1999

Quality and Quantity

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QUALITY AND QUANTITY

A Thesis

Presented to

The Faculty of the Department of Philosophy

San Jose State University

In Partial Fulfillment

of the Requirement for the Degree

Master of Arts

by

Tatiana Kern Bertschinger

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ABSTRACT

QUALITY AND QUANTITY

by Tatiana K. Bertschinger

In this essay, I wish to define stipulatively two concepts, Quality and quantity, and in terms of my definitions of these concepts I offer some explanations of contemporary issues in the fields of philosophy and mathematics, as well as the natural and social sciences.

My aim is to offer new insight into these issues by re-thinking them systematically in light of the concepts I define and with which I work.

Acknowledgments

I owe the basic material for this thesis to my mother, Helen Kern. She raised me in a philosophy-oriented environment, providing me with the idea that Quality and quantity are fundamental concepts. Her way of thinking appealed to me because they gave me a positive outlook. They offered an explanation and a possible solution to the most fundamental and pressing human problems.

Dr. Cynthia Rostankowski became my main advisor when I needed help the most. With kindness and time-consuming attention she helped me stay on course so that seemingly unrelated ideas could coalesce into one. Without her help this thesis would not have come to fruition. I cannot thank her enough

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CHAPTER 1

Substance

Quality and Quantity: Definitions

This essay is an account of what is the most basic element of all, namely, substance. For philosophers, substance is that on which all else depends for its existence, but it depends on nothing else for its own. I hope to offer a way of beginning to understand what substance is. In order to achieve this end, I find that it is useful to give it a name and I would like to call it Quality. Although “quality” usually refers to a distinguishing property of something, I mean by Quality: *that which accounts for, or is the source of all that is distinctive or specifically identifiable, and is a single totality*. I will capitalize and underline Quality when I mean it to be understood in this special way. Quality is what makes objects exist independently of outside influence

Whatever exists can be modified. Something is a duck because of its duck Quality, which is modified. Something is red because its Quality is modified by quantity, so that it appears “red.” By “quantity” I mean multiplicity, or measurability, or amount.

“Quantity” refers to the swarm of bees, the crowd of people, or the carat weight of a diamond. Material substance such as an atom, a molecule, a cell, a person, or even an apple is Quality as modified by quantity. An apple is not an absolute Quality because it is not free from quantity’s modification; no Quality is.

Repetition and individuation are quantity’s way of modifying Quality. An apple is Quality modified in multiple ways as it is made of repeated atoms, molecules and cells, as well as being a specific apple. In addition, Quality loses its independence, its freedom as it is modified by quantity, as it is repeated. Quality is the type or kind, e.g. an apple is a type or kind of fruit. An apple is Quality modified. Quantity’s modification of Quality is a bondage that makes Quality dependent on quantity for its existence as particular things. But this loss does not stop Quality from being itself; it only changes the way it appears. If what we call an object belongs to a particular type, it only shows that what is unique to this particular object is also repeated (repeated as the unique shape of dough cut by a cookie-cutter can be repeated). In order to be a particular object of a kind or type, Quality has to be individuated and repeated.

Quantity’s primary modification of Quality is the limitation of Quality. This limitation **individuates** Quality as it gives it boundaries, making it identifiable as an instance of Quality, e.g. the Quality of apple. A Quality modified by quantity is always a complete and independent portion, an individual, something measurable, a quantity.

Quantity in and of itself has no Quality. A number, an aggregate of units, without the apples, is merely a place-holder. So it can be said that the quantity of apples depends for its existence on the apple (Quality). However, the apple (Quality) does not depend on

the quantity of apples for its own existence. It can roll out of the pile of apples without losing its wholeness as an apple

Properties of quantity. Quantity has certain properties that affect Quality, as quantity modifies Quality into units. When Quality as apple is repeatedly modified by quantity, the result is a number of apples. This number is a quantity. However, this number of apples, if arranged in one single place, is often described as a single whole entity: the pile of apples or a bushel of apples, etc. In such a situation, a pile of apples is similar to an organism; the pile can be viewed as a specifically identifiable thing. A pile of apples is quantity but it can be mistaken for Quality as it is made either deliberately or by accident of nature into a single entity.

One might ask why mere quantity is sometimes mistakenly identified with Quality. Most obviously, the misidentification may occur because any collection of units may seem to be much the same as any other. But this is not so. In the case of Quality, the collection is naturally self-organized in a very special way. This self-organization has been noticed and discussed by biologists for a long time, but the science of physics shows that self-organization begins at the most fundamental level of matter. Paul Davies writes that there are three frontiers in physics: the very small, the very big and the very complex, and this complex frontier concerns self-organization. He comments that:

Complex systems cease to be merely complicated when they display coherent behavior involving the collective organization of vast numbers of degrees of freedom. It is one of the universal miracles of nature that huge assemblages of particles, subject only to the blind forces of nature, are

nevertheless capable of organizing themselves into patterns of cooperative activity.¹

This is the Qualitative tendency in action; the ability of particles to self-organize is due to the Qualitative tendency which is mediated by quantity. Because Quality is so mediated, it manifests itself in multiples of particles, but because it is Quality, it is manifested as the specific particle of an apple, or any other substance. Thus, in addition to the tendency to collect, as a part in a collection, each particle also has a tendency to self-organize this collection into one stable, single whole, a unit. This manifestation as a single unit from within a collection is the manifestation of Quality, or that which shares its content with quantity.

The Qualitative tendency can be modified by quantity to greater or lesser degrees. Quantity modifies Quality only moderately in the case of the molecules that comprise an apple. The molecules are the result of the tendency in each atom (Quality) to quantify, to collect in quantity, to multiply, and also the tendency in each atom (Quality), as part of a collection, to self-organize into one single totality, a molecule. Further, a cell is a quantity of molecules organized by nature as Quality, that is, a cell is a collection of molecules self-organized as a single unit, the apple. Thus, the modifying effect of quantity is great in the case of a naturally occurring collection, such as a cluster of grapes. An even greater modification of Quality by quantity is a pile of apples.

¹ Paul Davies, "The new Physics: a synthesis," in *The New Physics*, ed. Paul Davies (Cambridge: Cambridge Univ. Press, 1989), 4.

In some situations there is a balance between modification of Quality by quantity and the Qualitative tendency to organize. A swarm of bees is a quantity of bees. Each bee is a discrete thing, and one can separate one bee from the others, even though they cling together rather strongly. On the other hand, they are self-organized into one unit and that makes the swarm appear as a single indivisible entity or Quality.

Loss of Quality. If a quantity in the form of a pile of apples becomes misidentified with Quality, the perception of this pile as one single unit hides the individual status of each apple in the pile. This misidentification takes away the individuality of the apple.

Thus, when quantity is mistakenly promoted to what is primary and identified with Quality, this promotion and misidentification also demotes the Quality that gave content to it. Quantity comes to take precedence over Quality, and in so doing quantity transvalues Quality to an insignificant part that belongs to quantity! The apple that gave existence to the pile becomes simply a part of, and belongs to, the pile. Each apple in that quantity of apples is Quality that, by being repeated, has lost its individuality (its individual Qualitative manifestation) to become a mere part of the pile.

One more reason for misidentification. Quantity appropriates Quality's "qualities." When a quantity is perceived as an independent Quality, as a pile of apples, the particular characteristics of each apple that specify the apples are transferred to the pile. The identity of the apple, the identity of the source of the pile's existence is blurred into a different group entity that is identified by a collective "bundle of properties." One perhaps sees only the pile, not specifically the apples that comprise it. The Qualitative

properties, the shape and the colors of the pile actually come from the properties of each apple. In sum, quantity adorns itself with Quality's characteristics.

The same thing may happen to Quality as it forms things in nature. When a type of Quality such as a living individual, a human being, is repeated, it can create a group misidentified with Quality. A group such as a species, a nation, a state, a street gang, is quantity, which can be mistakenly taken as being a Quality. The human individual, when seen as a part of this new pseudo-Quality, loses his primary status and is misidentified as a part of the pseudo-Quality.

In life, the loss that Quality experiences to form a quantity is an analog to the cell that is part of an organism. While the anatomy, the physical structure of a unicellular being is complicated, the structure of a cell that is part of a stomach lining, for example, is less complex because in being a part of a group, it loses the components that a single celled life form needs to live.

Each kind or thing we may identify as Quality exemplifies this tendency to misidentify, and because we are so familiar with it, we readily misidentify the quantification of Quality with Quality itself. We impute a content (Quality) to quantity when we so misidentify. We comfortably talk about society or the media, but in so doing we misidentify the quantity of many people with a mistakenly imputed Quality, society, or the quantity of many forms of information distribution with the mistakenly imputed Quality of media. Quantity not only acquires a content by repeating Quality; it may also usurp the position of Quality, which made quantity have that content.

A group, a species, a nation, a state, a street gang is quantity, but viewed as a single entity it is seen mistakenly as Quality. A collection of persons is a quantity arranged as a single entity and thus, it looks like a Quality without really being one. Its cohesion is accidental, similar to the cohesion between apples in a pile. This cohesion (inertia or gravity) is similar to cohesion attributed to a gang by sociologists. There are properties that bind the gang members, but Quality is greatly hampered by quantity in such a collection. As Quality, as a primary entity, a human group appropriates characteristics of the individuals that comprise it. A gang, for example, is often characterized in terms of practices of persons belonging to the gang, e.g. ruthless initiation by committing certain actions, etc. But more complex properties are mistakenly attributed as well. A nation, for example, may be said to have a spirit, or a particular character.

Appearance. Quantity is also defined as portion, because a Quality is a “portion” of a quantity of smaller units. Since modified Quality such as “red” can be translated into numerical values, as the science of physics does, scientists and others might make us believe that quantity is all there is. Thus quantity gives the impression, the appearance of being the basic substance when it is not. The relation of Quality with quantity is confusing because both appear as what they are not. As a result of being hidden by quantity the primacy of Quality is easily missed. It has become very common to misidentify it with quantity, which is only its modifier. Quantity accounts only for the amount of Quality. **How much** (quantity) of what is has been conflated with **what is** (Quality).

Confirmation of Above Stipulation

While science is usually in the forefront of quantifying knowledge, there is one instance in science where both the Qualitative and the quantitative approaches are taken in order to understand material substance. Analytic chemistry, without intending to do so, confirms that Quality and quantity are different. It also confirms that Quality is primary and quantity secondary.

Only a tacit acknowledgment of Quality. Because science in general, and even the science of chemistry, is quantity-oriented, the term “quality” remains unclear even though a “qualitative” analysis is used to determine the basic ingredient, the (Quality) in an analyzed substance. The understanding of the basic ingredient as “Quality” is only tacit, and it is conveniently used without being defined. According to Kateman and Pijpers, “quality,” “has not been treated in detail in the literature up to now.”² The lack of clarity about the nature of Quality as “that which makes a thing such as it is,” the fear of using terms with unclear meaning, is very likely the reason chemists do not refer as explicitly and as readily to “quality” as being the purpose of the qualitative analysis as they refer to “quantity” as being the purpose of the quantitative analysis. A quote from an article is an example:

Analytical chemistry has for its purpose the determination of the constituents of which a substance or mixture is composed by methods

² G. Kateman and F. W. Pijpers, *Quality Control in Analytic Chemistry* (New York: Wiley-Interscience Publication, John Wiley & Sons, 1981), 7.

which are qualitative when the identity only is ascertained, or quantitative when the quantity or proportion is determined.³

Whole entity. However, even if Quality is used only tacitly, what makes the qualitative analysis "qualitative" is that the purpose of this analysis is a unit. This unit is a distinct whole, a complete entity, a totality in itself that is unique to the analyzed substance. Even though the numerical values that identify this "quality" are quantitative, and even though the nature of each unit varies, (this constituent could be either an element, a conglomerate, or a radical), the purpose of the qualitative analysis is always the same. It is to identify an entity that is conceived as a whole in itself that is stable and unique to the analyzed substance. The relative stability of constituents is a temporary indivisibility that makes the ingredient a single whole entity, an individual. This individual is irreducible to smaller parts in the sense that, if divided, its unique nature as individual is destroyed. In the case of water, the unique, indivisible constituent is the H₂O molecule. If the H₂ is separated from the O, the result will no longer be water.

The chemical analyst assumes, or at least seems to assume tacitly, that a material substance has both the Qualitative and the quantitative aspects. This distinction apparently coincides with what is in matter, and thus, by recognizing this fact and analyzing matter accordingly, the chemist obtains complete information about a given substance. Indeed, the qualitative and the quantitative analyses provide total, complete information about the analyzed substance. The quantitative analysis reveals the quantity

³ Encyclopaedia Britannica (Chicago: Encyclopaedia Britannica, 1958), s.v. "Chemistry," by [E]mest [H]aywood .[S]wift,395.

of ingredient(s) and proportion. But it is the qualitative analysis that provides the information about the constituents, about the basic ingredient(s) of the analyzed matter. In all, from the way the qualitative and the quantitative terms are used in chemistry, one can infer that:

Quality and quantity are different. The mere fact that there are two separate analyses to identify the qualitative and the quantitative already suggests that they are not the same things. When the chemist analyzes a liquid that looks like water, he does not yet concern himself with the amount of its ingredients. He first will want to confirm that its basic ingredient is H_2O , which is a single, whole unit that is unique to water. He will first be concerned about the Qualitative aspect of the liquid, which will tell the analyst about that which makes the liquid he is analyzing such as it is. However, the amount of the substance is its quantity, and quantity is a separate issue for the chemist; it is addressed separately by means of the quantitative analysis. Thus, based on the way the qualitative and the quantitative are used in analytic chemistry, one can conclude that they are different. One can also notice that:

The quantitative is secondary. The qualitative analysis in chemistry is meant to identify a basic substance, the “whatness” of a thing. The quantitative analysis, on the other hand, only determines how much of the basic substance(s) there is. The Qualitative (“whatness”) is prior to quantity (“howmuchness”) in the sense that the latter is dependent on the former. When one asks “How much?” it is assumed that there is already something real that can be quantified. Thus, the Qualitative is primary, while the quantitative is secondary. In addition, and most significantly:

Quantity appears to be what it is not

Within matter, the quantitative aspect prevails. Even though it is only an amount or a proportion, it displaces Quality from its position of basic ingredient to appear as the underlying substance. For example: the H₂O molecule, as a single, stable, whole unit, a totality in itself that is unique to water is the Qualitative element in water. But, this unit exists **repeated**. The H₂O molecule, or Quality, (what is unique to the analyzed substance) relinquishes its status of basic substance to the quantitative, which **appears** as the substance, as “ice” for example. The individuality, the Qualitative status of the basic unit (as the H₂O molecule), just by being repeated, is transferred to the quantitative, to “ice.” “Ice” is a quantity, the result of the repetition of the H₂O molecule below a certain temperature. Quantity as a chunk of ice obscures the primacy of Quality as it appears itself as the basic substance. Quality is demoted to “sensible qualities,” to properties of ice. These properties can be perceived as color, coldness, or hardness. These qualities are of quantity, and can be described in the quantitative terms of physics.

In all, analytical chemistry confirms that Quality and quantity are different, that Quality as the “whatness” is primary, while quantity as the “howmuchness” is secondary. Also, the knowledge that water is made with smaller units like the H₂O molecules helps to illustrate the special deceptive nature of quantity, to appear to be what it is not. Finally, it is important to notice that quantity obscures the identity of Quality as the basic substance. One could even say that quantity is opportunistic. After devaluing Quality, it

usurps Quality's position of substance and presents itself as a single whole unit, to become in appearance "that which makes a thing such as it is."

Dynamics of the Modification of Quality

When repeated, when mediated by quantity, Quality is changed. Its centrality, its uniqueness as a whole, basic ingredient is eclipsed. It becomes a mere minimum part. If each element of Georg Cantor's naive set theory, "the definite, distinguishable objects of our intuition or of our intellect to be conceived as a whole"⁴ is identified with Quality, and if the set itself as a collection of these elements is identified with quantity, then his elements of set theory illustrate the transfer of status from a single entity (Quality), to a collection of elements (quantity).

Cantor's Intuitive Concept of a Set. Robert Stoll writes about Cantor:

According to his definition, a set S is any collection of definite, distinguishable objects of our intuition or of our intellect to be conceived as a whole. The objects are called the *elements* or *members* of S.

The essential point of Cantor's concept is that a *collection of objects* (emphasis mine) is to be regarded as a single entity (to be conceived as a whole). The transfer of attention from individual objects to collections of individual objects as entities is commonplace, as evidenced by the presence in our language of such words as "bunch," "covey," "pride," and "flock."⁵

A transfer of "attention" from individual objects to collections of individual objects as a new entity is a shift of the status of substance from the Qualitative to the quantitative. This transfer of "attention" is the tendency in Quality to collect in quantity.

⁴ Robert R. Stoll, *Sets, Logic and Axiomatic Theories* (San Francisco: W.H. Freeman and Company, 1961), 3.

⁵ Stoll, 3.

This set theory illustrates that the element, as individual (as manifestation of Quality) loses its significance of being an independent whole entity by the fact of belonging to the set, and the set, even without any organization, can be mistaken as Quality.

