to causation. This is aspect of dualist theory which is potentially a new and important subject of study that can help us, for example, to deal with the problem of extremism. The study of dualism inculcates a dualist view that takes account of both sides of an argument whereas the extremist view promotes one side unequivocally without considering the merits of the opposing view. The merits of the dualist view can be taught in schools so that everyone learns to recognise that mentality when it is evident not only in other people's behaviour but also in their own thinking about things. The dualist view is a flexible one involving trial-and-error processes as we work our way through life. That view is contrasted with the monist view that focuses on one point of view to the exclusion of all others. The extremist's view is usually monistic and is intolerant of views that contradict or dispute their dogmatic view of things. Only through dualist studies will the dualist view be more thoroughly developed. A fuller account of dualist studies can be found in my book, *The Promise of Dualism* (Almostic Publications, 2015).

In this paper, the fundamental nature of dualist interaction is discussed. It is argued that every aspect of our lives can be examined in terms of it. From quantum interactions at the most fundamental level of existence up to the most complex interactions of human society, these can all be explained in terms of dualist interactions. By interpreting nature in these terms, we gain fresh insights into the processes underlying complex entities. For example, the stability of the reality surrounding us is seen as resulting from the harmonic assembly of dualist interactions.

It is also argued that the occurrence of a dualist interaction is observed prior to any causal explanation that is formulated to account for the dualist interaction. In simple terms, we make connections between things before we arrive at causal explanations about the nature of the connections. For example, in walking into a room full of people, one instinctively senses its atmosphere. It feels hostile, friendly, inviting or whatever. These feelings result from an immediate interaction with the room's atmosphere. The causes of these feelings will be apparent afterwards. There has been a death, a marriage or similar dominant event, or there are a number of outgoing

happy people around whom the people circulate and who are responsible for the happy atmosphere of the room. The interaction between oneself and the room's atmosphere is thus prior to any causal explanations arrived at after the event.

2. The importance of dualist interaction

A dualist interaction is a focused and directed activity involving one thing or event and another thing or event. A one-to-one interaction between the two things or events occurs and a dualist interaction is the result. An entity is an amalgam of dualist interactions each of which interact with each other on a one-to-one basis. Such one-to-one interactions are universal. Everything that happens in the universe is reducible to at least one interaction between one thing or event and another thing or event. For example, quantum physics reduces everything to interactions between atomic and sub-atomic particles on a one-to-one basis. The interactions in a complex entity are dualistic in that every interaction takes place between one part and another part. When many parts interact together, the various processes can be analysed and singled out as occurring between one part and another, and therefore as being dualistic. Complex processes are thus reducible to a succession or composition of one-to-one

dualist interactions when analysed in that way. For example, the various organs in our bodies are interacting with each other individually – the heart responds to our muscles' requirement for more or less blood supply – the kidney responds to the amount of liquid in the bloodstream by expelling more or less of it, and so on.

It is a fundamental axiom of dualist theory that all processes and all entities involve interrelated dualist interactions. It can be shown that dualist interactions are traceable back to the beginning of the universe where and when such interactions were set in train at the quantum level of existence. Every subsequent dualist interaction stems from that beginning, and a continuous and uninterrupted train of dualist interactions has followed from that beginning. As a result of the successive disintegrations and coagulations of entities, increasing internal complexity is built up until complex life forms become possibility. This means that there is no clear dividing point between energy and matter or between matter and life. The phase transitions are smooth and undifferentiated in reality even though in our thinking we create conceptual boundaries to make sense of life and the universe. Thus all biological interactions find their origin in the beginning of the universe and are involved with the processes of the universe as a whole.

Furthermore, the dualist interactions that created us began with the beginning of the universe so that we are the product of these. The exact beginning of dualist interactions within us cannot be found since the true origin lies at the beginning of the universe. This suggests that life is a direct product of the universe as a whole and that it is not something that can be constructed by finite beings such as ourselves.

Dualist interaction is not only the source of all change and transition in the universe, it is also the source of all unity, harmony, regularity, stability in the universe. All unity and stability is shown to result from dual interactions forming stable relationships so that unified entities and processes remain so over a limited period of time. Thus, a unified entity of any kind is a stable amalgam of dualist interactions which remain in relative harmony while the entity persists as a unity. Understanding the nature of dual interaction is therefore essential to understanding how static processes can be dynamic when their constitution is examined close enough. The most stable material object is a composite of dynamic atomic and sub-atomic interactions. The comparative changelessness of things depends on the continuation of harmonic interactions. Both dynamic and static relationships are included in this account.