The repeated Qualitative element (H_2O , for example) devalued to a mere part, yields its status of Quality to quantity. Quantity thus formed, as a single entity, becomes a single thing that appears as Quality without necessarily being one. Only if self-organized as one single unit, only if the Qualitative tendency is present, does the collection of smaller units become a larger Quality, as a living individual, for example. This totality, the complete thing, acquires the Qualitative status of “that which makes a thing such as it is,” the basic ingredient.

Philosopher’s substance. Qualitative-quantitative criteria expanded to bigger things. While the chemist limits his analyses to chemical compounds, the same Qualitative and quantitative distinction can be extended to larger objects. Material objects such as a living individual, as a whole unit that is stable, can be seen as Quality modified, that is repeated and thus belonging to a quantity, its species. Quality exists as itself, independent of outside influence. It seems that some philosophers have already associated the unit, the individual as a whole with that which is most basic. Saul Kripke’s “natural kind” seems to be the whole unit which certifies itself as *it*, and this seems to be what he is saying when he writes that “even if we can replace questions

about an object by questions about its parts, we need not to do so. We can refer to the object and ask what might have happened to it.”⁶

Also, Aristotle sees an individual, a whole unit such as a horse or a man (Quality) as the basic component, and calls it “primary substance.” For him “all substance appears to signify that which is individual. In case of primary substance this is indisputably true, for the thing is a unit.”⁷ Both man and horse could be the purpose of a qualitative analysis if their species were to be seen as the “analyzed substances.” Aristotle also sees “species” as “substances” but of a secondary kind. For him, “in a secondary sense those things are called substances within which, as species, the primary substances are included.”⁸

Thus Aristotle, the chemical analyst, and Kripke all seem to talk about the same things; all of them refer to what is individual but use different words to describe it. However, neither philosophers nor chemists use the term “Quality.” That is because for the philosophers, “quality” is generally understood as property, while for the chemist, it simply is not clear.

The connection between Quality and substance within matter has been hazy only because of the fundamentally deceptive nature of quantity, which falsely appears within matter as the one and only substance, while obscuring Quality. Quantity poses itself as

⁶ Saul A. Kripke, *Naming and Necessity* (Cambridge: Harvard Univ. Press, 1980), 52-53.

⁷ Aristotle, “Categories,” *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 3b10.

⁸ Aristotle, 2a10.

the basic substance when it is not, and demotes Quality to a mere property when Quality is the basic substance.

Thus, the reason why substance is so difficult to understand is because of the deceptive nature of quantity. Because of this trait of quantity, Quality, the source of all that can be identified as existing in the world, is consistently misidentified with its modifier quantity.

Epistemology

With the awareness of the special nature of quantity there is hope of reaching a step higher in the understanding of Quality. One begins with the suspicion that the Quality represents *existence* itself or that which makes material things exist, because material objects certify their own existence. However, to explore *existence* at its most fundamental level is to engage in metaphysics, and here I agree with Kant who says that before pretending to it one has to explain how what he calls “*the synthetic cognitions a priori*” is possible. He demands the explanation of how the rational mind can intuit an object before experiencing it. He warns:

All metaphysicians are therefore solemnly and legally suspended from their occupation till they shall have satisfactorily answered the question: *How are synthetic cognitions a priori possible?* For the answer contains the only credentials which they must show when they have anything to offer us in the name of pure reason. But if they do not possess these credentials, they can expect nothing else of reasonable people, who have been deceived so often, than to be dismissed without further ado.⁹

⁹ Immanuel Kant, *Prolegomena of any Future Metaphysics*, trans. James Ellington (Indianapolis: Hackett, 1977), 23

Kant is convinced that an explanation of how “*synthetic cognitions a priori*” are possible is necessary because “the generation of *a priori* cognition by intuition as well as by concepts, in fine, of synthetic propositions *a priori* in philosophical cognition, constitutes the essential content of metaphysics.”¹⁰ Any pretension to metaphysics without an explanation of how it is possible only leads to useless dogmatism or skepticism.

There is no science of metaphysics yet, but there is mathematics. And mathematics is an already existing (an actual example) of “*synthetic cognitions a priori*,” and in the case of mathematics, Kant says, the question is not whether it is possible, but how it is possible. Since I agree with him on the need to understand how one knows what one has not yet experienced (that an eclipse will occur, for example), but have a different explanation of how this is possible, I will briefly touch on Kant’s view and compare it to mine.

Kant’s Transcendental Philosophy

Kant’s proposes *space* and *time* as pure intuition that as forms of our sensibility allow the intuition of objects in advance of having experienced them. He says that synthetic cognition *a priori* is possible because space and time as pure intuition “is nothing but the mere form of sensibility, which precedes the actual appearances of the objects, since in fact it makes them possible.”¹¹ Mathematics, he explains, is thus based

¹⁰ Kant, 17.

¹¹ Kant, 28.

on space and time. So Kant, by explaining how mathematics is possible, presents the credentials as he sees them for those who want to involve themselves with metaphysics. However, his solutions are problematic.

First, if space and time are mere forms of our sensibility, then it can be said that before humans or even before any forms of life appeared on earth, there could not have been any space or time. But this does not seem to agree with the prevalent scientific theories.

Secondly, his solution leads to a mystery. The Noumenon is doomed to remain forever unknown. Human knowledge is limited to what is “sensible” because pure intuition is limited to the objects of the senses (spatial and temporal). This means that Quality will remain forever unknown. However, if one assumes that knowledge is awareness of what is real, and if Quality is the only thing that is real (as the “whatness”) then, it should be accessible to our knowledge. The prevailing scientific view is that there are no mysteries. What there is can be known, eventually.

Since I believe that Kant is right in setting a condition on those who engage in metaphysics, but since I do not agree with his specific explanation, I am presenting an alternative explanation. In this explanation, space and time are replaced with *deductive logic*. Deductive logic, along with other kinds of logic, allows scientists to predict how material objects will behave. The reason for looking at deductive logic only and not to “fuzzy” logic, for example, is that it seems to be the presentation by one’s mind of the very basic order of nature, an order that has to do with *existence itself*, the “whatness” at its most fundamental level.

CHAPTER 2

Fundamental Order - Hypothesis

Deductive Logic

Deductive logic is what makes the “*synthetic cognitions a priori*” possible because it is our mind’s, our brain’s presentation of the most fundamental order of nature. The main hypothesis of this essay is that ***there is a fundamental order that has freedom of Quality as its target***. The whole universe with all that is in it is made according to this order. The human anatomy and physiology, the nervous system, with its brain, is also made by this fundamental order in such a way that this order presents itself to the rational mind as truth-preserving, deductive logic.

Frege and Wittgenstein’s thoughts on logic. Frege was interested in arithmetic, and, since he maintained that arithmetic is a branch of logic when he talked about arithmetic he was also talking about logic. Martha and William Kneale, presenting Frege’s view that logic is separate from psychology, also comment about his view on logic (and arithmetic that he sees as a development of logic) being the “laws of laws of nature”:

...For again and again he [Frege] insists that logic, and with it arithmetic, which he wishes to exhibit as a development of logic, is completely independent of psychology. In the Preface of *Grundlagen*, for example, he lays it down as the first guiding principle of his work that the logical should always be kept separate from the psychological. And in the preface of his *Grundgesetze* he attacks explicitly all attempts to present the laws of thought as psychological generalization, saying that he hopes his work will help to free logic from the infection that seems to have contaminated all the recent books on the subject. What he suggests... that the laws of arithmetic are not laws of nature, but laws of the laws of nature, i.e. fundamental principles about the thinkable.¹²

Frege does not seem to be the only one to suggest that logical laws are laws of laws. While talking about tautologies, Ludwig Wittgenstein writes what could also be interpreted as relating to the same subject. He writes:

Logical sentences (Sätze) describe the scaffolding of the world, or rather *they* present it. They “treat” of nothing (they have no ‘subject matter’). They presuppose that names have reference and that atomic sentences (Elementarsätze) have sense. And this is their connection with the world.¹³

Logical laws like “p and not p is false,” treat of nothing because they refer to the form; and forms are empty. What gives content to logical form are the meaning and the sense that language conveys. Sentences constructed with “and” and “not” give sentences a certain sense. The meaning and the sense of the words that can substitute “p” and “q” refer to what it is (or is not) the case in the world.

¹² Martha and William Kneale, *The Development of Logic* (Oxford: Clarendon Press, 1962), 448.

¹³ Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, ed. and trans. D.F. Pears & B.F. McGuinness (London: Routledge & Kegan Paul, 1961), 6, 124.

Also, one might add that if logic is so fundamental, it should not be arbitrary.

Wittgenstein comments:

We have said that some things are arbitrary in the symbols that we use and that some things are not. In logic it is only the latter that express: but that means that logic is not a field in which we express what we will with the help of signs, but rather one in which the nature of the absolute necessity of signs speaks for itself.¹⁴

In all, the claim that logic is at the foundation of natural laws (physical laws) is not new.

Deductive Logic and Fundamental Order

If deductive logic is a presentation of the most fundamental order of nature, its analysis should offer a glimpse into the nature of this fundamental order. One of the important things that this glimpse reveals is that this fundamental order favors Quality, i. e. there are values at the fundamental levels of nature.

Values of Goal and Means in Deductive Logic.

Deductive logic not only has a Quantitative component consisting of Boolean algebra; it also has a Qualitative element consisting of the *truth* that Boolean algebra preserves from the premise(s) to the conclusion. Furthermore, the Qualitative aspect, the *truth*, is in a privileged position. In deductive logic the truth is the goal (target) and the quantitative aspect, while it is necessary, is only a means. Boolean algebra is meaningless unless it is valid, i. e. unless it is capable of serving as a means to preserve

¹⁴ Ibid., 5, 124.

the truth. Most significantly, the quantitative “movements” of Boolean algebra serve as a means not only for the **preservation** of truth, but also for the **synthesis** of truth from the multiple premises to one unique truth (its conclusion).

Uniqueness main property? Uniqueness seems to be the main property or perhaps even the essence of the Qualitative. In logic the truth in the conclusion of an argument is always unique—whatever the nature of the subject of the deductive argument.

In all, in deductive logic, the Qualitative aspect, the truth, is the goal, the purpose of the argument. The quantitative aspect, on the other hand, is a necessary means to preserve the truth from the premise(s) to the conclusion.

Freedom of Quality the goal. If deductive logic presents the fundamental order, and if deductive logic shows that truth is the goal of the argument while the quantitative aspect (Boolean algebra) is only a means, then it can be inferred that in a natural unit there is the same relation between Quality and quantity. One can infer that groups of cells and organs and their automatic movements, determined by physical laws, are organized by the fundamental order so as to transform quantity as a power that devalues Quality into a means that helps Quality to achieve its freedom from quantity’s power. This power is in the form of multiplicity. Quality and its freedom are this order’s goal.

Synthesis¹⁵ of Quality. If quantity modifies Quality by repeating it, then one can say that the **synthesis** of Quality from multiple particles (sub-atomic particles, for

¹⁵ Oxford English Dictionary (New York: Oxford Univ. Press, 1971). *Synthesis*: The putting together of parts or elements so as to make up a complex whole, the combination of immaterial or abstract things, or of elements into an ideal or abstract whole.

example) into one unique Quality such as an atom, is a step toward the freedom of Quality. The quantitative “movements” of the Boolean algebra serve as a means not only to preserve the *truth*, but also to **synthesize** this truth from the multiple premises into a unique truth as its conclusion. The goal is not only the preservation (existence) of the atom, which is the effect of the most elemental tendency of freedom of Quality. The goal is also the **synthesis** of the existence of its multiple sub-atomic particles into the existence of one atom, as a complete, unique kind of whole unit that exists as itself, independent of outside influence. The new unit thus formed represents a step toward freedom of Quality.

Mind and Body

A natural unit, a Quality such as an atom or a person, is a complete “deductive argument,” and thus, it also has two components: the Qualitative and the quantitative. The truth in an argument can be understood to represent *existence* of the unit, existence as *itself*, i. e. as a complete, whole indivisible thing that exists independently of outside influences. If Quality is existence itself; then as the self that belongs to the object, it certifies the existence of the object, giving objective reality to it.

Boolean algebra in a deductive argument, on the other hand, can be understood to represent the quantitative aspect of the unit, the aspect that mathematics can describe. The body of the individual is his quantitative aspect. It is the means that not only preserves Quality (the existence) of the body; it is the means that liberates Quality within the body.

If deductive logic is our mind's presentation of the fundamental order, and if the human body is built according to this fundamental order, then one can say that the human body is the means (as Boolean algebra is a means) that preserves *existence itself* (the truth), and its "conclusion" as *itself*. If the human *self* is the manifestation of existence itself, and if existence itself (Quality) is what certifies itself, then it certifies its own existence by saying "*I am, I exist.*" This is because it has the necessary means, the anatomy and physiology of the rational being that allows Quality to manifest itself unmediated. Because it is existence itself that certifies itself, when a person says "*I exist*" his statement is necessarily true. Even though the *I* is unmediated manifestation of Quality it exists integrated with quantity. It manifests itself within quantity, and as such, the *I* belongs to quantity and is subjected to its rules.

Where does the tendency to be free comes from, and why is Quality modified, in an infinite way, and why does it need the help of a fundamental order in order to achieve its freedom?

Quality the Only One

By looking at matter from the viewpoint of the chemical analyst, one can say that the Qualitative is the only thing that really exists in matter because it is the "whatness." The quantitative is only the "howmuchness." Since this is true in a material sample that the chemical analyst analyzes, why would the entire universe whence the sample comes, be different?

Condition necessary for the Universe to be the way it is

The idea as proposed here does not follow any traditional thought, even though in parts it may resemble some traditional views such as those of Spinoza. What Spinoza calls God, I call absolutely unique Quality. The similarity with Spinoza's concept of God is that for him God is in nature. However, for Spinoza, God has infinite attributes, and this seems to mean that God is "supremely perfect."¹⁶

Absolutely unique Quality does not seem to be absolute perfection. If Quality is the most basic thing, then why is this fundamental substance under the power of quantity and modified by it? Why does it exist repeated, devalued and totally dependent on quantity? In matter, the "whatness," the H₂O molecule for example, is devalued and hidden by quantity as it appears as "ice." In addition, dependence on quantity in life is also significant. Even the rational self, if it is the instantiation of Quality without mediation, (God, Kant's "divine" rational *self*), why is it still within quantity's grip? Without quantity, Quality cannot exist within the universe as it is. Quality is intrinsic¹⁷ to the quantitative structure. The quantitative, made real by Quality, is what one sees as real things. The rational *self* is inside (intrinsic to) the human anatomy and it is dependent on this body for its integrated existence with quantity.

¹⁶ Benedict de Spinoza, "Letter 2: B. d. S. to the Very Noble and Learned H. Oldenburg," September 1661, in *The Collected Works of Spinoza*, ed. and trans. Edwin Curley (Princeton: Princeton Univ. Press, 1985), 165.

¹⁷ By "intrinsic" I mean it is inside without occupying any space in the same way a geometric point is inside a geometric sphere, for example, without occupying any space.

If Quality is the ultimate substance and the condition that underlies the universe, the fact that it is subjected to quantity, the fact that it is subjected to what is without content, what is deceptive and opportunistic, and the fact that this basic substance allows itself to be obscured and devalued by it, is at least a suggestion that the absolute unique Quality is not absolutely perfect. And it could be that the reason for the creation of the Universe is the tendency in absolute Quality to reach absolute perfection. This perfection could consist in Quality's integration with quantity as one according to the order where Quality is the end in itself while quantity is its necessary means.

Absolute Quality

Absolute Quality is not an entity that thinks. If one understands “entity,” existing or not, as having individual existence, then, absolute Quality is not an entity.

Individuation is how quantity modifies Quality (p. 2), and if absolute Quality is not modified by quantity, it does not have individual existence and thus, it is not an entity.

Quantity makes the understanding of Quality difficult. Even rational thinking depends on the activity of the brain, as a means to understanding things. The brain and the whole body of the individual are a quantitative system and the only means available an individual has to understand Quality. This **means** interprets Quality as its property, and thus quantity devalues Quality.

Geometric symbols. In the same way that the rational mind presents information about the fundamental order in the form of deductive logic it also presents, in the form of geometry, information about quantity's origin from Quality. One can say that geometry

is a science with an emphasis on quantity. Geometry presents the same fundamental facts in different ways. Euclidean geometry is only one way to present it. Because it presents natural facts from the quantitative viewpoint, the geometric representation of Quality is a geometric point the value of which is zero.

The geometric point as a unique center of a sphere, for example, can illustrate Quality as integrated with quantity; both Quality and the point are without measurable dimensions, and both can be inside a measurable body without occupying any space within it.

The multiplicity of points in the periphery can represent quantity. Also a line-arrow from the center pointing toward the periphery can illustrate the quantitative tendency in Quality. In addition, the repetition of the central point that results in a line can very symbolically illustrate the origin of quantity from the movements of Quality. Thus, very schematically, the elements of Euclidean geometry illustrate that the quantitative tendency in Quality is the origin of the existence of quantity.

In addition, the mind seems to present, also through geometry, values of Quality in relation to quantity. The point as center represents what is important. What is important is said to be central, intrinsic, internal, and profound, and the point as center represents it: "I see the point....The point of the argument is..."

Conversely, the multiple points at the periphery represent quantity. They, for being on the outside of the center, represent the superficial, the external (to Quality, to the individual), the extrinsic, the outside, the secondary.

For the quantitative viewpoint quantity is the only reality there is, and thus, what is not quantitative does not have any value. The quantitative viewpoint devalues Quality to zero-quantity. Being that our brain is a quantitative structure it presents Quality as it is seen from the quantitative viewpoint, that is, it is seen only as what it is not. The geometric point illustrates that Quality is not a quantity, that it lacks quantitative value.

Quality modified. The devaluated Quality, which we can understand as a unique geometric point as a center of a body, exists also as a fact of nature. In nature, Quality starts manifesting itself as *itself* (as a specific object) in the form of a centralized unit. Each centralized unit is Quality modified by quantity. It is Quality translated into a “language” of quantity, but with sufficient organization to be able to manifest as itself as a reality that certifies its own existence, that is, that exists as an objective reality. A unit that is distinctive, specifically identifiable is always based on centralization, as an atom, a cell, or an individual. A center is a quantitative version of the primary, the important. Atoms, cells or individuals are basic elements of specifically identifiable things.

One can schematically represent a man as a sphere and portray his *self* as a geometric point in its center, which does not occupy any space. The point in the center that illustrates a man’s *self* is an illustration of a Quality modified by quantity. Quantity hides Quality to present itself as objective reality. As quantity in the form of ice, for example (p. 11), obscures the value of Quality (the H₂O molecule) because it modifies it, quantity, as a body of an individual, obscures the *I* of the person. Quantity, the body, portrays itself as primary while it eclipses Quality. The modified mind of the individual is reduced to a property of the body, of the person. The individual, a quantitative entity,

owns the thought, the mind. It is a person, a quantitative object, who understands an idea or has a mind; this idea or mind is always of this person, which is quantitative, a body. The unmediated manifestation of this modified Quality is the individual's rational mind. It appears as belonging to the individual, and it can be reduced to "just" an idea, a concept that a person has.

Quality not modified. However, if Quality is not modified by quantity, as absolute Quality must be, then, it is not devalued by it to a position of a property of a quantity, of molecules, cells and organs of the individual's body. If absolute Quality is not modified, then it does not belong to any body. In this case, the mind, the idea, the concept is free; it does not belong to an individuated entity. It is not reduced to being "just" the mind," or "just" an idea, or a "just" a concept that an individual has.

Subjective. As an idea or mind that we understand as a concept, Quality is **subjective**, in the sense that it makes a thing exists as *itself*, independent of outside influences. One can speculate that absolute Quality is an idea, a concept, a zero-quantity substance which is **subjective**, and which does not occupy any space. It is not an entity because it is not an individual. However, because uniqueness seems to be its essence (p. 21) it accounts for the "personal." It is everywhere in virtue of being what gives existence to the "everywhere." It is within space because it is what makes space. It is in every individual thing because it is what gives existence to everything. Absolute Quality could then be similar to Plato's Idea. However, Plato's Forms other than that of absolute Quality are only human idealizations of modified Quality.

With gradually more complex organization of quantity, as that of a human body, the subjective self is able to reveal *itself*, unmediated. This *self* is subjective, and with a means in the form of anatomy and physiology, it feels as itself. Because it is **modified**, Quality also feels itself as being the center of the universe. Quality manifests itself as a center. Thus, it turns out that a material object has an objective reality because what makes it objectively real is something subjective.¹⁸

The Creation of the Universe

Absolute Quality, not being an absolutely perfect substance, may be assumed to have the tendency to become absolutely perfect, and this tendency could be at the base of the creation of the universe. This tendency, as the tendency to increase self-value, would also be what moves the universe. In addition, it could be that this tendency to become absolutely perfect involves Quality's integration with quantity to become one integrated whole.

Dangerous venture. However, Quality's integration with quantity as one would not only be difficult, but dangerous because quantity is of deceptive and opportunistic nature, (pp.10-14). The interrelation of Quality with quantity would result in many events that are not favorable to Quality. The very act of tending toward quantity would

¹⁸ This is only an apparent contradiction due to the existing bias toward quantity. The term "objective" is used in two ways. In both ways it conveys the idea of impartiality and certainty. Something is said to be "objectively real," when it is not imaginary but really exists. Also a viewpoint is said to be "objective" when it is an impartial viewpoint. However, inert objects do not have viewpoints. All viewpoints are subjective, but they can be either partial or impartial. Thus, in both cases "objective" is associated with certainty and truth, that is, with Quality. The impartial subjective viewpoint is not recognized as valid. But this is the viewpoint of a scientist. Also it is ignored that it the subjective nature of Quality that makes an object certify itself as existing

devalue Quality because quantity would limit it. This limitation of Quality would be its individuation and its repetition. Quality, individuated and repeated, would lose its original value. Instead of remaining as a whole in itself, it would become a **minimum part** of quantity. Because the nature of quantity is deceptive and opportunistic, it would usurp the primary position of Quality. From that moment, the quantitative aspect of things would **appear** as primary when it is not.

Fundamental order as insurance. The more Quality is subjected to repetition, the more self-value it loses. The only thing that prevents quantity from annihilating Quality is **the fundamental order**, understood by us as deductive logic (p. 20). This fundamental order organizes quantity. The organization keeps quantity from devaluing Quality to the point of nothingness. It transforms quantity into a **means** that not only preserves Quality (as the logical argument preserves the truth), it also shields it from extinction. This organization of quantity also gradually frees Quality from quantity's limitation by synthesizing the existence of smaller units into the more liberated existence of a more complex unit. The fundamental order makes quantity conform to the Qualitative tendency in Quality, the same tendency to increase self-value that created the universe. In sum, such a fundamental order that we understand as deductive logic, not only insures Quality against its total annihilation by quantity, it also liberates it.

Absolute Knowledge. If there is such a fundamental order that dictates the direction in which quantity with its power over Quality moves, if absolute Quality is the source of this fundamental order, and if absolute Quality is like Plato's Idea, then this Idea implies knowledge because the fundamental order reflects this knowledge as it

makes the universe and all that is in it. Also, this fundamental order implies knowledge about the deceptive nature of quantity because it provides for the protection that Quality needs as it integrates with quantity. The fundamental order reflects knowledge that the power of quantity would limit Quality, infinitely repeating it, and this repeated and devalued Quality would become the captive of quantity.

Institution of the Fundamental Order

The institution of the fundamental order appears to be the result of a bargaining-like process, as if there was a give and a take. The absolutely unique Quality began its integration with quantity as if giving quantity a head start. Quantity appeared as the only reality while Quality was devalued to a mere property of quantity; it became quantity's minimum part. As quantity became an existing reality, it subjugated the devalued Quality to its own rigid (cyclical) laws.

After Quality gave existence to quantity, quantity made Quality appear as if it did not have any value. Quantity became the whole, the totality, the reality. Thus, quantity usurped the position of Quality as primary substance, and it appeared as the only objective reality there is. Quality, on the other hand, was reduced to an obscured existence.

The only thing that would prevent quantity from annihilating Quality is the fundamental order. The fundamental order controls the direction in which quantity's rigid movements go.

The movements of quantity are rigid, automatic, meaningless, without direction like that of a wheel on a stationary axle, but the fundamental order transforms these

meaningless movements into a means that preserves and at the same time frees Quality. Thus, the fundamental order not only determines the direction in which quantity must move, but it transforms quantity into a useful means for the advancement of the Qualitative direction.

The fundamental order controls the direction in which quantity and its rigid laws move. These movements thus directed organize as matter, and this matter moves in such a way that it not only preserves but also liberates Quality by synthesis, as illustrated by deductive logic. This organized quantity in the form of matter is the only means by which Quality achieves its free manifestation and tendency while integrated with quantity as one. Quantity, all the while existing integrated with quantity, profits by acquiring a content and by becoming real as a means. After the big bang, quantity, as one with Quality, eventually will no longer be an empty opposition, and both will exist as one. The rational being is an instantiation of the process of the integration of Quality with quantity as one.

Quantity's interpretation of Quality. The integration of Quality with quantity (big bang) began with the power of quantity over Quality. But under the fundamental order quantity's movements are directed toward Quality, (they benefit Quality). However, while quantity's movements obey the fundamental order and treat Quality as a target, the interpretation of what "Quality" means has been up to quantity. This is like another concession to quantity. Quantity always interprets "Quality" as a **minimum number**, because, Quality, if represented as an element of a set, is a minimum number in that set.

A Law of Probability. A law of probability, the same one that rules in organized gambling is the interpretation of the intent of the fundamental order by the power of quantity. This law favors only the minimum number, the winner. Thus while the movements of quantity (in the form of laws of physics) have to obey the fundamental order, that is, they have to obey logic, and thus have to have Quality as their goal, the interpretation of what “Quality” means is left up to quantity. This power interprets the intent of the fundamental order according to its own translation. Since “Quality” is interpreted as a minimum number, only one among many units will be favored. The process of centralization is the effect of this interpretation.

In all, the fundamental order, or what the rational mind presents as logic, is like an insurance that protects Quality, and thus makes possible the fulfillment of the original purpose, which is absolute perfection of Quality by means of its integration with quantity as one and as a means

The loss of knowledge and the basic forces of nature. Quality's tendency toward quantity, its “meeting” with quantity, consists in quantity modifying Quality. It consists in the limitation of Quality, its individuation, which allows its repetition. Quantity devalued Quality. Quality's tendency toward quantity and its consequent multiplicity result in the loss of knowledge that in quantitative terms becomes physical laws. As a result, quantity interprets this knowledge as physical laws. Thus, the absolutely unique Quality is without knowledge and repeated, devalued, but, in spite of this devaluation and ignorance, its tendency to pursue its perfection as freedom within quantity remains. This tendency remains in the limited Quality as the tendency to increase self-value. But, for

being under the power of quantity, this tendency is translated into quantitative terms. It is interpreted by the mediating power of quantity and its automatic movements as the most basic physical forces that move the universe.

The creation of the universe, the search for perfection, summarized, consisted in the departure of the absolutely unique Quality from itself. This departure is the beginning of its integration with quantity. This beginning subjects Quality to the power of quantity. After its integration with quantity and under the power of quantity, the devalued Quality, with the help of the fundamental order, struggles to return to its freedom. It returns to *itself* in the form of *life* by gradually regaining its knowledge about itself and about quantity.

This return of Quality to its absolute self occurs as quantity is organized as a means by the fundamental order. Quality is intrinsic to quantity, that is, Quality is inside the body without occupying space.

The Beginning of the Universe

The “meeting” of Quality with quantity was the big bang that quantitatively can be represented as a burst of geometric point from a unique center point. The subjective attention that Quality gave to quantity gave power to quantity with which quantity in turn subjugated Quality and transformed it into its property (p. 12). Under the protection of the fundamental order, however, but already under the power of quantity, all knowledge was translated into quantitative terms and became physical laws and their power. It could have been what some cosmologists describe as a “free lunch” because it

seems, mathematically, as if something appeared out of nothing. “Nothing” can be Quality since it is not measurable:

Alan Guth and Paul Steinhardt write that:

If grand unified theories are correct in their prediction that baryon number is not conserved, there is no known conservation law that prevents the observed universe from evolving out of nothing. The inflationary universe model provides a possible mechanism by which the observed universe could have evolved from an infinitesimal region. It is then tempting to go one step further and speculate that the entire universe evolved from literally nothing. The recent developments in cosmology strongly suggest that the universe may be the ultimate free lunch.¹⁹

Limitation

In order for absolute Quality to begin its integration with quantity, first, it would have to be subjectively directed toward quantity. This direction would distance absolute Quality from itself, as it would be a departure from itself, and that would result in multiplicity as it would transform Quality into a repeated minimum part of quantity.

Transfer of knowledge. However, in order for absolute unique Quality to be repeated, it had to be devalued first by its direction toward quantity that would alienate it from itself. Once directed toward quantity, Quality is subjected to the laws of quantity. There seem to exist laws of quantity that can be identified as limitation and cyclical transmission and repetition. They are more than one but they act simultaneously. Limitation seems to be the most important law of quantity.

¹⁹ Alan Guth and Paul Steinhardt, “The inflationary universe,” in *The New Physics*, ed. Paul Davies (Cambridge: Cambridge Univ. Press, 1992), 54

The subjective departure of absolutely unique Quality toward multiplicity is limitation, which devalues Quality. This devaluation is the transfer of knowledge from the absolutely unique Quality to the devalued Quality as a unit, as a **minimum number**. The knowledge of absolute Quality, as it devalued into a repeated unit, became the physical laws and their power.

Thus limited, Quality would begin its venture into the power of quantity. During this venture Quality would make three changes in the directions in which it would search for its increase of self-value. Each of these changes would produce a different effect.

To facilitate the illustration of these three directions the symbols of the elements of geometry are helpful. In order to illustrate Quality's journey into the power of quantity I will be using elementary geometric symbols.

Three directions of Quality. Before becoming multiple, unique Quality allowed itself to be devalued by directing itself subjectively toward quantity. This direction consisted in the transmission of its absolute knowledge to quantity. Quantity interpreted it as physical laws and their power. Thus the absolute unique Quality surrendered its knowledge, an act which devalued it to the maximum without annihilating it. This devaluation of Quality and its repetition resulted in the actualization of quantity in the form of an infinite number of copies of Quality. Devalued absolute unique Quality resulted in an infinite number of units. In this devalued manner the unique Quality began its integration with quantity. The urge to reach absolute perfection survived in each devalued, ignorant copy, as a tendency to increase self-value by **accumulating quantity**.

First direction. The result of this first direction, an inexorable direction toward quantity is *extension* in the form of *time*, *space*, and the *force of gravity*. If uniqueness is more than just a property of Quality and more its essence, the departure from itself entailed moving toward multiplicity, perhaps by sending out its copies. Or it could have departed from itself by multiplying itself, not by dividing. This repetition could not have been by division into infinite parts, since Quality is without extension. Rather, by belonging to a different realm with different ‘language’ from the quantitative, which could be translated into quantitative terms in a similar way to one language, when translated into another, preserving the meaning of the original. Existence (Quality) is preserved. However, as with a translation, some essential meaning present in the original language is lost. The translation of the absolutely unique Quality into an infinite number of units preserved reality (existence) but with changes in existence in favor of quantity. Quantity became the reality according to this translation, and Quality now belongs to it according to this translation.

Laws of Quantity

As the absolutely unique Quality directed itself toward quantity, this attention made quantity real but devalued Quality. One can compare this departure of Quality from itself to quantity, to infinite number of geometric points, like copies emerging from an absolutely unique center by means of the movement of repetition. Each point moves away from its central position losing its “central” importance. This repetition forms a line, which, as a set, is a quantity that becomes the single unit, and the point forming this unit, is reduced to being only **one among many** in a line. Thus each point becomes a

minimum number that can itself represent an already limited unique Quality, in the form of a unit.

However, the tendency to perfect itself remains in all devalued units. The target toward which these units aim in order to increase self-value changes, however. At the beginning, (at the very base of the universe), and out of ignorance, this target is quantity. As a result, increased self-value, as interpreted by quantitative “language,” means a spontaneous ability to create copies of itself and the accumulation (attraction) of quantitative values. To attract quantities is the aim, the goal that reflects the tendency to increase self-value. The original reason that moved absolute Quality to create the universe remains in each natural unit as the **force that moves** the universe.

Forces of nature. The property of Quality to search for increased self-value is subjective, but because it is modified by quantity, it becomes physical force. When this force is manifested as the center of gravity it keeps the planets together; when it manifests as the center of an atom it “glues” the atomic particles together. When this direction toward increase self-value manifests as a center of a cell, it directs the vital functions that keep the cell alive. When it is manifested as the will, it moves a person. Thus, while the absolutely unique Quality loses most of its importance within the quantitative reality, its tendency to reach absolute perfection remains in everything as the tendency to increase self-value.

Extension. The direction toward quantity is a subjective limitation that individuates the multiple units. The inability to know (about itself and its origin) is a subjective barrier that prevents the identification with either other copies or with its

origin. As quantity mediates this inability to identify, it translates it into physical distance that is the quantitative translation of the subjective **inability**. Because the subjective distance is between copies that come directly from the absolute Quality (absolute reality), when mediated by quantity this subjective distance becomes a physical distance. Thus this inability to identify, when it originates within copies that come directly from the absolutely unique origin, translates into physical distance, *extension*, or what scientists see as real. These limited units are perhaps Leibnitz's isolated monads.

Cyclical Repetition and Transmission: Time. *Time* is the result of Quality's inexorable departure toward quantity and away from its unique self. This departure submits the limited copies to the laws of quantity. Cyclical repetition and transmission are laws of quantity. This cyclical repetition and transmission is *time*. The departure of copies, as repetition of their absolute origin, can be compared to the movement of repetition of the original central geometric point and its transmission to the next point thus forming a line. The departing copy can represent the **present** because it can represent the "whatness" or what is. The urge to increase self-value, the "will," the tendency toward increase of self-value, in the form of quantitative tendency of the first generation copy is the **future**. Each copy leaves behind a trail, the **past**.

Movement. The spontaneous creation of copies results in movement. For movement to exist, a "fixed" point, a point that is the reference to the movement of a second point is necessary. This means that at least two points are needed for movement to exist. The fixed (or assumed to be fixed) point is the point of reference that makes the movement of the second point real. In matter, Quality is the "fixed" point because it is

unique. Its departure from it, (its attention toward quantity) the creation of a second point, creates movement. *Time* is the cyclical repetition and transmission. Thus *time* is the base of movement

Space. *Time* leaves behind a trail of quantitatively oriented copies, and this “trail” is not only the past, it is also what makes *space*. Both *space* and *time* can be compared to the same geometric line (spacetime) that emerges from the absolute geometric center. Space is perhaps an infinite chain of quantitatively oriented abstract copies that lack measurable dimensions. No copy (like a geometric point) lacking quantitative value can occupy any space. But being limited copies, and being of an absolutely unique origin, they create space by creating distance. A one-dimensional geometric line may be an illustration of how something one-dimensional can represent a limit or a boundary.