In this way, dualist theory provides an alternative way of thinking about our place in the universe. It complements logic, mathematics and science and provides new insights into these. This is because its approach is through the interactive nature of consciousness and its apprehension of abstractions through intuition and induction.

The dualist interaction supplies a semantic component to information theory that it otherwise lacks. A message or piece of information derives its meaning, firstly, from an interaction between the conveyor of the message and its recipient. The form of the message is empty until the intention of the conveyor and the interpretation of the recipient come into play. The conveyor intends it to have a certain meaning which the recipient may or may not interpret successfully. Secondly, the message must have a social meaning in the first place. It is the verbal means by which we relate to other people as well as keep in touch with external reality and interact with it. Thus, the meaning of the message lies in the interactions between the conveyor and the recipient of the message and not in the means of conveyance i.e. the symbols and sequences of numbers which are a meaningless jumble of letters and sounds outside these interactions. People make the message and not the means of its conveyance. In this way, dualist theory

serves to add the semantic component to information theory that it otherwise lacks.

Our mentality reflects the universal and fundamental nature of duality in so far as it functions by dualist interactions. We relate to the universe in a fundamental way in that our dualist interactions ultimately involve the universe as a whole. Dualist theory looks all the interconnections that involve dualist interactions and attempts to systematise them. Thus, by exploring dualist interactions we can understand better how we are intimately entwined in the workings of the universe whether we like it or not.

The following are some of the ways in which dualist interaction is fundamental to life and the universe.

- At the most fundamental level of existence, the interactions between elementary particles are basically dualist. When one particle interacts with another, it does so on a one-to-one basis and wave/particles are produced in evidence of that interaction. Such one-to-one interactions ensure that ever more complex entities are created in the universe.
- The evolution of living beings involves dualist interaction in that species are perpetually interacting on a one-to-one basis with their

environment to which they adapt or fail to adapt as the case may be.

- Dualism is reflected in relationships such as the following: positive/negative, left-handedness/right-handedness, life/matter, mental/physical, objective/ subjective, male/female, yin/yang, sacred/profane, and heavenly/sacred.
- There are dualist contrasts between hot and cold, day and night, summer and winter and so on. These enter into our dualist thinking so that the one cannot be contemplated without implying also the existence of its opposite, whether that opposite is stated explicitly or not.
- Above all, there is the overriding interaction between microcosm and macrocosm, between the very small and the very large aspects of the universe, which is the key to our understanding the workings of the universe. Exploring the very small aspects is obviously the subject of research at CERN and other nuclear research facilities. The very large aspects of the universe are the subject of astronomical research throughout the world. But the relationship between these is the subject of dualist research that looks

at the whole picture compared with the more specialised interests of physics and astronomy.

- Life is full of dualist interactions and their effects on us. We and other living beings result from these dualist interactions. Dualist interaction involves interplay between one entity and another so that changes of some sort result. It can be shown that not only the processes of the universe are describable in terms of such interactions, but the way we think and feel about things also involves dualist interactions.
- There are numerous dualisms involved in accountancy and economics, for example: debit and credit, profit and loss, input and output, demand and supply, monopoly and competition, rich and poor.
- The bit of information can be represented in various binary forms: as logical values (true/false, yes/no), algebraic signs (+/-), activation states (on/off), or any other two-valued attribute.¹ Life cannot be absolutely distinguished from non-life. The complexity of matter

phases gradually into the complexity of life-forms. Material objects also have their complexity. A stone stays together because of the interactivity of atomic and molecular forces. The most congealed and stable object is in fact full of dualist interactivity that serves to keep it congealed and stable. Physics tells us that there is unseen motion everywhere.

- Scientific facts are established by chains of dualist interactions. For example, the fact that water boils at 100 Celsius at sea level is established by a chain of dualist interactions involving boiling water and the measuring of its boiling point. It is confirmed by a chain of dualist interactions aimed at confirming or refuting that fact.