Because the units are limited, not knowing, ignorant, blind, their tendency toward perfection, is translated into physical force that tends to increase the unit’s self-value. It tends to accumulate quantitative values by attracting other (quantity-oriented) copies. If space is an infinite chain of abstract copies that tends toward the quantitative, and if each copy tends to increase its own value by attracting others to itself (as property that it would own) then perhaps this attracting force, when infinitely repeated, forms the *gravity field*.

Successful few. According to the fundamental order but interpreted in quantitative terms (probability), only the minimum number of them will succeed in reaching their goal of increasing self-value. For these quantity-oriented copies, “value”

means quantity. Thus they tend to increase their value by accumulating quantitative values. The successful ones would be the “celestial bodies.”

Space curved. The geometric representation of a straight line that leaves a center and moves toward the periphery to form spacetime is only a schematic representation of the quantitative direction, a direction that departs from the unique center. However, if the typical movement of quantity is cyclical, it would leave a curved trail.

Spacetime is abstract. Lines emerging from an absolutely unique origin do not cross. Since the copies that create time and space come from an absolutely unique origin, their movement does not find equivalent force. If resistance is what gives the “concrete” or “solid” character to matter, then this lack of resistance would explain the abstractness of space and time.

Second direction-energy and matter: The ignorant search for increased self-value within the multiple copies continues. The quantitative tendency is reflected in the ability of the copies to make copies of themselves. Some of these secondary copies of Quality change direction from the purely quantitative one. The effects of this hesitant direction are *energy* and *matter*. Thus the strictly quantity-oriented direction creates *space* and *time*. However, this inexorable outward direction of the primary copies changes as these copies make secondary copies. From the primary copies that constitute an infinite abstract chain of *space* and *time*, secondary copies emerge. As these secondary copies emerge from multiple centers, outwardly in all directions, the process of time and space is repeated, but the effect of their departure is different since their origin is secondary. Since their origin is multiple, the copies emerge like lines emerging from multiple

centers, and meet equivalent but opposing forces, thus creating resistance. Conflicting forces that meet create resistance that results in energy, and matter, which are no longer abstract for this reason. Energy is perhaps explained as one set of equivalent but opposing forces overpowering another. Matter, on the other hand results form a stationary state because of equilibrium.

Within the power of quantity, Quality is a mere part. At the moment of the big bang, the initial integration of Quality with quantity begins in the form of total power of quantity over Quality. Thus the integration begins on quantitative terms. These terms devalue Quality to a minimum part. The bigger is the total, the smaller is the significance of its minimum part. If the initial total is the entire universe, and if it is infinitely large, then it takes an infinite number of copies. In the universe as a quantity made into a whole, into a single entity, Quality is devalued to its absolute minimum value of existence. As minimum part, each Quality is reduced to maximum insignificance, and a minimum part of the universe.

Unilocal. Each of these original copies is also a perfect part because each lacks independence from the quantitative total in the same way that a cogwheel is a part of a machine. If, at the level of the quantum and even at a pre-quantum level of time and space, a “particle,” a Quality is totally dependent as a part on the quantitative total, then this part, as a true part, is dependent on the movement of the other parts. When one part moves, all the others as parts are also affected in much the same way that if one cog in a machine moves it affects the other part that also belong to the machine. The particle does not know how it moves because the knowledge belongs to quantity in the form of

physical laws and their power. It is the particle's dependency as a member or part of the total that automatically moves the particle ("unilocality"). This feature is probably used by the fundamental order as a means, in the form of brain physiology, to manifest the Qualitative as unmediated *self*.

Weirdness and counter-intuitiveness. At the initial level of matter, the worth of each unit as individual, as manifestation of reality, is minimal, almost non-existent. This is because, at the quantum level, the power of quantity prevails. Quantity, which lacks content, is empty and deceptive, and this mediates Quality. Quantity at this stage is not organized so as to allow Quality to decisively manifest itself as individual. It is only when quantity is organized as a centralized unit, that a quantity is perceived as reality that is "normal." Quality, as a quantitative portion has to have a quantitative organization that is like a logical "argument," an argument that is good enough to manifest Quality as its "conclusion."

Before Quality has a quantitative organized means to manifest itself as an individual or unit, reality as in the quantum world, is said to be "weird" and "counterintuitive." The observer cannot recognize its reality in terms of everyday experience. Only the language of mathematics, the language that speaks in quantitative terms can explain the effect of the quantitative power.

The base of "everyday reality": centralization. The equivalent forces that come from multiple secondary copies as center can be compared to geometric lines that emerge from multiple centers. Lines that emerge from multiple centers will meet, will collide. This forcible meeting of equivalent but opposing forces could produce different effects.

If one direction overpowers the other, this could result in energy. However, if two or more directions (forces) balance each other, the effect could be a stationary movement. This collision, this forcible encounter, is used by the fundamental order as a means, as an opportunity to organize the multiple copies. This organization preserves and advances the freedom of their bound Quality so that it can manifest itself as a unique, whole, indivisible, stable individual existing as itself, independent of outside influence.

Centralization: the beginning of freedom of Quality. At the quantum level, each unit belongs to quantity as a part of a whole. However, the bond to the quantitative total at the quantum level begins to break as smaller units are organized into larger centralized units. Centralization signifies a gradual disengagement of Quality from its quantitative total. The Qualitative movements, mediated by quantity, yet directed toward Quality as interpreted by quantity, individuate Quality. Quantity's limitation individuates Quality as this quantity is organized by means of movements that obey the laws of physics, but directed according to the fundamental order that favors the minimum number (Quality).

The first step toward freedom is the set organized as individual. A natural unit has an internal organization and exists as a centralized individual. A center, in quantitative terms, is what is unique, as Quality is. In order to manifest and be recognized as an objective existing reality, the unit has to be centralized. Centralized units are recognizable by an observer as real because a center is the quantitative version of manifestation of Quality. The observer, the rational self as the manifestation of Quality, recognizes other manifestations of Quality as "real" (like knows like).

Thus, in light of the concepts of Quality and quantity as defined in this essay, one can say that the weirdness and the counterintuitive-ness at the quantum level does not mean that the base of the real world is uncertain, weird, and counterintuitive. It only means that at the base of matter is the power of quantity. Quantity is not **what is** but only what repeats **what is**. If quantity is something vacuous, empty and deceptive, and if this quantity is in power as it is in matter, then observers can only see a reality that is described as weird and counterintuitive. This second direction that creates energy and matter can be represented as a tangential line perpendicular to the original outward direction.

Return to Freedom

Life. Life is the last leg of Quality's journey toward absolute perfection. That is, life is both a direction of Quality toward its freedom from quantity and, at the same time, its gradually and progressive integration as one with quantity as a means. Life is the return of Quality toward itself, but as an individual, i. e. **integrated with quantity as one**. So life is the direction of Quality aimed at its absolute perfection while integrated with quantity at the same time. This aim involves the return of the knowledge that Quality surrendered to quantity at the beginning. As Quality gradually gains the means (through anatomy and physiology) to freedom through evolution, some forms of life such as the Homo sapiens (a minimum number among all life) succeed in gaining knowledge of themselves, or at least gained the hope of reaching that knowledge.

Life is Quality modified by quantity in such a way that this quantity provides a means for it to aim at absolutely unique Quality (self). *Life* is the beginning of a decisive move toward freedom of Quality existing within quantity as one. A living unit succeeds in overcoming the quantitative limitation (inertia) to move and actively pursue itself as its own goal. Life is the beginning of the knowing pursuit of increase of self-value that is in Quality, not in quantity.

The return of Quality to its absolute self is still subject to the rules of quantity. Since these are rules as in organized gambling, the return to absolute Quality is subject to the same laws that rule organized gambling. As a result, while all life strives to preserve itself, to survive, under the power of quantity, only a minimum number wins. For highly quantity-dependent forms, such as unicellular forms of life the chance of survival is very small. Among all the countless forms of primordial life, only a minimum number are lucky enough to win the privilege of staying alive. Among them, even living to maturity is a lucky event. The chances of survival increase, however, as quantity is organized into an increasingly better “argument” in the form of anatomy and physiology. This quantitative means facilitates the freedom of Quality. The higher the intelligence of the individual, the greater is its chances of survival to maturity. Unlike a newborn mouse, a newborn gorilla has a good chance to live a full lifetime. However, only a minimum number of animals win this high chance of survival that apes have, for instance.

Thus, because life within quantity is like a lottery, even though all life participates in the pursuit of freedom, judging by the fact that all life forms strive to stay alive, only a minimum number among them succeed in advancing toward freedom. Only

some primordial forms of life free themselves and evolve into intelligent animals. From among all the many intelligent species only one, the minimum number, the Homo sapiens, is lucky to have developed the proper anatomy and physiology and thus have achieved Qualitative freedom and become rational. The anatomy and physiology of the rational being is an advanced quantitative “argument.” It is a successful means that is able to synthesize Quality into one unique individual. Thus integrated with quantity, Quality, in the case of humans, is free to manifest itself saying “*I am.*”

The third direction, the one toward the absolute self, can be represented as an oblique arrow that aims from the periphery (the multiple) to the uniqueness of the absolute center. The center, toward which this arrow aims represents Quality, and thus, it represent what is real, exists. The movement of the arrow toward the center can represent the Qualitative evolution of life, the evolution that lifted some of the primordial life to the level of intelligence. Only one species reached rationality.

If Quality is God, it can be said that man is God on his way to perfection. However, what discredits man is his quantitative tendency. Every individual, as an integration of Quality with quantity, has within him or herself a quantitative tendency, a tendency to present quantity as Quality.

A person whose Qualitative tendency is free (rational) can be said to be, as Kant says, an instantiation of the “divine” because it would be God integrated with quantity as one. For some prophets and for Christ, the word “God” refers to every human. Christ, after declaring that “I and the Father are one,” had to defend Himself against stoning. He was accused of blasphemy for saying that He was God. He defended Himself by asking:

“Is it not written in your law, ‘I said, you are gods’?” Christ referred to Psalm 82:6 that states: “I say, You are gods, sons of the Most High, all of you...”²⁰ The potential stoning episode underscores that the interpretation of God by Christ is different from the interpretation of God by others.

Quantity obscures Quality’s presence. If experience shows that man is usually not God-like, but if one thinks of man as God on his way to His integration with quantity, and if one knows that quantity tends to devalue Quality and promote quantity as the primary entity, then one can expect that the quantitative tendency in man would discredit man as Quality. Under quantitative influence, what is unique in a person loses its credibility. Quality is devalued and obscured by quantity, his body, and by his quantitative tendency. The subjective is devalued and discredited. Quantity hides God. An infant or a perfectly rational man is the manifestation of Quality. In them Quality appears directly as an individual that is helpless. Any helpless individual, perhaps only momentarily, manifests God in himself because his helplessness means that quantity as a means abandoned him when he was thirsty, hungry, cold, mistreated, persecuted.²¹ Without quantitative means, Quality is helpless. The helplessness of an individual is an index of the absence of quantitative significance of the individual. The worst criminal, when helpless, has in him a helpless and devalued Quality, or only what Kant calls “humanity” and this is respected by the rational being for the sake of rationality. So even

²⁰ John 10:31-36 and Psalms 82:6 RSV

²¹ Matthew 25:35

though the death penalty may seem appropriate, it should be carried out as humanely as possible. God is helpless, not all-powerful. Physical power, as in thunder, is the manifestation of the power of quantity.

Human Invisible Trap - Hobbes

Hobbes blames man's readiness to harm his own kind on bad human nature, and while his solution involves the abdication of individual freedom, I am attributing man's negative readiness to harm his own kind to an error that consists in the violation of nature's most fundamental order. This order is partial toward Quality but man's choice of life is to contradict it. Hobbes wants to solve human problems. He attributes the present human condition, man's readiness to mistreat his own kind, to the "state of nature." Human nature is not good nature, according to him. His pessimism is apparently a judgment about human nature based on history. Because of their bad nature humans require an outside coercive force; Hobbes believes; without it, there would be a perennial "condition of Warre of every man against every man."²² To live in peace humans have a social contract. According to this contract, every individual agrees to give up his freedom to the monarch in exchange for personal safety. The will of this monarch becomes the law, and there is no unjust law because, according to the contract, the monarch's will represents the will of the people. If the law happens to be bad, the monarch is accountable only to God. This contract provides for the outside coercive

²² Thomas Hobbes. *Leviathan*, ed. Richard Tuck (Cambridge: Cambridge Univ. Press, 1991), 96.

force that the “natural” human nature needs in order to act in a civil manner. Thus Hobbes disagrees with the idea of an intrinsic good human nature. He assumes that human nature is not good, and in need of an outside coercive force. Without this outside force, humans will not coexist peacefully, according to him.

But the “bad” in human nature is only the effect of human violation of the fundamental order that allows the power of quantity to prevail. Instead of continuing the same Homo sapiens-producing, progressive direction of life, the human being abandoned it and chose the quantitative direction instead. This was a contradiction of the (Qualitative) value of life in nature. Rationality cannot have been the reason for this act since it is something Qualitative also. It was an irrational move.

It is a fact that humans as a species have had quantity as their goal of life, as what is most important, while Quality became only a means. This is reflected in the perennial pursuit of power over territories, money, or groups, where the individual has been used as a means. Thus life in this “human world” is such that most humans scramble to accumulate power over quantitative values, toppling, exploiting, robbing, and killing each other in the process. This is what Hobbes sees as a “state of nature.” Thus humans, by pursuing quantitative and not the Qualitative as a goal and by using the Qualitative and not the quantitative as a means, inverted nature’s values. What was only a means in nature became the supreme goal of life.

Instead of continuing the same Homo sapiens producing, progressive trend of life toward Qualitative freedom, the human being brought this trend to a abrupt halt. Instead

of continuing the Qualitative trend of the third direction that led to freedom, the Homo sapiens gave way to his quantitative tendency. Man pursues quantity in different forms as the main goal in life at the expense of Quality, the individual. This error led humans into a psychological trap within which the born rational individual has to struggle for survival against the most powerful predator he can possibly have: himself.

This inversion of values resulted in a trap from which man so far has been unable to escape. This trap has invisible walls because they are psychological, the result of a general belief that the quantitative is a worthy goal of life. The opposition of man's goal to his own Qualitative nature created these walls. Within this psychological trap, humans pursue **quantity as the goal** while Quality, the individual, is used as a means to pursue quantity. Thus the attempt to become free and regain self (Qualitative)-value is out of ignorance replaced with the pursuit of quantitative values. In fact, within this trap that is taken as a "human world," or "this world" Quality must act according to the rules of the power of quantity. The individual must pursue the quantitative as in power over money, territories, or groups, or else risk a total loss of freedom (poverty or slavery) or even death. To pursue Quality is to act morally, because it is in accordance with the fundamental order, but to act accordingly is often suicidal, only because of the trap.

The result of the desperate pursuit of the quantitative to survive with some sense of value in the trap is what Hobbes calls the "state of nature." Plato's cave appears to refer to this human psychological incarceration. He mentions that to get out of it one has to make a total fundamental turn and look in the opposite way. I will try to show that the quantitative direction indeed constitutes a fundamental turn around from the Qualitative.

What Hobbes calls “state of nature” is a reality, and this reality is the result of the absence of the most essential human “component” that humans need to function in a civil manner. This “component” is the realization that Quality is the only goal worth pursuing, simply because it is the only thing that is really real. Without this preference for Quality over quantity, humans need a substitute that will fill the place of what is missing. This substitute is the external coercive force. Without it humans cannot live in peace. The need for some sort of social contract, even the need for an absolute sovereign, is real, but only because humanity has been psychologically handicapped. As a result, humanity needs an external coercive force in order to act in a civil manner, just as a man who has lost the use of his legs needs at least crutches in order to walk.

Within the man-made trap that Hobbes calls the “state of nature,” man is his own worst enemy, and he is better off surrendering his freedom because when a man is his own worst enemy, his freedom implies harm to himself. This harm can take the form of oppression, which is the effect of Quality being treated as secondary to the power of quantity. Non-human animals are still trapped in the natural quantitative trap from which the human being exited with the help of the fundamental order. And the chances that an intelligent non-human animal has to suffer or die prematurely are greatly diminished compared to lower (more quantity-dependent) forms of life. The Homo sapiens is on top of the Qualitative ladder because his will is, or can be, free from the power of quantity. By being born rational (Qualitatively free), the human being got the increased chance to lead a care-free life. He is no longer in the daily menu of other species, for example. But he decided to return to the power of quantity and its quantitative trap instead. This time

the trap is one he himself has built, and it contains all the horrors of an insect world, if not more. While intelligent life is gradually **exiting** the natural trap, the Homo sapiens has returned to it by his own will.

The Measurable is not the Base of the Real

Quantity and the fact that it is measurable are presented as a proof of objectivity of the real. However, measurement would not have been possible had it not been for the measuring unit. The standard of measurement is a conventional representation of Quality; thus the measuring unit becomes the measure that measures.