3. What dualist interaction involves

Dualist interactions can be multiple while being individually one-to-one dualist interactions. What this means is as follows. Multiple interactions are always composed of dualist interactions that may be isolated one by one. If three or more objects are involved, dualist interactions occur between each of them. Object *A* interacts with object *B* and both of them interact individually with object *C*. Each

¹ Cf. Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication*, (1949 - Urbana: The University of Illinois Press, 1964).

interaction is dualist in itself. Thus, triple and quadruple interactions are examples of multiple dualist interactions. A may interact with B , C , D at the same time. But this group of interactions nevertheless consists of three distinct dualist interactions, namely: $A \leftrightarrow B$, $A \leftrightarrow C$, and $A \leftrightarrow D$. Though they take place at the same moment in time, they can be individuated and analysed separately. Similarly, the most complex combination of interactions may be reduced to individual dualist interactions. It is impossible to consider any interactive situation without treating it either as a single dualist interaction or as a group of dualist interactions. Thus, every movement involving two or more entities of any kind must be analysable in terms of dualist interactions.

Dualist interaction introduces change by an exchange between the two interacting subjects in which something or other is added to or subtracted from the subjects of the interaction. One-to-one interactions are thus adding or subtracting something and this involves not just quantifiable change but also qualitative change. Billiards balls colliding produce a quantitative change but not a qualitative one. The balls remain much the same after the collision and their internal structure is unaltered. This is non-dualist interaction. The Large Hadron Collider at CERN

produces collisions in which protons are smashed apart to find out their constituents. In so far as there are no interactions between the particles, this is only non-dualist interaction, akin to cracking a nut open. Dualist interactions, on the other hand, can be a prosaic part of everyday life. Adding milk to tea brings about interactions between the ingredients that change the look and taste of the resultant substance. The connection and interplay between two objects changes them, adds to them or diminishes them. As a result, something different emerges. Consequently, the objects change internally and substantially. The whole process of making the change, addition or subtraction constitutes the dualist interaction.

Thus, interactive changes are arithmetical, but they are also qualitative. When two entities enter into a dualist relationship with each other, the resultant changes are usually qualitative and not just quantitative. Thus, in chemistry when two substances come together and a new substance emerges, the change is qualitative. The substances sodium and chlorine form sodium chloride (salt) when they are mixed up together. When the substances fail to interact there is only quantitative change in that the mixture becomes heavier by the presence of the two substances but it is not changed into

something different from its constituents. Thus, two substances may be attracted together to make a bigger entity such a crystal and the difference may only be quantitative if no interactions occur between the constituents of the crystal. Substances may aggregated without making any qualitative difference as, for example, when sand is plied up without changing the particles of sand. But if cement aggregate and water are added and mixed into the sand, dualist interactions take place that result in a new substance, namely, concrete. An object may be an entity that exists in external reality or an object of thought that relates only indirectly to reality. They may be simple and straightforward in their interactions with other objects but be more or less complex in their internal structure.

In summary, therefore, non-dualist interaction may produce changes that may add, subtract, reduce or diminish but nothing substantial or qualitative results. The simplest non-dualist interaction occurs when two material objects collide and their respective trajectories change, or a piece of one might be dislodged. Nothing substantial is exchanged by such an interaction as they remain internally as they were before. Dualist interactions are more complex in that something is exchanged between two objects for something different and they change

significantly or are added to within them. Examples in the physical world are elementary particles that exchanges particles when they interact. Bacteria also interact with each other when they acquire bits of DNA that they incorporate into their structure. But the dualistic interactions with which we are most concerned in dualist theory are those between people in a social context. Such are the basic workings of dualist interaction.

4. The nature of biological and social interactions

Interaction in biological entities involves opposition followed by reciprocity. Something happens or is done and there is a reasoned reaction to that happening or deed. Either there is something done to the agent and it reacts accordingly, or the agent does something and there is a reaction which may require a further response by the agent. The opposition between these passive and active extremes is eliminated while they maintain their connection through constant interaction. A maintained interaction creates the unexcluded middle ground wherein originality, innovation and supervenience all take place. These interacting events occur instantaneously to make our thoughts and actions seem fluid

and uninterrupted. For example, the artist in creating a creative object will interact with the materials and put them together in different ways until they are satisfied with their artistic achievement, or not if that is the case. Until the end product is produced, the materials remain in an indefinite state until they are worked into the object envisioned by the artist.

Social interactions involve reciprocity between participants in which minds are changed. In understanding what another person says, changes take place in the listener's brain that reflect the new understanding that has taken place. Moreover, an interaction is dualist when one side is being acted on or is reacting to another side. The sides need not be singular or composed of one thing on either side. It is enough that the sides are opposed to each other and that they interact with the aim of establishing a meaningful and reciprocal relationship between the two sides. For example, in a committee meeting, the chairman may have a number of responses from different committee members, but the interaction between the chairman and each of the members is always on a one-to-one basis and therefore is dualist. Basically, we can only have conversations with other people one at a time. We address one person and then another. Moreover, a speaker before an audience is interacting dualistically

with that audience as a whole. The same principles apply to physical and biological interactions in general.