The ultimate reference point in measurement, however, is the *I*, the *self* of the one who measures. The rational *self*, being the revelation of Quality as itself, is the ultimate “measuring unit.” It is the measure that measures.

Protagoras says that man is the measure of all things. However, he addresses the subject from the quantitative viewpoint only. A person with a quantitative viewpoint can have many things that he sees as important. In addition, different individuals can have different views about what is important and true. Thus, the quantitative viewpoint presents the rational man in a negative light, Qualitatively (morally) negative.

But one can say also that man is the measure of all things from the Qualitative viewpoint, the view that recognizes that Quality is the “whatness” and thus the one thing that matters, the end in itself. Thus a Qualitative viewpoint is one and the same regardless of how many people there are. This viewpoint is directed toward the Qualitative target. Science is based on this viewpoint. One real (true) objective fact because it is equally valid for all rational beings, because even though each thinking man

independently “measures” facts, these facts, if real, are recognizable as existing (certified by Quality, the *self*) and are equally valid for every observer. Thus one can use Protagoras’ statement that man is the measure of all things not in the quantitative sense that he means, but in the Qualitative sense as well.

In all, the belief that quantity can be credited as the objective reality because it is observable and measurable is not justified. The credit belongs to the Qualitative, the measuring unit representing the whole, the totality, and the person that observes. The objective reality of a material (quantitative) object, its being measurable and observable, is not due to its being quantitative. However, being deceptive and tending toward the position of Quality, quantity presents itself as the objective reality.

In nature, quantity obscures Quality. Among humans, the quantitative viewpoint hinders knowledge about Quality. Biology is a science of life; however, its emphasis is on the quantitative aspect of life. As a result the Qualitative evolution, the evolution that liberated Quality and thus Qualitatively elevated primordial life to the level of rationality, is seen as incidental.

Qualitative Evolution and Objection to it

If Darwin’s theory of evolution is seen as a fact, the emergence of rationality from primordial life invites the thought that the evolutionary ancestors of the *Homo sapiens* followed the Qualitative direction. There was a Qualitative evolution that consisted in the gradual freedom of Quality from quantity. The direction toward freedom led to rationality. That it took millions of years for life to reach the *Homo sapiens* stage

suggests that it was not a fleeting occurrence. It was rather a persistent pattern, a trend of progressive Qualitative advancement.

Biologist's View

Biologists object to the idea of a Qualitative evolution as an important event; they see it as something incidental. Their view seems to be well summarized by ethologist Richard Dawkins. He writes:

Life isn't like that. Evolution has no long-term goals. There is no long-distance target, no final perfection to serve as a criterion for selection, although human vanity cherishes the absurd notion that our species is the final goal of evolution. In real life, the criterion for selection is always short-term, either simple survival or, more generally, reproductive success. If after the eons, what looks like progress toward some distant goal seems, with hindsight, to have been achieved, this is always an incidental consequence of many generations of short-term selection. The "watchmaker," that is cumulative natural selection is blind to the future and has no long-term goal.²³

My Position. First, I agree that long term goals are probably only contemplated by individuals with a high degree of intelligence. Humans have long term goals. Maybe some other intelligent animals such as apes or elephants have some goals that are not very immediate or apparent. All other forms of life that participated in the Qualitative evolution pursue short term goals: their daily interests. Thus, unlike the view of religious biologists, the view presented here does not involve any long-term goals. The goal is the individual and its Qualitative freedom which accompanies intelligence. The living individual is the Qualitative "ingredient" of its species. Quality, as the individual, is a

²³ Richard Dawkins, *The Blind Watchmaker* (New York: W.W Norton and Co., 1986), 50.

goal that is immediate, and it can be said that Qualitative evolution is the result of generations of individuals pursuing their own interests subject to natural selection. This selection is blind because it represents quantity and the obstacle that it represents. Also, one has to agree with Dawkins that the notion that the final goal of evolution is our species is an “absurd notion” if a species is seen as quantity.

What biologists like Dawkins do not address separately is that individuals’ interests are not limited to the quantitative. There is also the basic interest which is Qualitative. It is logical to prefer what is real to what only appears to be real. What is not so real is quantity, but it is a means that life pursues because it is necessary. Without quantity, Quality cannot survive as an individual.

Dawkins writes that the criterion for selection is either simple survival or, more generally, reproductive success. He sees reproduction and survival as something of the same kind, only at different levels. Reproduction is “general.” Survival is “simple.”

Because sciences are limited to the study of reality from the quantitative viewpoint, that is, a viewpoint according to which only quantity is real and worthy of attention, Quality and its tendencies are usually ignored. When it is not possible to ignore the tendency to survive which is a tendency toward the preservation of Quality, it is seen as somehow beneath the quantitative. Survival is the goal of the Qualitative tendency but it seems to be loosely classified under reproduction, which is the effect of the quantitative tendency.

Reproduction is Quantitative. Reproduction is the quantitative criterion for natural selection, and survival is Qualitative but is dependent on the quantitative.

Reproduction, therefore, appears as the most important criterion of natural selection, so biologists assume that reproduction is the only purpose of life in nature.

Survival is Qualitative. However, the fact that the quantitative is dominant and survival is dependent upon it does not change the fact that survival is the effect of the Qualitative tendency in life. Survival is the pursuit of the freedom of Quality, and Qualitative evolution is the result of this pursuit. Without participating in the above thought, Dawkins connects survival with autonomy. He writes:

Staving off death is a thing that you have to work at. Left to itself-and that is what it is when it dies-the body tends to revert to a state of equilibrium with its environment. If you measure some quantity such as the temperature, the acidity, the water content or the electrical potential in a living body, you will typically find that it is markedly different from the corresponding measure in the surroundings. Our bodies, for instance, are usually hotter than our surroundings, and in cold climates they have to work hard to maintain the differential. More generally, if living things didn't work actively to prevent it, they would eventually merge into their surroundings, and cease to exist as autonomous beings. That is what happens when they die.²⁴

By recognizing that the effort to stay alive is an effort to be autonomous, that is to be free, one can say that survival is a Qualitative criterion for natural selection. The motivation to survive is a motivation to preserve Quality, and Quality is the individual as a whole, as a complete entity.

Wholeness of Individual Downgraded. Even though Dawkins does not say it in these words, his main argument rests on the belief that nothing exists in addition to the quantitative. Based on this belief, machines are equated with living beings. Both are

²⁴ Dawkins, 9-10.

indeed similar because they are complex and made of components that obey physical laws. Ignoring that there is a subjective self in living beings, Dawkins sees machines and living beings as so much alike that he lends man-made machines the status of “biological objects.” He also ignores the importance of the wholeness of a living being and only sees its quantitative aspect, which indeed is like a man-made machine. Seeing only the quantitative side of reality, he points out that in both the living being and the machine it is not the whole body of the individual that determines how the complex object will act; it is the way its parts, its components, interact with each other that counts. In both living beings and in machines the bodies obey the laws of physics, and the way these laws apply to its parts is what is important. He illustrates that even though the law of physics applies to the whole body this law does not explain how the bird flies. Only the laws of physics that apply to the components of the bird, (muscles, wings), and their interaction with other components of the body explain how the bird flies. He writes:

Take the law of motion, for instance. If you throw a dead bird into the air it will describe a graceful parabola, exactly as physics books say it should, then come to rest on the ground and stay there. It behaves as a solid body of a particular mass and wind resistance ought to behave. But if you throw a live bird in the air it will not describe a parabola and come to rest on the ground. *It will fly away, and may not touch land this side of the county boundary* (emphasis mine).²⁵

While illustrating that only the laws of physics that apply to the component parts of the bird explain how the bird flies, he remarks that the bird probably “will fly away, and may not touch land this side of the county boundary.” This action of the bird has

²⁵ Dawkins, 11.

nothing to do with the mechanics of flying. It has to do with the bird's urge to be preserve itself, to be safe, to survive, to be autonomous, to remain intact as a whole unit.

Tendency to Ignore the *Self*. There is a strong tendency among biologists to reduce the living being to a machine and to elevate machines to the status of “biological objects” even if the conclusion to the argument does not follow. Dawkins stipulates at the beginning of his book that both living entities and man-made machines are “biological objects.” At first he says that what decides whether objects are “biological” or not is their complexity, because it is the laws of physics of these complex components that explain how a body works. Since the living body is a complex unit made of many components that obey the same physical laws as the components of a car do, he insists that machines, like airplanes, computers or cars, can also be considered as biological entities. However, at the end he says that the reason one knows that a machine is “biological” is not that it is complex, but that it is obvious that some living entity made it! He writes:

chimps and dogs and bats and cockroaches and people and worms and dandelions and bacteria and galactic aliens are the stuff of biology. The difference is one of complexity of design. Biology is the study of complicated things that give the appearance of having been designed for a purpose. Physics is the study of simple things that do not tempt us to invoke design. At first sight, man made artifacts like computers and cars will seem to provide exceptions, yet they are not alive, and they are made of metal and plastic rather than of flesh and blood. In this book they will be firmly treated as biological objects.

...Never mind whether cars and computers are “really” biological objects. The point is that if anything of that degree of complexity were found on a planet, we should have no hesitation in concluding that life existed, or had once existed, on that planet. Machines are the direct

product of living objects, and they are diagnostic of the existence of life on a planet.²⁶

Thus Dawkins does not address his claim that complexity is what justifies his calling a computer or a car a “biological object.” Instead, he says that it is the fact that it is made by a living being. He is presenting a proof of existence of life on a planet, not a proof that complexity makes a machine a “biological object.” If one finds a simple, uncomplicated object on Mars, such as a knife, that surely will also convince anybody that living beings exist, or once existed on Mars. But, does that justify saying that a knife is a biological object? Dawkins' attempt to erase the difference between the living being as a whole unit with a *self*, and the non-living as a mere conglomerate or complex of interacting parts, is not valid.

Qualitative Trend

It took millions of years for life to reach the Homo sapiens stage, and this is due to the tendency in life to survive. The urge to survive is an urge to preserve and free Quality. The effort to survive produced the rational being because rationality is the manifestation of this Qualitative freedom.

How the Qualitative evolution happens: minimum number wins. Quality under the power of quantity (matter) does not know, but the fundamental order acts on behalf of Quality by using its quantitative tendency and the resulting quantity as a means to advance its freedom. Since quantity is the only means the fundamental order has to

²⁶ Dawkins. 1-2

execute its intent, it is quantity's interpretation of its intent that ultimately decides the form this organization will take. Quality translated into quantitative terms means the **minimum number** that belongs to a quantity, and the minimum number is also the winner of the "prize" that each individual unit strives for: the manifestation of itself, as primary, as "central." A center is a minimum number of total multiple points in a sphere; so the basic organization of quantity that serves as a means to Quality is a centralized unit. The center of gravity, the nucleus of an atom or a cell, or the central nervous system of a person, represents this quantitative interpretation of what is primary. The quantitative interpretation of Quality as a minimum number is also in the form of a unit (minimum number) that is on top of a pyramid of power. In a way, what is on top of a pyramid of power can be said also to be "central" to a quantitative structure. This quantitative structure as a center or as a pyramid of power is used by the fundamental order as a **means** to the goal, which is Quality.

Progression of freedom. The complexity of the quantitative aspect of a natural unit is like the complexity of a deductive argument. All the natural units are like valid deductive "arguments." They all preserve *existence itself* or the objects would be non-existing. It can be said that these units have *existence* as their "conclusion," and in this sense, all existing objects are the same. However, since organizations vary as outside demands from the environment vary, not all natural units are the same. Some can be compared to "arguments" (internal organizations) that are better than others for the purpose of protecting Quality by adaptation to the environment. Some organisms, like scorpions, for example, have stingers containing poisons that protect them. Other

organizations are better for liberating Quality. The best and the most successful “argument” so far in favor of freedom of Quality is the human anatomy and physiology with its central nervous system. The rational *self*, which is *existence itself*, is the “conclusion,” of the human anatomical and physiological “argument.” His tendency to pursue his perfection is free from the mediation of quantity. This free tendency is Kant’s “good will.” This freedom of the Qualitative tendency is possible because of the anatomy and physiology of the rational being, which is like a logical argument that not only preserves Quality. It is also liberates it to the point that it can say, “*I exist*.”

Experience and Self-organization: Hypothesis

Organization of anatomy and physiology. The improvement on the organization of the body of the individual (quantitative aspect) is necessary as a means for the individual’s Qualitative manifestation. There are genetic changes that occur regularly in each individual.

John Alcock writes:

1. Genes are present in all living things; they are nucleic acid that contain coded information about protein synthesis.
2. Many genes occur in two or more alternative forms or ALLELES. This genetic variation results in the production of slightly different forms of the same protein.
3. If one allele produces developmental effects (through its variant protein) that usually cause its bearers to replicate the allele more often than other individuals with different alleles, then the successful allele will become more common in the population.²⁷

²⁷ John Alcock, *Animal Behavior*, 4th ed. (Sunderland, Mass: Sinauer, 1989), 9-10.

Hypothesis

Since, in addition to immutable genes, there are alternative genes that are not forever the same, but are slightly changed, could these genetic changes be the recorded daily subjective experience of events of great significance to the *self* of the living body (the “argument”)? After all, it is known that experience can influence the body. Lamarck's claim of a big genetically transmitted one-step change in an individual, like thick soles on the feet of individuals whose parents walk barefooted on rough terrain, proved to be wrong. However, is there anything that makes it unlikely that those minuscule protein genetic changes in genes called “alleles” are genetically transmitted daily experiences? In this form the daily experience of significant events in the individual's life are added data to the genetic makeup of the individual. If one looks at the logical structure of the living body as being the means that serve the needs of the individual's Qualitative freedom, this gradual input of data needed to adapt the body to the needs of the individual of a certain environment is thinkable. As the individual experiences daily challenges and makes choices, the feelings that accompany experiences are recorded, and protein changes in such a way that useful traits appear to be tested by the outside environment.

These changes could have been crucial in the advancement of intelligent life and therefore in the appearance of the *Homo sapiens*. Thus one can imagine that everyday feelings of the individual experience caused extremely small genetic mutations at the level of protein molecules called “alleles,” and thus they are the main determining cause

in bodily improvements, “developmental effects” that prove useful during evolution. Thus feelings could be the basic determining cause of evolution.

Feelings. All feelings, good or bad, sensory as heat or cold, emotional as love, hate, anger, compassion, indignation, rage, originate from Quality. Feelings come from Quality because it is subjective in the sense that it exists as *itself*. The human being, for example, exists as *I*, as *self*. Feelings relate to Quality, which manifests as *itself*.

When Quality is bound by quantity, as is the case among lower forms of life (high quantity dependence), its reactions to experience are mediated by automatic instinctive movements. In this case, Quality reacts through quantitative, rigid, repetitive movements. Instinct is the mediated expression of Quality as guided by the fundamental order. There is a tendency in science to ignore feelings for being inaccurate. It is also assumed that feelings are below rational thought. This is because it is thought that feelings can only refer to the quantitative, to one’s body, for instance. However, feelings are also Quality-oriented, mediated by quantity or not. Rational beings have Qualitative feelings. When these Qualitative feelings are weak, however, quantitative feelings intrude. Kant’s “duty” is manifested Qualitative feeling under the pressure of competing feelings directed toward the external, the quantitative. But even though Qualitative feelings are obscured by the quantitative, rational beings are aware of the primacy of these feelings, experiencing them as imposing, as duty to act in a certain way just because it is the right thing to do. According to Kant, “duty” is a necessary action out of respect for the law. The Qualitative tendency respects the intent of the fundamental law, which is Quality. Respect for Quality is Qualitative feeling.

The beginning of morality. There is no one single line that divides human from non-human animals, it can be assumed that animals that are closest to human intelligence, are the ones that have feelings most resembling human feelings, and if so, they also have Qualitative feelings. Alasdair MacIntyre argues that there is continuity in life. His position is that

to acknowledge that there are animal preconditions for human rationality requires us to think of the relationship of human beings to members of other intelligent species in terms of a scale or a spectrum rather than of a single line of division between “them,” and “us.” At one end of this scale there are types of animals for whom sense perception is no more than the perception of information without conceptual content. There is, in Heidegger’s terms, no “as structure” whatsoever. At another level are animals whose perceptions are in part the result of purposeful and attentive investigation and whose changing actions track in some way the true and the false. And among such animals we can distinguish between those whose perception and responses are more fine-grained and those whose perceptions and responses are less so.²⁸

Thus, if there is no dividing line between human and non-human animals, one can say that morality begins in nature. But, biologists do not acknowledge any Qualitative tendency. So, in order to describe a Qualitative aspect of life, (which among humans has always been exclusively equated with religion) they introduce amusing analogies with quotes from the Bible, without addressing the Qualitative aspect seriously. Under the heading of “Evolution of Helpful Behavior” John Alcock writes:

Robert Axelrod and W. D. Williams have shown that *if* there is a certain proportion of reciprocators in a population and *if* potential cooperators interact repeatedly, then individuals that use the simple

²⁸ Alasdair MacIntyre, “Dependent Rational Animals: Why Human Beings Need the Virtues, A revised version of 1996-7 Carus Lectures,” photocopy (Durham N.C.: Department of Philosophy, Duke Univ., 1998), 51.

behavioral rule “Do unto individual X as he did unto you last time you met” can reap greater gains than individuals that always try to accept assistance while never helping in return. The strategy of taking advantage of a cooperator, although possibly providing a large return for the cheater in the one interaction, in the long haul may yield less than a strategy of cooperation with these individuals that in the past cooperated with you.²⁹

The quote “Do unto individual X as he did unto you last time you met” is “a simple behavioral rule” from nature. It refers to the Qualitative and one can find the same meaning in the Bible. It is related to the advice to “love your neighbor as yourself” if the definition of “neighbor” is taken as Jesus gave it.³⁰ After Jesus responded to the lawyer who wanted to know what he should do in order to inherit eternal life, the lawyer asked: And who is my neighbor”? Jesus responded with a question: “Which of these three (the priest, the Levite, or the Samaritan), do you think proved to be the neighbor of the men who fell among the robbers?” The lawyer replied: “the one who showed mercy.” And Jesus said to him, “Go and do likewise.” So if Jesus had had the opportunity to talk to the man who was helped by the Samaritan, He would have said to him - Love the Samaritan as you love yourself because he showed mercy on you. This advice is practically the same as “Do unto X as he did unto you last time you met.” “X” would be the Samaritan, the neighbor. A bird that helps is the Good Samaritan. It is the “neighbor.” The bird that receives help is the one that later (next time they meet) obeys the moral command (has the Qualitative feeling) to “love its neighbor” by favoring him. Apparently, among birds, good deeds are not forgotten. The same bird that received help

²⁹Alcock, 479–480.

³⁰Luke 10:29

returns the favor; the bird that receives help will have the chance to “love his neighbor as himself.” in the future. Apparently avian “Good Samaritans” are rewarded, or it would not “pay” to be one. As biologists say, this is indeed a simple behavioral rule in nature. This also shows that Qualitative behavior is also a practical, useful behavior that is conducive to survival.

The bird very likely does not know what it is doing, but the act of satisfying its Qualitative feeling very likely makes it feel good or it would not repeat it the next day. If this bird had received an unpleasant shock every time it fed another bird’s offspring, would it still help? Would it patiently endure, knowing that in the long haul it would be rewarded? It is more likely that as the bird helps, it is happy, and this positive feeling is immediate, not “in the long haul.” Happiness is perhaps like a buzz or an indicator that reminds the individual when it has indeed taken a direction toward Quality, a self-oriented direction. Also, since quantity is repetition, pleasant feelings, when repeated, might be engraved in the genetic code, and thus, might influence the anatomy and physiology of the individual.

The Qualitative evolution is a Qualitative flight from the power of quantity. It is the flight from the rigidity and cruelty of the power of quantity and toward freedom and lasting happiness.

Terror and Deceit

In addition to positive experiences, animals have negative experiences. The chance of escaping negative feelings is subject to the laws of quantity. The more dependent on quantity, the less chance there is of escaping unpleasant experience.

Because life starts from the power of quantity, it does not start from kindness and compassion. Compassion is a sign of acknowledgment of Quality, and it is possible only with freedom from the rigid, cruel mediation of quantity. A primordial individual is highly dependent on quantity, and it can only recognize itself as a minimum number, which is seen as *itself*. In addition, as it is bound, Quality aspires to see itself as a **winning** minimum number, and so another Quality is seen only as a means for its survival. The individual itself is its own goal.

Thus life, because it starts from the power of quantity, starts from what for a sentient individual is terror. A praying mantis eats a fly; a bat eats the praying mantis; a bird-eating tarantula snatches a startled baby bird from its nest and eats it slowly; a lion eats a gazelle, or a wildebeest is eaten alive by a horde of wild dogs who slowly chew it to death, starting from its hind legs, etc. This nightmare in life describes well the effect of the power of the quantitative over Quality. It is the struggle for survival, the survival of the fittest, and natural selection, described by biologists.

In sum, since life, Quality's active search for freedom, begins from incarceration by quantity, and since this incarceration is the inability to identify with another Quality, the effect of this inability is terror. And life, as in Qualitative evolution, tries to escape from this terror.

Deception. Since life begins from beneath the power of quantity, and since quantity is deceptive, and since quantity under the fundamental order is a means, deceit in the form of body structures or appearance is common among the highly quantity-dependent animals. Butterflies, for example, display huge “eyes” to scare away

predators. Some caterpillars look like a snake's head. Insects blend with the environment, simulating leaves or twigs. However, as freedom of the Qualitative is achieved, as is the case among intelligent animals, such physical deception begins to disappear in the battle for survival. But, since quantity is present in every individual, deception in actions continues. Apes use deception to get what they want.

Chances to suffer and die. As one can look at the chances an individual has to survive, one can also look at the chances an individual has to suffer terror and die. The more dependent he is on quantity, the greater chance an individual has to suffer and die. Among individuals that are highly dependent on quantity, only a minimum number do not suffer and live.

As the Qualitative evolution progressed, as freedom of Quality increased, the chances of living under permanent threat of horror decreased. Very intelligent species no longer face a daily threat from predators that want to eat them. An offspring of an orangutan is no longer on any species' daily menu. As intelligence appears, (with the exception of man who put himself back under the power of quantity) fewer individuals go through the terror of being prematurely killed by either another species or by their own kind. There are no mass killings (wars) among intelligent species in the wild as there are among ants. Intelligent species are on top of the food chain because of their intelligence; the Qualitative evolution increases the chances of the individual (Quality) to live happily.

Difference Between Things

The basic difference between all that exists is in the degree in which Quality can manifest itself within quantity. The initial reason for the creation of the universe is absolute perfection of Quality by integration with quantity as a means. The tendency to self-perfection begins, as the tendency to increase self-value, but out of ignorance (33) this tendency is toward quantity. This ignorant (quantity-oriented) tendency moves things in the universe in many different ways. However, as freedom of Quality progresses, knowledge about Quality also progresses, and the pursuit of increase self-value becomes Quality oriented. The effect of this Quality-oriented search is life.

Inert objects, such as an accidental unit like a rock or even a conventional unit such as a thumbtack, are made of sets (quantity). Humans artificially shape the thumbtack, so it becomes a complete unit that exists as itself. Humans made a Quality out of a set of natural centralized unit such as atoms (chunk of iron). Each atom gives the set its reality, and the set as one single unit manifests, with man's help, as Quality, that is, as *it*, and that exists as itself. Because this thumbtack is the manifestation of *existence*, (of its atoms), it is a unit that certifies its own existence, as Saul Kripke notes, and it can "prove" its *existence* to someone who steps on it inadvertently. The thumbtack does not know that it exists because knowledge is a sign of Qualitative freedom. The iron molecule composing the thumbtack is not free; it is repeated, that is, it is mediated by quantity. Thus the thumbtack's Qualitative manifestation is limited to *existing as itself*.

But in life, during the Qualitative evolution, Quality begins to manifest itself as *itself*, and directs its urge to increase self-value not by representing or accumulating quantities, but by gaining freedom from quantity's mediation and its rigid power. The anatomy and physiology of the individual are the necessary means to free the Qualitative tendency from quantitative mediation. They are the means the Qualitative tendency has to reveal itself, as the Qualitatively will of the individual. The fundamental difference between living beings is in the degree of freedom of Quality and thus, in the nature of the goal toward which this will is directed.

A living individual is living because its quantitative aspects, the atoms, the molecules, and the cells of its body are organized by the fundamental order as one single, complete, logical "argument." The "conclusion" of this "argument," the *existence* of the individual, manifests as *itself*. The anatomical and physiological organization gives *existence* (Quality) the possibility to transcend the quantitative limitation (inertia) and react and feel as *itself*. Simple life already not only *exists* as *itself* (as a thumbtack does), it also *feels* as *itself*, as Quality, that is, as a primary entity. This primacy, in quantitative terms, refers to the minimum number that is most important. This self-evaluation of Quality, as the center, manifests as an urge to survive, to preserve Quality, which is the beginning of Qualitative knowledge of itself. Even a flagellate swimming in a benign solution will change direction to avoid a drop of a solution that may be harmful to it.

The very intelligent but not yet rational animal, besides *existing* and *feeling* as *itself*, as being central, also *recognizes* itself as being primary as a center of the universe. Such self-recognition is a more advanced Qualitative knowledge. It is the beginning

of the integration to quantity, not as a part of it, but as an end in itself. It is a self-evaluation, and the origin of self-respect, self-worth, or “pride” that intelligent individuals such as dogs, apes, or humans display. It is the need to present oneself as worthy and to have others recognize that worthiness. This self-pride explains the necessity that some intelligent animals including humans have to “save face.”

The rational human being expands this freedom of Quality and his urge to increase self-value. Besides *existing*, *feeling*, and *recognizing* himself as an end in himself, he also *knows* that he knows, or has the urge to know, and to have others know about Quality. The rational being recognizes that Quality as such, in himself and other rational beings, has primary value.

Idealism. The same tendency that moves the universe, the tendency to increase self value in the rational being, because it is an unmediated tendency, constitutes a search for perfection. The self-perfecting tendency in the rational self manifests itself as “idealism.” Because the rational self is a manifestation of Quality, or what is presented in logic as “truth,” idealism is the knowing pursuit of the truth.

The acknowledgment of Quality is also known as “love” or “compassion.” Everything that can be labeled as “progressive,” or “civilized” comes from a very few rational beings known as “sublime artists,” saints” “creative geniuses,” or “prophets.” These are the few rational beings, aware of both the quantitative (measurable) and the Qualitative (immeasurable), who survived long enough in the irrational world where only the quantitative, the vacuous is considered real and where “whatness” is negated. They survived long enough to give our species that which elevates it mentally and morally as

well as materially. Intelligent humans provided the material tools needed to stay clean, warm and fed, as well as the tools needed to relate to one another by transportation and communication.

The rational individual, the idealist, appreciates Quality as “perfection.” as integrated with quantity, and where quantity remains as a means only. The idealist sees this integration as beauty, justice, and truth, proving his or her self worth by creating works that reflect this perfection.

In all, the difference between things is in the way Quality manages to manifest itself through its quantitative means. The ascending gradation of Qualitative freedom makes experience and feelings possible, and these feelings gradually influence the anatomy and physiology of the individual. The experience of the individual adjusts and “perfects” the quantitative machinery to further meet the need of Quality, the individual. The complex human central nervous system already represents this quantitative “perfection” in the form of precision. It allows the unmediated revelation of Quality as the *self* that can say *I am*. It is the fundamental order’s successful reach toward the freedom of Quality.

Thus Qualitative evolution shows that Quality fled from the power of quantity. This fight allowed a gradual freedom of Quality from the power of quantity because quantity gradually became a useful means. As will be illustrated next, nature gradually but drastically reduces the power of quantity. But even though all life wants to flee from bondage and from suffering such as the terror of being slowly eaten alive, for example, only a minimum number of species succeed in freeing themselves.

CHAPTER 3

Fundamental Order - Empirical Support

Two Trends

In addition to speculation about a fundamental order that favors Quality and restricts the power of quantity, the facts of nature presented in this section provide the empirical support for the existence of this order. The significant aspect of this empirical support is that it also reveals the details necessary to know why humans exists in a quantitative trap where the majority lives in misery. It gives specific information about why and how humans inverted the values of the most fundamental order.

The fundamental order promotes the freedom of Quality, but at the same time the laws of quantity hinder it. As a result, only a minimum number of species win freedom. In order to make room for Quality's freedom, the fundamental order controls quantity. There is a chart that illustrates the relation that Quality and the power of quantity have in nature. It shows that the power of quantity is gradually but drastically reduced as freedom of Quality from this power increases. In order to gauge the decline of the power of quantity as intelligence grows, I will first present an illustration of the pre-Homo-

sapiens Qualitative evolution, an evolution in scale form, that begins with the simplest unicellular form of life, and ends with the most intelligent ones, such as apes. Between these two extremes I will also intuitively introduce some species that appear to fit.

The Helen Kern ³¹Chart

<u>QUALITY'S FREEDOM</u>	<u>QUANTITY'S POWER</u>
PROTOZOA (Cholera bacterium)	1,000,000,000 per day, times 365
MOLLUSKS (Oyster).....	1,000,000 per year
AMPHIBIANS (Bullfrog).....	20,000 per year
INTELLIGENT MAMMALS (Wolf).....	12 per year
PACHYDERMS (Elephant).....	1 in 3 years
APES.....	1 in 3 years

Progressive Qualitative Trend.

About Quality. The left column of this chart is a very abbreviated evolutionary scale, a list of some animals that can intuitively be ordered according to their proximity to rationality. This column begins with one example taken from among the most quantity-dependent forms of life. If unicellular life is "primitive" or "lower"³² it is only because Qualitatively, it lacks the significance that an individual primate has. The E.

³¹ My mother and my teacher

³² Freedom of Quality is the only justification for referring to the human being as a "superior" animal. Since biologists only study the quantitative aspect of life, justifiably they object to the reference to animals as superior, inferior, lower or higher. However, since there is also a Qualitative side in life, it is hard to give a coherent account of life without resorting to words the use of which can only be justified within the Qualitative context. It is the state of Quality in respect to the power of quantity what makes an animal "lower," "higher," "inferior," or "superior."

coli bacterium can hardly be said to have individuality. It is not a whole entity that is indivisible in the way bodies of intelligent animals are. It divides to reproduce.

On the opposite end of the same left-hand column are the Qualitatively free animals. Again, if they are "superior" or "higher" it is only because they are Qualitatively significant- significant as individuals. They are whole, indivisible units with a definite individuality, perhaps even with conscious intelligence. Among them are the apes. Thus the left-hand column in the above chart illustrates the progressive Qualitative (individual) trend.

Between the bacteria and the apes one can insert species that intuitively fit in between the two high and low Qualitative extremes. Among them there are those that seem to reproduce the most. For example, among mollusks there are some sea snails that reproduce very little. However, I will only look for the "champions" of reproduction because these will show the range of the power of quantity within this genus or species. Oysters are some of these champions among mollusks. One oyster can lay one million eggs for fertilization. There are also many species of frogs, but among them is one species of which the typical individual (its Quality) reproduces (is repeated) the most. The maximum number shows how far the power of quantity can go among these various animals

About quantity. The right hand column illustrates the numbers. These are not the numbers of surviving and reproducing offspring. They are numbers that illustrate the power of quantity; thus it includes the number of individuals that will die or might suffer before having a chance to live and to multiply.

From this chart one can see that among simple forms of life one can find the greatest rates of reproduction occurring in the shortest period of time. As the whole earth is not covered with E. coli bacteria this means that only a small percentage of individuals live and the rest die prematurely.

On the other extreme in the right hand column are the numbers indicating the maximum rate of reproduction that an ape can achieve. These numbers pale in comparison with those of the primitive forms of life. In between these two extremes, the rate of reproduction gradually decreases.

Thus, corresponding to the progressive freedom of Quality, the numbers in the right hand column illustrate that the **maximum** reproductive rate (quantity) regresses from millions in a day to only one every three to five years. Often this one offspring, of a gorilla, for example, succeeds in reaching maturity. In sum, the numbers in the right hand column illustrate the dramatic drop in the significance of the power quantity that corresponds to Quality's freedom from this power. In all, the Helen Kern chart tells the story of the drastic decline of the power of quantity as Quality gains freedom by means of the organization of quantity. This chart illustrates that nature gradually reduces the power of quantity as freedom of Quality is achieved.

These declining numbers illustrate the also progressive increase in the individual's chance of living to maturity. As intelligence grows, the chances an individual has (Quality has) to not die (to not suffer) prematurely also grows.

Ceiling of Reproduction

The more abbreviated the representation of the evolutionary scale is, the more eloquently it shows the decline of the power of quantity as intelligence increases. As intelligence progresses, this maximum capacity to reproduce inexorably declines. One oyster can lay one million eggs; however, this large number does not approach the high capacity that a unicellular organism has to reproduce. The above chart illustrates that there is a gradually descending ceiling of reproduction in species corresponding to the gradual increase in the freedom of Quality, a ceiling through which the power of quantity cannot penetrate.

The Helen Kern chart illustrates the following:

1. All animals that reproduce in the millions belong to species the Quality of which is not significantly manifested. An E. coli bacterium has very little individual significance.
2. No intelligent (Qualitatively free) animal can reproduce at the high rate in which an E. coli individual can.
3. These two facts underscore that the power of quantity is at its peak only among the most quantity-dependent (lower) life forms.

The significance of the power of quantity drops from millions in one day to one every few years as intelligence progresses. Each number at each level of the scale reflects the balance existing within this species between Quality and quantity.

If there is a fundamental order in nature that favors Quality, and if quantity is a contrary that devalues Quality, one can predict that this fundamental order will guard the already achieved Quality by imposing a ceiling of reproduction through which species cannot penetrate. That impenetrable ceiling prevents an animal that has already achieved a certain freedom from going back to reproducing at a higher rate, thus losing the freedom it has already achieved.

Quality Progressive - Quantity Regressive

In sum, the above chart illustrates that in nature there are two fundamental trends. The **progressive Qualitative** trend that led to the appearance of Homo sapiens, and the **regressive** trend of the power of quantity. As the fundamental order organizes a means and as it guides Quality toward its freedom, it simultaneously **controls** the power of quantity, thereby reducing it.

Opposite Trends. The quantification of Quality illustrates (Helen Kern chart) at least that Quality and quantity are not the same because they act differently. Most significantly, this chart illustrates the contrary nature of quantity in relation to Quality. It illustrates that Quality and quantity exist in an inversely proportional relationship.