When we interact in conversation, our replies are often not logically deducible from what is being said to us. For example, The question, "Are you coming with me?" might be answered by saying 'no', 'yes', 'maybe'. 'later' or whatever. In other words, the exchange involves a response which cannot be predicted by considering the first statement alone. There is no logical equivalence between the one and the other because complex processes are involved, especially with regard to biological entities. Action is followed by reaction, not on a logical basis but on a purposeful basis. Physical entities interact in ways that may be understood in scientific theory but are not accountable logically (e.g. wave/particle interactions). Interactions within and between living beings may have a purposeful or meaningful basis which is not logically deducible or causally determined (e.g. interacting with the environment to ingest food and expel waste products.)

Thus, the richness of dualist interactions in biological and social contexts shows the importance of the notion of dualist interaction. Dualism has been wrongly disparaged by modern philosophers because they have identified it solely with Descartes' simplistic mind-

body dualism. But this dualism is inadequate it consists in separating the things of the mind from the things of the body, as if the mind contains discrete objects analogous to those in the external world.² Dualist interaction unites them in a continuous process instead of separating them as if they were lumps of matter. Cartesian dualism led to Locke's empiricism based on the view that ideas are formed in response to sensory experience of the external world. But ideas then become intermediaries between us and the external world. Berkeley and Hume rightly pointed out the lack of a causal connection between ideas and their objects. Thomas Reid countered the resultant scepticism by showing that the mind worked by means of processes or faculties and not by discrete ideas. This laid down the foundations of the science of psychology as developed during the 19th century.³ Psychology implies that we interact in a dualist fashion with the external world. However, philosophers continued to reject such 'psychologism' because it ran counter to their use of linear

logic and discrete categories as a means of understanding how we acquire our knowledge and apply our understanding. In other words, Kant continued to reign supreme whose view consists in imposing a grid of intuitions and categories on the world rather than interacting with it in an open-ended fashion.

5. The role of dualist interaction in mathematics

Mathematics is a method of representing dualist interactions in a stable manner so that we can understand and predict the workings of the universe. A mathematical equation such as $x = y$ is dualistic in that the left hand side relates to the right hand side such that the two things could not be more equal. A dualist interaction between the two sides is performed when mathematical rules are applied equally to both sides in solving equations. Each side of the equation is changed and they acquire a different qualitative meaning. The mathematical formula thus consolidates our thinking and ensures that we think about things in a way that accords with the way things are in reality. Such formulae enable us to relate in a precise way the workings of our brain to the workings of the universe.

Mathematical formulae achieve their stability and formality by omitting (1) the

² In his 'Sixth Meditation' Descartes says that he has a distinct idea of himself as a thinking, non extended thing (*res cogitans, non extensa*) and a distinct idea of body as an extended, non-thinking thing (*res extensa, non cogitans*) and therefore he is really distinct from his body and can exist without it. Cf. Descartes, 'Sixth Meditation' 78, in *Meditations on First Philosophy*, trans. J. Cottingham, (Cambridge, UK: Cambridge University Press, 1986), p.54.

³ Cf, for example, Thomas Reid (1764), *An Inquiry into the Mind on the Principles of Common Sense*, in *The Works of Thomas Reid*, ed. Hamilton, (Edinburgh: J. Thin, 1895), where Reid analyses the five senses in a psychological manner to counter Hume's scepticism of the senses.

qualitative component in a dualist interaction, (2) the context within which the dualist interaction occurs, and (3) the time and place to which the formulae may or may not refer. The qualitative component consists of the differences and changes that a dualist interaction introduces when it takes place. They may be re-introduced in the following manner: $C\{(x = y) + d\}$ = a fact or event, where C is the context, $x = y$ is the mathematical formula, and d is the difference or change brought about by the dualist interaction. Another suggestion is to replace the equal sign as follows. xAn — the symbol of A for application or activation might be introduced in the formula in place of the ‘equal’ sign to show that the number is being applied or activated in the real world. The formula is no longer just an abstract formula being used according mathematical rules. The A implies connections in the real world such as directly applying to, for example, apples or cars. The formula is used dualistically to interact with these objects.

The meaningful existence of numbers depends on their interactive use in practice. A number such as three does not exist on its own. It can only exist as part of a dualist interaction represented by the formula $x = n$, where n is the number and x is the relationship it bears in the world, usually, a group, bunch, bundle, class of

things. Thus, $x = 3$ is three particular things existing in the world in some capacity; it is not an isolated idea like three itself. The idea of the number three is given Platonic existence when it is taken out of any context. Thus, the square root of minus one becomes a real number when it is used in a practical context in which it has definite function and enables us to do things in the world.

Both mathematics and logic have their limitations in that they are based on discrete distinctions which are quantitative and not necessarily qualitative. The emergence of unpredictable qualities and complex innovations cannot be readily accounted for in these subjects. Its limitations were first clearly shown in the 20th century with the various self-reflective paradoxes to which it gives rise. Russell’s paradox, the Cretan liar paradox and other paradoxes arise because linear logic cannot refer back on itself with contradiction, inconsistency or discontinuity. Gödel’s incompleteness theorem shows that such limitations lie at the heart of mathematics. The theory of interactive self-reference may help us to get beyond such paradoxes. We are constantly referring back to ourselves and therefore bringing ourselves into the equation.

Dualist interaction has a timeous beginning and ending; it begins and ends

in time. At the outset, there is the unity which is the 'now' of present time. Everything is one thing as it is experienced at one moment of time. The mystical experience of the absolute unity of things is manifested in a single moment of experiencing everything all at once and in the submergence of self in that experience. But everything is absolutely the same only in timeless conditions or when one denies the passage of time by seeking Nirvana or going into a trance or catatonic state. Thus, dualist interaction only comes into play with the passage of time. When we are aware of the passage of time we experience change or the possibility of change. At the next moment of time, things change and we interact in experiencing something new and different in so far as we experience it as new and different. Otherwise everything would be changeless and be exactly the same from one moment to the next.

6. How dualist interaction creates a stable reality

The notion of dualist interaction helps us to explain how we can experience reality as if it were entirely independent of us while our actual experience of it is entirely in our minds. We know that things and events exist 'out there' because our dualist interactions are constantly successful in keeping us in touch with

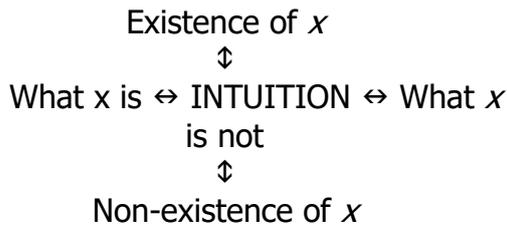
these external realities. In so far as mistakes do not occur, our confidence in the independence of reality is constantly reinforced. When we do make mistakes about what does or does exist, we usually know how to correct them and our confidence is not shattered. Thus, our apprehension of external reality is at least accurate and reliable enough for everyday purposes, even though psychology and the other sciences inform us that our senses are severely limited in what they can tell us about what external reality is really like. For our mental capacities are usually sufficient to keep us in touch with realities because of the dualist interactions involved.

We intuitively know of the independent existence of things and events because we habitually interact with our surroundings through perception and conception. Our acts of perception and conception involve dualist interactions with our surroundings. Things are perceived and conceived to be what they are largely through our past experience of them. Our present experiences are usually dove-tailed with our past experience so that reality is experienced in a relatively changeless manner. Here we are only concerned with the effects of these mental capacities in keeping us in close touch with what really exists. The point is that these constant interactions ensure that

what is in the mind is conformable with what is outside the mind. Thus, the interaction involves both the idealist and realist positions in succession. There is no need to view things from either a realist or an idealist position since both are involved in this account of what reality is both in the mind and out of it.

The crux of the matter is that our mental capacities provide us with matrices that represent realities. These matrices are constantly confirmed by our dualist interactions with external realities. Through perception and conception, external reality is composed of an array of stable entities that are completely unconnected with us. We see things when we open our eyes, hear sounds impinging on our ears, feel the smoothness or roughness of fabrics, or feel the heat or coldness of our surroundings. We immediately conceive of the things that we see, hear or feel, and we can name them because of the gift of language. Each entity is perceived or conceived intuitively all at once and as a whole. But the steadiness with which entities are perceived and conceived results from our interacting with our environment to arrive at reliable representations of external reality and its contents. These representations become reality within our minds. They do so by being harmonious matrices at work in our minds as is now outlined.