Not free (Low) Quality.....High power of quantity

Free (High) Quality.....Low power of quantity

If one can assume that two complementing things that act in an inversely proportional way are opposites, then Quality and quantity are **opposites**.

Opposite relationship not symmetric. While a lower form of Quality is a necessary requirement of its existence with high power of quantity, lower forms of life do not necessarily have to live within a high power of quantity. That is because, under the fundamental order, Quality and quantity are not the same and are not treated in the same way. Quality is the goal; the power of quantity is only a means. Thus it is possible that Low Quality can exist with low power of quantity, but high Quality - requires low power of quantity to remain free. Thus the inversely proportional relationship between Quality and quantity is not symmetrical because the fundamental order treats them differently. The inversely proportional relationship between Quality and quantity is sometimes asymmetrical because the fundamental order is partial to the Qualitative. Some inferior, or not very intelligent, animals reproduce very little, and this does not upset the natural balance between the Qualitative and the quantitative. If, under the fundamental order, Quality is the goal, and if the power of quantity obstructs its tendency to freedom, then it is not a contradiction of this order for the Qualitative to be free from this power at any level. Low power of quantity is compatible with low Quality. What is **not** compatible is high power of quantity with high Quality. Thus when lower or even somewhat higher but still unintelligent animals can afford (because of favorable conditions) the individual freedom of low reproduction rate, they can do so without upsetting the natural balance between the Quality and quantity. The quantitative is only a means that life, lacking sufficient Qualitative freedom, needs in order to survive. However, it is not only a mere means; it is a means that **limits** the freedom of Quality. Since this freedom is the goal of the fundamental order, any means other than high power of quantity that helps animals

survive is valid. Favorable environmental conditions, special physical characteristics such as poisons and stings, hard shell in snails or simply a large body size, are those means.

Large size is another means that replaces quantity. It gives an animal an advantage over predators. It is conceivable that size is just as important in the reduction of the reproduction rate as intelligence is. There is no question that large body size does contribute to a low rate of reproduction; it takes more effort and time to build a large body. However, I argue that large size only replaces reproduction as a means of survival and falls under the same category as poison, spines, shell or camouflage.

If large size were as necessary as intelligence for the reduction of the reproduction rate, then all large animals would reproduce in small numbers. This, however, is not so. There are large animals that have a high rate of reproduction. There are large animals, much larger than an ape that also reproduces at a much higher rate than they. Even though the largest sharks, the sand sharks, for example, bear only one or two cubs in each pregnancy, there are sharks, the whale shark that has a much higher reproduction rate. "The whale shark (*Rhincodon typus*) grows to a length of 18 meters or more and weighs up to 40 tonnes.... About 300 embryos were found in the uteri of a pregnant female harpooned on 15 July 1995, 2 miles of Tong-Ho on the East Coast of Taiwan. The shark was 10.6 m TL and 16 metric tons weight."³³ In addition, "the

³³ Abdul Shukor, "Recent Updates on Whale Shark Reproductions." Online. Available <http://web.singnet.com.sg/~sharkegg/whaleshark.htm>. Aug. 11, 1999.

leathery turtles are also large animals. They grow to a maximum of 9 ft., the shell being up to 6 ft, and may weigh up to 1800 lb.”³⁴ These turtles reproduce often and in large numbers. “About 60-100 eggs, 2 – 2 ¹/₄ in. in diameter, are laid....And each female comes ashore to lay about four times in one season.”³⁵ Thus, big-sized animals generally reproduce less; they can, however, also have a high rate of reproduction.

On the other hand, apes can neither reproduce several times a season nor have more than one offspring at a time, twins being the exception. Very intelligent animals always have a low rate of reproduction. Even humans who are under quantitative pressure and aided by science to go in that direction have succeeded only in having women give birth to seven or eight children in a single pregnancy. They cannot compete with the whale shark, or with the leatherback or the loggerhead turtles.

Sexual Reproduction

Nature Favors Quality- Biologists Biased Toward Quantity

Since reproduction is a crucial point in the life of a woman, a definition of what female sex means is necessary to place things in the proper perspective. In addition to cultural pressure, the sciences related to life are guilty of omission of the notion of Quality. One specific way this omission affects human life is by confusing the role of women as females.

³⁴ *The Marshall Cavendish International Wildlife Encyclopedia*, rev. ed. (North Bellmore, N.Y.: Marshall Cavendish, 1991), vol. 13, 1423.

³⁵ *Ibid.*, 1424.

Biological science and Quality. Because all humans live in a psychological trap, biologists do not use the Qualitative-quantitative criteria; thus they overlook the Qualitative evolution. They overlook its progressive nature and the regression of the power of quantity in the presence of Qualitative freedom.

The Qualitative is ignored, as Donald Griffin points out when he states that:

most scientists who study animal behavior have had little or nothing to say about the feelings or thoughts of the animals that interest them so keenly, and in their writing one almost never finds any use of terms such as "think," "intend," "believe," and the like.³⁶

When there is something Qualitative that biologists observe it is interpreted in quantitative terms. They only see fights for power in hierarchical orders, for example. However, the tendency to establish hierarchical order based on brute force comes from the quantitative tendency. It is not that females do not have fights for hierarchical positions; they also have a quantitative tendency. Every individual has both the Qualitative and the quantitative tendencies within itself. Females especially, but not exclusively, have another need in addition to the need for hierarchical positions; this need is for friendship, a relationship based on caring. If a wild dog lies on his back while another pretends to bite him in the neck, biologists talk about hierarchical orders and signs of submission. However, this explanation does not make sense when the dog that was on top suddenly drops to the ground and the other playfully finds itself on top. Why not simply say that they are friends that trust each other, that they are only playing?

³⁶ Donald R. Griffin, *Animal Minds* (Chicago: Univ. of Chicago Press, 1992), 6.

Biologists ignore compassion; they do not notice that in the midst of a life where only the strongest survive, there are islands of compassion and care. These islands are the Qualitative tendency most commonly manifested as maternal instinct. In these islands of compassion, the helpless individual not only finds comfort, but also learns to be compassionate. It is true that maternal instinct begins in the form of automatic reflexes; however, because there is a fundamental order that is partial to the helpless individual, it directs these automatic movements in ways that directly benefit the helpless offspring. As intelligence progresses, maternal care also progresses from a mere automatic reflex to a flexible caring behavior that adapts more precisely to the needs of the helpless individual.

By ignoring the Qualitative, biologists ignore that part of life that gains increasing importance as it approaches intelligence. They are very sure of what they are doing when they study inferior forms of life like slugs or cockroaches because these beings are "inferior" which implies high dependency on the automatic rules of the quantitative. Thus they can advance hypotheses that are more easily confirmed or denied by simple mechanical experiments in laboratories. The "how" of animal behavior of highly quantity-dependent animals is relatively simple because they react with automatic reflexes. When scientists study intelligent animals in the field, however, the explanation becomes more difficult. The "how" of intelligent animal behavior becomes difficult because the brain anatomy is not simple. The most interesting knowledge about the "why" of intelligent animal behavior is reduced to its quantitative aspects, ignoring the Qualitative.

The reason I bring out the bias against the Qualitative within the science of biology is because this bias results in ignorance about the female sex, and this ignorance in turn is responsible for the historical subjugation of women by the opposite sex.

The sexes are not individuals; they are two systems that promote each tendency. The psychology of each sex is the tendency that its sex promotes.

Biology only acknowledges successful reproduction, (the quantitative tendency which is the male sex), as the sole purpose of life. The role of the female sex as the Qualitative tendency is ignored. However, the female sex tendency is not one and the same as the individual of female sex. All individuals have both the Qualitative and the quantitative tendencies in them. Thus, the female individual also has a quantitative tendency. The Qualitative tendency in her, however, is what made the Qualitative evolution possible as it **controlled** quantity reducing the reproduction rate, as illustrated in the chart on p. 75, to make room for the development of Quality. And at the same time it fostered the gradual freedom of Quality, the individual.

Sexual Reproduction: Biologists' Puzzle

The main hypothesis in biology, that the sole purpose of life is to make as many copies of one's genotype as possible, is not confirmed by the facts of nature. The hypothesis that there is a fundamental order that is partial toward the Qualitative, however, is amply confirmed. Because the biologist's main hypothesis that the only point of life is to inject one's genes into the next generation is one-sided (mistaken), they have difficulty explaining the existence of sexual reproduction.

Sexual reproduction is the object of Charles Darwin's doubting position regarding affirmations that the role of sexual reproduction is reduced to "mere dissemination." He writes:

We do not even in the least know the final cause of sexuality: why new beings should be produced by the union of the two sexual elements, instead of by the process of parthenogenesis. When we look to the state in which young mammals and birds are born, we can at least see that the object gained is not, as has sometimes been maintained, mere dissemination. The whole subject is as yet hidden in darkness.³⁷

This darkness is the effect of the omission of Quality. Biologists show puzzlement rather than acknowledge that their hypothesis may be wrong, incomplete. Under a sub-heading of "The Puzzle of Sexual Reproduction," John Alcock writes: "The most basic question of all for any sexually reproducing species is, Why bother with sex?"³⁸

Since the main point of life, according to biologists, is the injection of one's genes into the next generation, sexual reproduction does not make sense; asexual reproduction does. However, as Alcock comments "reproduction is still with us," and he asks:

Why do female satin bowerbirds bother with males? How much simpler it is for animals that reproduce asexually. If the point of life is to inject one's genes into the next generation, what more direct way to do so than to run off photocopies of one's genome and place them in the offspring? Imagine a mutant bowerbird that reproduces parthenogenetically. All of her offspring will be capable of reproducing on their own (and so can be considered egg-producing females), whereas the sons of a sexual female must mate with a sexual, egg-producing female in order to propagate their mother's genes. If we assume that the

³⁷ Charles Darwin, "On the Two Forms, or Dimorphic Condition, in the Species of *Primula*, and on Their Remarkable Sexual Relations," in *Collected Papers of Charles Darwin*, ed. Paul H. Barrett (Chicago: Univ. of Chicago Press, 1980), 2:61.

³⁸ John Alcock, 372.

sons and daughters of a sexually reproducing female require the same amount of maternal resources per gamete, then for every son produced, a sexual female loses one daughter. If one half of the progeny of the sexual female are sons and the other half daughters (which is the typical case), then parthenogens should have twice as many surviving daughters as sexual females. (We assume that a parthenogenetically produced daughter has the same survival chances as a sexually produced one.) Each of the parthenogenetic female's daughters should also have twice as many female offspring as the genetically distinct sexual female in the population. The proportion of parthenogenetic females will therefore rapidly increase (if our assumptions are correct), eventually leading to the extinction of the sexually reproducing females and males.³⁹

Table I
Advantage of parthenogenesis if sexual and parthenogenetic females produce the same average number of offspring

Sexual Individuals				
Generation	Males	Females	Parthenogenetic Females	Proportion of females that are Parthenogenetic
1	49	49	1	$1/50 = 0.02$
2	49	49	2	$2/51 = 0.04$
3	49	49	4	$4/53 = 0.08$
4*	45	49	7	$7/52 = 0.13$
5	43	43	13	$13/56 = 0.23$
.	.	.	.	.
.	.	.	.	.
n	0	0	100	100

To keep the total population of this species about 100, across the board cuts of 10 percent and 5 percent were made in generations 4 and 5, respectively.⁴⁰

Alcock does not mention the fact that the unicellular organism is the champion in its ability to inject its genes into the next generation. It can do it faster and in greater

³⁹ Alcock, 373-375

⁴⁰ Alcock, 375.

quantities than any other more Qualitatively advanced animal possibly can. If that is the whole point in life, one might ask why did sexual reproduction appear at all? However, Alcock's question is still relevant because it shows that the logical prediction that follows from biologists' major hypothesis, that the sole purpose of life is reproduction, dissemination of one's own genes, is not confirmed by nature. Biologists scramble for reasons why this is not so without arriving at a satisfactory answer. The best explanation they offer is that sexual reproduction provides genetic diversity.

Alcock writes:

It is well known that sexual reproduction results in a continual formation of novel genotypes. In the making of gametes during meiosis, the genetic information of the original reproductive cell is thoroughly scrambled because of recombination. As a result, an egg or a sperm that is produced may carry any one of the huge number of possible combinations of genes. The genotypes that are produced by the union of eggs and sperm are virtually guaranteed to be unique (except for identical twins).⁴¹

Alcock's question should have been Why does the male bowerbird bother so much? It does not seem that the female is bothered too much. Nevertheless, his question is: Why do female satin bowerbirds bother with males? Some have suggested that since some males offer more than just genes but also help feed and care for the young, these benefits will double her production of offspring and thus enable her to out-reproduce her parthenogenic competitor. But Alcock and George C. Williams are not satisfied with this answer. Alcock asks: "...even when males offer females more than their genes there

⁴¹ Alcock, 376.

would seem to be great advantages for females that reproduce asexually[846]. Yet, as we are all very much aware, sexual reproduction is still with us. Why is this so?"⁴²

There are two hypotheses presented by George C. Williams on sexual reproduction that are worth mentioning, according to Alcock: The lottery hypothesis, and the coevolution hypothesis. About the lottery hypothesis in regard to sexual reproduction, Alcock explains:

George C. Williams has argued that sexual reproduction is analogous to the strategy one employs in a lottery. You do not usually win a prize in a lottery by buying a large number of tickets with exactly the same number. Instead, lotteries favor the possession of diverse tickets. Thus, the environment of some species, but not all, acts like a lottery in that the environment changes from place to place, from season to season, and from year to year. If one's offspring disperse to find relatively unexploited areas, they may not find a place with conditions identical to those a parent experienced. Therefore, an individual that reproduces asexually might very well have progeny beautifully suited for conditions that were impossible to find or that no longer existed (even in the place where the parent had lived). Winning tickets are those offspring that find and are capable of filling these variable slots. By reproducing sexually, an individual places different samples of his genotype in a variety of different progeny, who will have a chance to distribute themselves over a range of habitats rather than all being highly dependent on the same set of ecological conditions.⁴³

Thus Williams is saying that by reproducing asexually "all tickets" will be the same, thereby reducing an individual's chances of winning.

The other hypothesis is the coevolution hypothesis that Alcock also describes. Of this he says:

⁴² Alcock, 375.

⁴³ Alcock, 376.

Imagine the following evolutionary game between a parasitic species and its host. If the host were to reproduce asexually, then those genotypes in a parasitic species that best attacked the dominant asexual genotype would spread through the parasite species. Should a sexual form arise in the host species, however, it might produce some offspring whose distinctive combinations of genes conferred resistance to the common form of the parasite. These different forms would enjoy high reproductive success, but as the new successful combinations became common, selection would favor sexual parasite parents that happened to produce some offspring whose gene combination enabled them to exploit the now common form of the host. Sexual reproduction by parasites in turn favors parents in the host species that have offspring with uncommon gene combinations that escape the increasingly common parasite type.

The host and parasite exert FREQUENCY-DEPENDENT SELECTION on each other. Sexual reproduction, by constantly breaking up gene combinations and creating new ones, would be favored over asexual reproduction.⁴⁴

As the last comment on this issue, Alcock writes:

Currently, the coevolution hypothesis appears stronger. Environmental unpredictability per se is not likely to be the selective factor that has favored the evolution of sex, but the last word has not been said on this fundamental problem in evolutionary biology.⁴⁵

Comment on biologist's view. I suppose one cannot argue with the fact that the sexes do provide variety. But what about the fact that the main reason why science has great difficulty producing a vaccine against the AIDS virus is that it mutates very rapidly? Also, the Ebola virus is made of RNA, and RNA viruses are known to undergo rapid genetic changes. If, very early, before any sexual reproduction appeared, life did not have difficulty in either making copies or in undergoing genetic changes, the appearance of sexual reproduction does not make sense. Further, if it had appeared anyway, it could

⁴⁴ Alcock, 377.

⁴⁵ Alcock, 380.

not have made too much difference. Asexual forms of life would have been more common because they are more efficient in reproducing. If the assumption that the only point of life is to inject as many genes as possible into the next generation were correct, then the prediction would be that asexual reproduction would be the rule in nature. But this not the case, and instead of acknowledging that the hypothesis is false, biologists frame it as a puzzle. The biologists' premise is wrong because it is incomplete. There is also a Qualitative point to consider; this point leads to the subject of the sexes. The female sex has arguably the most important role in life there is, but under the present partiality toward quantity, this important role has not been brought to light.

Sexual Reproduction: Empirical Support

Matter is the effect of the power of quantity. If life originated from matter, then it can be said that it originated from within the power of quantity. This power of quantity is visible in the rate of reproduction. Emerging life can reproduce astronomically and the only factors that control this prolific production of copies are external ones. If there is a fundamental order that favors Quality, its gradual freedom from the power of quantity can be predicted. In order to free Quality, the Qualitative tendency that comes from the fundamental order transforms the power of quantity by means of "self-organization" of matter into a means to Quality. The body of the individual gradually develops a better "argument" that favors Quality. In addition to an automatic intervention of the fundamental order, an individual, **as an agent that executes the intent of the fundamental order, gradually appears.** This agent is an individual of the female sex.

And as this individual becomes intelligent, the automaticity of its reactions is replaced with the flexibility of reason.