By means of dualist interaction we arrive at stable notions or concepts of entities that directly reflect reality in the context within which they are experienced. Each notion forms a matrix that exists entirely within the mind but constitutes reality within its allotted context. A dualist matrix is composed of stable interactive oppositions between positive and negative elements, namely, existence/non-existence and what it is/what it is not. There are dualist interactions between (1) the existence of x and its non-existence, and (2) what x is and what it is not, where an x may be a notion, context, account, theory or some such thought or composite of thoughts. The balancing between these four elements makes x consistent in our thinking about it when we do not examine it in itself. When we do examine it, its stability falls apart as we put x in a different context or view it from another perspective, standpoint or point of view. Thus, we intuitively grasp the existence of an object x by differentiating it from the other things which it is not. It is grasped as a whole at the moment of intuiting it, and it becomes more than a whole thing when it is examined more closely and is perceived in all its details. A dualist matrix illustrating the existence of x is outlined in quadrifoil form as follows:



The quadrifoil matrix of a stable entity x

Intuitively we see or hear things as being ‘out there’ because the act of perceiving them is constantly updated and renewed from one moment to the next. The activity ensures the accuracy and dependability of our perceptions. The continuous flow of perceptual intuitions gives us the impression that we are experiencing the whole of reality within our minds. These intuitions give us a stable view of the world whenever we open our eyes. We immediately and intuitively see everything before us as a complete whole. What we hear and feel also contribute to that holistic experience. In that way, our perceptual intuitions become the reality we immediately experience. Everything is as it is until we pay attention to things and perhaps see that something is not where it should be. In that case, its non-existence becomes apparent and balance between existence and non-existence vanishes. The presence of a clock becomes apparent when it stops ticking and the absence of the sound paradoxically reveals the fact that it has been ticking. This example shows how the

holistic experience includes elements the existence of which we are not immediately conscious. In short, we are aware that something exists because we are undertaking dualist interactions whether or not we are aware of the interactions or their nature.

These four interactive elements provide the boundaries within which the entity is experienced as a stable and long-standing entity for as long as it is an object of thought and does not become the subject of thought. In the latter case, it is focused upon and analysed into something different from what it was intuitively thought to be. It differs in specific ways because more or less things are seen in it or attributed to it as a result of being the subject of thought. When it is the subject of thought, it is put into a context within which it does or does not make sense. The existence of a character in a feature film makes sense in the context of that film but not in the context of real life when film fans act as if the character had a physical existence.

An entity’s stability is maintained within its existential boundaries. For example, we may have a very stable view of what a table is but when we put that notion into a scientific context then it becomes an insubstantial thing full of empty space. All notions within a context are further interconnected in a matrix that

includes the family relationships of conceptual logic. In this way the contexts of mathematics and physics reflect their respective realities. Each context forms a reality of its own seems to have a platonic existence apart from the reality of immediate experience. The stable structure of an entity is also established by a pattern of dualist interactions. The pattern ensures that dualist interactions balance each other out thus ensuring the entities stability over a given period of time.

This interactive view of existence clarifies the existential quantifier in logic. The quantifier is obviously inadequate in so far as it simply proclaims the existence of anything without acknowledging the thinking underlying such a proclamation. The idea that a stable and harmonious interaction is occurring when existence is posited enables us to straddle both the idealist and realist views. We directly perceive things as they are because a constant and reliable interaction is occurring of which we are not entirely conscious because it is both given by our sensory organs and so well learnt and habitual. In other words, the dualist view enables us to clarify how things are both in our minds and out there at the same time.

The dualist view leads to a *circular assumption of mutual existence*, which states that everything exists for us because of dualist interaction. At some point in

time, an act of dualist interaction occurs which brings existence into being for each of us as individual human beings. Thus, the proof of our existence and of the existence of anything other than ourselves can only be circular. The proof of this circular assumption goes as follows. The fact of interaction means that something exists. I interact therefore there must be a reality independent of me towards which I can interact. Reality exists, therefore I must exist as an entity that can interact with it. Thus, existence begins with a single act of dualist interaction that brings existence into being. Every other interaction follows on from that single act. But there are an infinite number of starting points that may be made so that there is no end to the circularity.

Dualist theory begins with the unity which is the 'now' of present time. Everything is one thing as it is experienced at one moment of time. The mystical experience of the absolute unity of things is manifested in a single moment of experiencing everything all at once and in the submergence of self in that experience. But everything is absolutely the same only in timeless conditions or when one denies the passage of time by seeking Nirvana or going into a trance or catatonic state. Thus, dualist interaction only comes into play with the passage of time. When we are aware of the passage of time we

experience change or the possibility of change. At the next moment of time, things change and we interact in experiencing something new and different in so far as we experience it as new and different. Otherwise everything would be changeless and be the same from one moment to the next.

7. The priority of dualist interaction over cause and effect

The cause and effect relationship is a type of dualist interaction in which we explain or rationalise the connection between two events – a cause and an effect. The dualist interaction is prior to and necessary for causal explanations. The dualist connectivity needs to be observed or apprehended before a causal connection is noticed and formulated. Thus, relationships of cause and effect are imposed on previously existing dualist interactions. I may feel a pain in my leg and wonder what caused it. In noticing the pain, I interact with what I am feeling but the pain is itself causeless as I have to make the connection between the feeling and its cause. I then remember that I knocked my leg against a chair and I then have the cause of it.

Dualist interactions precede causal explanations, as the latter are a function of dualist interactions having taken place and

having been observed or noted by someone who recognises them as such. When they are noted, the reasons for the interactions having taken place are formulated and these reasons are causal. In other words, making a causal link means having noticed a dualist interaction that requires a causal explanation. When I see a car crash into another vehicle ahead of it, I have observed an event involving a dualist interaction between the vehicles. I then surmise that the rear vehicle must have failed to brake quickly enough to avoid a collision – I have formulated a causal explanation for the event. I could not have done the latter without having done the former. Such causal explanations can be very rashly made. For example, ruined crops or dying cattle might be blamed on witches who have allegedly caused such events through their magical powers. The events were usually connected with witches simply because no other explanation is sought. The development of science has obviously dispensed with such witchery and consequently most unexplained phenomena can now be explained by seeking scientific explanations.

Causal explanations also involve one-to-one interactions in formulating them. We need to interact with things on a one-to-one basis to establish causes or reasons for things happening. For example, the re-

occurrence of the pain in my leg reminds me that I knocked my leg yesterday. The memory of it follows an interaction with the experience of pain. Every event has a cause only because we do something interactively to understand or make sense of an event on a causal basis. We notice a connection between events or things and discover or invent a reason or cause for the happening. Every event has a cause only because we do something interactively to understand or make sense of an event on a causal basis. We notice a connection between events or things and discover or invent a reason or cause for the connection being made. If we see smoke, and then see a fire engine going in that direction, we make the connection and conclude that the smoke was caused by a fire. We have interacted with the given facts and have arrived at the most plausible conclusion.

Duality applies even more to the universe than causality. Our causal explanations are our human attempts to explain connected events. The latter connections are more fundamental and prior to the causal explanations. Dualist interactions involve correlations between two objects, events or other aspects of the universe that exist whether or not there are or are not intelligent beings around to experience them. They are therefore prior to causes in accounting for the natural functioning of the universe. Dualist

interactions can be qualitative and not be at all quantifiable. For instance, our feelings of anger may not only be unquantifiable but also causally unjustified, as when the anger erupts spontaneously and for no apparent reason. Nevertheless, there are interactions occurring that are good or bad, justifiable or unjustifiable and so on. The anger is judged to be bad and unjustified through lack of explanation. In contrast, causal explanations of a scientific kind account for quantitative relationships in which one event leads to another in a deterministic fashion which can be calculated numerically. An account of the dualist interactions provides us with a qualitative understanding of how the interrelation between events leads to different events. The causal account allows us to calculate the relationship between events while the interactive account enables us to assess them in terms of how good or bad, valuable or useless, meaningful or meaningless, important or unimportant they are.

The fact that dualist interactions underlie cause and effect relationships is confirmed by the feedback involved in the latter relationships. The feedback means that a causal account forms a closed system. Thus, striking a match causes a flame to consume the chemicals available on it and the flame causes these chemicals

to be consumed. That consumption eventually causes the match to be incapable of causing any further flames. There are obviously dualist interactions taking place in each instance. But there is more going than can be accounted for by the closed system of feedback relationships that constitutes a causal account. Who is striking the match and for what reason has no place in the causal account. How the match was made involves an entirely different causal account. The dualist account and the particular dualist interactions being pinpointed depend on the account that one is making of the events taking place. A different account will refer to different dualist interactions. But they can all be brought together and interwoven as is being done here for the purposes of showing the versatility of the dualist account. Such an account can be as concise or long-winded, superficial or exhaustive as suits our purposes.

It therefore follows that causal explanations are interconnected and form closed systems that may not be sufficient to explain all the factors involved. Thinking in terms of dualist interactions helps us to develop the account of any complex series of connected events. Taking another example of a vehicle accidentally crashing into another vehicle, the crash may be caused, perhaps, by an

icy road surface or by carelessness on the part of a driver. Dualist interaction draws our attention to the interactive processes involved in this incident. The expected outcome was that the two vehicles should interact by passing harmlessly by each other. However, one vehicle interacted with the road surface in an unintended manner, or because one driver's attention was distracted for some reason. The driver's inability to cope with a skid is another factor that may be involved. The preventative nature of the incident is therefore highlighted by means of dualist analysis. The accident was not simply a matter of cause and effect because emotional and other factors may be involved in a complex way that may be better understood by a dualist analysis. Therefore, while all cause/effect relationships involve dualist interactions of some sort, they can be more fully explained by a dualist account that includes all the factors and not just that of direct or necessary cause/effect.

The causal account can never be the whole picture. The fact that the dualist account goes beyond the merely causal one is also shown by another example. When we take the pills and potions of physicians, we rely on their causative effects to make us better or at least feel better. We interact dualistically with such curative medicine by taking them regularly, finding them

pleasant or unpleasant or, more generally, in our appreciation of doctors' efforts. These interactions are initiated by ourselves and are a matter of choice rather than rigid determinism. We may disobey the doctor's orders if we so choose. Thus, there is more involved than the causes and effects of our actions since choices need not have happened. Also, we may simply forget to take the medicine and it may be difficult if not impossible to pinpoint of the cause of our forgetting to do this. A mere random and unpredictable quirk in the brain may be responsible for our forgetfulness. Thus, the dualist viewpoint enables us to bring in factors that are over and above any causal account and not strictly implied by such an account. In this way, this account of dualist interactions goes beyond the causal one and is evaluative and subjective in comparison.

It also follows that not all dualist interactions can be causally explained. Dualist interactions are causal in that explanations may be given as why they occur at all or why events have turned out in the manner that they do. Whether such explanations are available or not depends on the state of science. The limited nature of our scientific knowledge is such that many causal explanations are wanting in respect of many interactions. Although dualist interactions can be assigned causes, our scientific knowledge is often deficient

in accounting for them in causal terms. This is particularly the case as regards interactions said to be occurring in the mind or brain. Subjectivity and consciousness are notoriously difficult to pin down anywhere to demonstrate their causal nature and to explain what they are in physical terms. As a result, mental illness is often difficult to treat effectively. The positing of dualist interactions can therefore pinpoint areas of our knowledge that lack causal explanations by the requisite scientific hypotheses, theories, laws, mathematical formulae and so on. Whether they ever will be satisfactorily explained by these means, may be debatable.

Moreover, dualist interactions may be both causal and intentional. Dualist interactions in general are potentially causal in nature in so far as causal explanations are found for them. But biological interactions are both causal and intentional. Living beings are sufficiently complex and self-referential to be become agents that act intentionally and purposefully. Everything about them can be explained in causal terms but their intentional acts are addition to that causal description. For example, there is no clear division between agent causation and event causation in the dualist account as they form a spectrum of complexity from one to the other.

Causal relationships are therefore only retrospectively assigned. Nothing occurs in the universe without an interaction of some kind taking place. Everything depends on everything else *ad infinitum*. This concatenation of interactions is only retrospectively understood in causal terms. The cause/effect relationship is only one form of dualist interaction. This was not recognised by David Hume, the arch-causationist who thought that concrete causes were behind everything, as he said: “And indeed there is nothing existent, either externally or internally, which is not to be consider’d either as a cause or an effect”⁴ Modern physics obviously casts doubt on this certainty as many events occur causelessly in the quantum world. Moreover, Hume had a linear view of causal connections based on a constant conjunction, contiguity, continuity, identity and logical necessity. As he was not a dynamic thinker, he thought only in concrete, formal terms instead of the dynamic, fluid terms that are required by dualist theory. Thus, the problem of causation arises because the possibility of antecedent dualist interactions is not taken into account. Causal connections between things are never complete or totally necessary because the possibility of

unaccounted for dualist interactions always exists.

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⁴ David Hume, *A Treatise of Human Nature*, 1739, (ed. Nidditch, Oxford: the Clarendon Press, 1978), Book I, Part III, Section II, p. 75.