Biologist's Definition of Sex

Biologists simply say nothing about the nature of the sexes themselves. Instead they talk of sex not in terms of tendencies in an individual but in terms of individuals where one of these tendencies prevails. Alcock, for example, in the chapter about sex, writes that "Males, by definition, are those individuals that produce sperms, the smaller gametes.... Females, by definition, are those individuals that produce eggs, the larger gametes."⁴⁶

Because of identifying the sexes in terms of individuals rather than in terms of two opposite tendencies within individuals, biologists contribute to the classification of human beings in two classes (having small or large gametes). This classification of humanity in two classes is not wrong, but it is superficial and it is not new. It probably started in the remote beginning of human life. The assumption that there are two kinds of human beings invites the thought that one of them might be superior. In addition, if reproduction is assumed to be the only purpose of life, and if the male sex is the active agent in this process, it is not surprising that the conclusion at which humans arrived is that the male sex is superior. Furthermore, because of partiality toward the power of quantity, the only function that biologists recognize in the sexes is the transmission, and

⁴⁶ Alcock, 373.

therefore, the repetition of genetic material to the next generation-a quantitative function, the male sex function.

Male Sex

The male individual, as individual, not only represents Quality; the individual of the male sex represents the highest Quality of his species. A peacock, not a peahen, is the most beautiful. The male individual transmits his individual Qualitative genetic characteristics in the form of talent, or aesthetically pleasing features such as colors. As intelligence appears, the individual male can display ethical behavior. Thus the individual because it is of male sex, (quantitative tendency) generally is the one who displays (is adorned with) the qualities of Quality (of the individual). The Qualitative aspects of the male are transmitted to the next generation.

A male individual has both the Qualitative and the quantitative aspects. What makes him a “male” is that his quantitative tendency develops as part of his typical anatomy and physiology, a specialized system that promotes quantity. The number of smaller gametes in the male individual varies, but even with this variation, it can be said that the male sex always produces a great quantity of sperm, at least in the thousands, more often in the millions. Thus, every male individual has the potential to reproduce in great quantities. The repetition of its genetic material, over and over, is the exclusive function of the male sex as quantitative tendency. Since quantity, and its tendency, is a means under the fundamental order, the male sex as tendency toward quantity serves as a means that enables the male individual, as Quality, to display and to transmit this highest Quality to the next generation.

The Female Sex

Any individual, male or female has both the Qualitative and the quantitative tendencies. What makes an individual a “female” is that the Qualitative tendency in her develops a specialized system with the sole intent of controlling quantity and favoring Quality and its concomitant freedom. This system consists of that part of the female individual’s anatomy that is absolutely indispensable for reproduction.

What makes an individual a “female” is that this individual, as Quality, has her own system not for the purpose of reproduction, the transmission of genetic material, but for the purpose of regulating this transmission and propagation according to the needs of Quality. This system, as female sex anatomy and physiology, works in the interest of Quality, and produces "larger gametes." The larger gametes are not in charge of repeating and transmitting as much genetic material as possible to the next generation. On the contrary, since the numbers of sperm a male produces are always great, the gradual reduction of quantity one sees on the chart on p. 75 is due exclusively to the gradually diminishing number of available eggs. This control of the numbers of eggs controls the number of the species making room for the development of Quality

Nature Partial to Female Sex

If the female sex is the tendency toward Quality, and if there is a fundamental order in nature that prefers Quality, then it is predictable that nature would favor the female sex. Nature demonstrates that it prefers the female sex. According to the

Twentieth-Century Institute of Embryological Research, as John Money points out, the female is primary, not the male. He explains:

the scientific facts of modern embryology, which leaves no doubt whatsoever that in nature's order of things, it is Eve first, then Adam. For Adam to be created after egg and sperm unite, something must be added that Eve does not require. That something is, in brief, a masculinizing hormone.

One test of the Adam principle is the test of what happens when it fails. In animal experiments, its failure is deliberately planned. Not so in human beings! The test in our species must be unplanned—an experiment of nature, so-called. The perfect human example does exist. It is called the androgen-insensitivity syndrome, a condition that begins with conception and lasts through life...

When on the day of conception, an egg and a sperm unite to begin the formation of a new androgen-insensitive baby, the egg carries an X chromosome from the mother and the sperm carries a Y chromosome from the father. This is a combination that should produce a normal boy. The beginning development of an XY, androgen-insensitive embryo is, indeed, the same as that of a normal boy, until the two testicles are developed in the abdominal cavity. From then on, the testicles pump androgen into the embryonic bloodstream, but the cells that should use it to shape themselves into male sex organs fail to do so. They carry a genetic error which makes them insensitive to the hormone. Unable to shape male sex organs, they shape themselves, as best they can, into female sex organs - not so successfully internally, but very successfully externally. When born, the androgen-insensitive baby has only a vestigial cord for a uterus. Externally, because it looks like a perfect female, it is declared to be a female, and reared as a girl. When the age of puberty arrives, there is no menstruation because there is no uterus, but the body becomes very well feminized, breasts included. Still unable to use androgen, the body uses instead the female hormone (estrogen) normally produced by the adolescent and adult male testicles. Without the competition of male hormone, testicular estrogen does an excellent job of shaping a female. Her good looks may be so outstanding that they enable her, in some instances, to earn a living as a model. Such is the power of the Eve who lurks, forever imprisoned, is even the most full-bearded, bass-voiced, heroically androgenized and macho-minded of males!⁴⁷

⁴⁷ John Money, *The Adam Principle: Genes, Genitals, Hormones, and Gender*, (Buffalo, N.Y.: Prometheus Books; 1993), 57.

Thus, as Money points out, the female sex invariably develops in the embryo in the absence of masculinizing influence. This demonstrates that nature prefers the female.

Carlson also writes: "The other major generalization is the inherent tendency of genital structures to develop into female type in the absence of specific masculinizing influences."⁴⁸

The Human Being, the Individual, the Basic Entity

There is another "experiment of nature" that illustrates that it is the human being, the individual (Quality), not the system that promotes it (female sex), that is the basic entity. Turner's syndrome, (monosomy X), an "experiment of nature," a genetic anomaly that illustrates that the individual exists prior to the tendency toward it; the individual exists prior to the female sex, but the female sex follows.. In this syndrome, the individual has only one X chromosome. The person with this syndrome is always considered a female. This syndrome illustrates to scientists that nature is biased toward the female sex. Money writes: "One important lesson to be learned from Turner's syndrome is that nature's own wisdom is always to prefer Eve."⁴⁹

Money also writes:

None of the interviews and test data suggests that girls with Turner's syndrome were less feminine than their controls. Differences which occurred pointed rather in the other direction. Turner's syndrome therefore teaches that neither the second X chromosome nor a fetal ovary is essential to the subsequent differentiation of a female gender identity.⁵⁰

⁴⁸ Bruce M. Carlson, *Patten's Foundation of Embryology*, 4th ed. (New York: McGraw-Hill, 1981), 459.

⁴⁹ Money, 41.

⁵⁰ Money, 44.

Turner's syndrome also illustrates that the individual exists prior to the female sex, which is, prior to the system specialized to control quantity. First, what this anomaly illustrates is that one X alone has enough genetic information to produce a normal rational human being, a normal individual. As individual, as Quality the Turner's syndrome girl or woman is perfect. She is a wonderful human being, but she is not physically attractive. "Short stature is a universal feature." Also "Congenital defects which may or may not occur include webbed neck, cardiac and kidney malformations and receding mandible." However, they do not suffer any form of psycho-pathological problems; in fact, they are balanced human beings fit to be adoptive parents. "The girls with Turner syndrome were highly interested in wedding and marriage, in all forms of maternalism from doll play to baby care, and in feminine appearance."⁵¹

What Money describes as "maternalism" is the Qualitative tendency, and is not exclusive to women. A man, as individual, as Quality, is capable of manifesting this tendency also. "Maternalism" is the manifestation of the Qualitative tendency in Quality, in the human being or another animal.

While Turner's syndrome produces a perfect individual (human being) the system that this individual can develop as "female sex" is not perfect. There are no ovaries present, according to Money. Others say that: "very rarely, the one X chromosome can even produce a fertile female."⁵² The Turner woman is a human being who usually lacks

⁵¹ Money, 53.

⁵² Jeanne M. Meck, Robert C. Baumiller, and Jan. K. Blancato, "Chromosome Anomalies," in *Encyclopedia of Human Biology*, 2nd ed. (San Diego: Academic Press, 1997), 2:757

the specific system necessary to participate in reproduction. She is not always of female sex biologically speaking. However, the tendency toward the care and protection of the individual is intact because this comes from the individual, from Quality itself. Thus, in Turner's syndrome, because there is nothing wrong with the individual as a Qualitative entity, but the female's reproductive equipment is deficient or absent, one can say that the individual exists prior to the female sex, but the female sex necessarily follows. . John Money says that the female sex lurks within Adam. I argue that it is more accurate to say that it is Quality, the individual, the human being that lurks inside the male. The female sex develops because no masculinizing influence (any quantitative influence) interferes with the system that will protect Quality and its development.

Sex and Individual Not Synonymous

Every embryo passes through an undifferentiated stage with a dual duct system. One duct from this dual system is a potential male sex, the other a female sex. If each sex represents a tendency, one can say that these two ducts represent the Qualitative and the quantitative. In the absence of the Y chromosome, the duct destined to form the female sex develops. In the presence of the Y chromosome, however, the would-be female duct remains in vestigial form, while the duct destined to become male sex develops to form the testis, which secretes testosterone. Testosterone masculinizes the cells of the individual's body so they grow as male. Thus, at the same time as the Y chromosome activates the male sex, the duct system that would have become female sex remains in vestigial form. In the presence of the Y chromosome, the female-to-be duct

system normally remains in vestigial form and alongside this vestigial form, the male sex anatomy and physiology develops.

I reason that unless this would-be-female duct system develops fully, to assume that it is already the “female sex” does not seem appropriate. Therefore, instead of saying that inside every male lurks the female sex, it is more precise to say that inside every male individual is a **human being**. If during its embryological development the embryo is left alone, if the Y chromosome does not develop the male sex; this embryo develops into a human being that does not show the influence of the power of quantity. In this individual, the would-be-male external sex organs stay in undeveloped form, as “female sex” organs, and thus the individual looks like belonging to the female sex.

Who is the Basic Human Being?

If one insists on looking for the basic human being, the female individual is the one. She is the human being in whom the power of quantity (with its Y chromosome) did not establish its own system to promote its own tendencies. When the Y chromosome is present, it interferes with the development of the system that promotes Quality; it halts the development of the female sex system, to develop its own system that directs the human being toward the promotion of the power of quantity, thus of reproduction. An individual with this system is called a “male.” If this is so, the equation of male sex with not just the human being, but the superior kind of human being, as historically has been the case, is a fallacy. This fallacy has always been the basis of the treatment of women as inferiors.

In Russian, there is a saying that: a private is not a general, a chicken is not a nightingale, and a woman is not a human being. This simple saying reflects the prevalent attitude that there are two kinds of human beings and man is the superior kind.

What I find extremely important in the fact that women have always been considered inferior to the male is that only one X chromosome, the "female sex" chromosome, has all the information needed to build the entire individual with a normal human brain. Since the individual with Turner's syndrome develops without prenatal influence of male or female reproduction-oriented hormones, one can speculate that the one X chromosome has all the basic information necessary to build an individual, including a normal rational brain, which apparently does not need the presence of the Y chromosome. The X chromosome has all the basic information needed to develop an individual as a Qualitative entity but without perfect reproductive (quantitatively related) features.

Susumu Ohno writes under the sub-title 'THE FEMALE AS THE PRIMORDIAL SEX AND THE MALE AS A MODIFIED FEMALE that

As far as mammals are concerned, the basic plan of development is to be feminine. It will be recalled that differentiation of Mullerian (mesonephric) ducts to fallopian tubules and uterus of the female reproductive tract is an automatic process that requires no intervention, as it is the urogenital sinus's differentiation toward the vagina. In sharp contrast, Wolffian (paranephric) ducts would perish if left alone, their differentiation to male reproductive tracts requiring testosterone; differentiation of the urogenital sinus to penis and scrotum requires not only testosterone but also its in situ conversion to 5 α -dihydrotestosterone.

Even primordial germ cells are inherently planned to be eggs rather than sperm.⁵³

Also, Carlson writes “The Mullerian ducts have the capacity to develop autonomously unless suppressed by male sex hormones.”⁵⁴

Thus, if there is such a thing as a basic human being, and it is the female. It is not the male, as traditionally thought. One X chromosome is enough to make a complete good human being as the Turner syndrome illustrates, and that human being looks like a female. Nature prefers the female sex. The second chromosome perhaps is related to the involvement of Quality in quantity-oriented issues such as outward appearance of the individual and with reproduction. Thus, female individual is the basic human being because it does not need any outside influence to develop. In all, if there is a fundamental order that favors Quality, and if the female sex is the tendency toward Quality, then, it can be predicted that nature will prefer the female sex.

Male Sex

It is the view here that the Y chromosome is only a “pass” that can switch the track of the reproductive role of the individual during the embryonic development from Qualitative to quantitative orientation. It provides the quantitative tendency with the freedom to develop its own system dedicated to quantity. It changes the natural plan of development from female to male. John Alcock points out:

⁵³ Susumu Ohno, “Sex Differences, Biological,” in *Encyclopedia of Human Biology*, 2nd ed. (San Diego: Academic Press, 1997), 7:816-17.

⁵⁴ Carlson, 525.

Note that the Y chromosome does not code for a complete set of masculine characteristics. Instead, it carries information that shifts development from one track to another, **committing gonadal and neural cells to male properties** (my emphasis) instead of guiding these cells onto a pathway that produces corresponding tissues with female attributes.⁵⁵

The Y chromosome carries the information on how to develop the system that promotes the quantitative tendency to its full capacity. John Money writes:

The Y chromosome is necessary to tell a newly formed embryo to develop testes and become Adam, not Eve. To be more precise, it is not the entire Y chromosome that is necessary, but only a small segment of the short arm of the Y chromosome. This segment contains the fragments of the genetic code that, very early in embryonic life, activates the precursor cells of the gonads into developing as testes instead of ovaries.⁵⁶

The Y chromosome, in addition to its power to switch track during the development of the gonads, has in mammals not too much genetic information. Alcock mentions that

The Y chromosome of some mammals carries very little genetic information. Recently, however a research team using sophisticated molecular genetic techniques located a gene on this chromosome in humans and other mammals that appears critical for the development of male testes. Perhaps in mammals generally a gene of this sort provides information for the production of a key substance in the early embryonic cells of males only. This testis-determining factor (TDF) is then transported to other cells whose receptor-TDF complex may migrate to the nucleus of target cells, where its presence activates previously quiescent genes whose enzyme products initiate changes that result in male gonads, male brains, and male sexual behavior." ⁵⁷

⁵⁵ Alcock, 88.

⁵⁶ Money, 42.

⁵⁷ Alcock, 86.

The Y chromosome is said to be “agenic.” While only one X chromosome apparently carries all the information needed to make a Qualitatively worthwhile individual, the Y chromosome, the male sex chromosome, cannot sustain life by itself. Money writes: “There are no babies born with only one Y chromosome and no X. That error in a developing embryo is lethal.”⁵⁸ I claim that this inability to sustain life is because life is Qualitative while the Y chromosome is like a permit from nature that the quantitative aspect of an individual needs to develop its own system in order to promote the power of quantity.

The embryo starts with two undifferentiated ducts. Without the Y chromosome, the embryo develops into a female. The male individual develops when the Y chromosome is present. The Y chromosome has the defiant character of a “pass.” It is something that can override the status quo. It can unlock the confined quantitative tendency and suppress the existing development of the system that controls the quantitative and fosters the Qualitative. The Y chromosome is a masculinizing influence upon the gonads.

The reason the lone Y chromosome cannot sustain life is that it acts on behalf of the quantitative tendency and thus it is not the “hand” that is entrusted by the fundamental order, among the most intelligent animals, to be in charge of the individual (Qualitative) genetic information.

⁵⁸ Money, 41.

“The bulk of it [the Y chromosome] is made of heterochromatin, ... which contains no genes.”⁵⁹

In all, it seems that there is an agreement among biologists that the female sex is the basic sex. Biologists say that genital structures develop into female type in the absence of specific masculinizing influences. Even though this statement says it well, it sounds strange if one looks at the two sexes as two tendencies where one of them is favored by the natural order and the other is under strict control. This statement can be compared to saying that if there are two persons, one of whom is free and the other is not, the free person (compared here to the female sex) can walk out any time, even though she does not have the key that locks up the incarcerated person (compared here to the male sex). The "key" is the masculinizing influence of the Y chromosome. It allows the development of the system that actively promotes the quantitative tendency. The Y chromosome is the key that allows the quantitative tendency, present within every embryo, to develop its own self-promoting system.

A male individual is one whose quantitative tendency, (present in a female as well), has had a specific authorization from the natural order to develop a fully developed system, which entices its user with sensual pleasure. This system, however, antagonizes the individual's own Qualitative nature, especially when the male is intelligent.

⁵⁹ Ohno, 7:812.

Male and Female

The **male** individual develops when this individual's quantitative tendency is allowed by the fundamental order to develop its own system. The **male** individual develops only when he is born with a "pass" authorizing the individual's quantitative tendency to develop its own system with which to promote quantity. This "pass" is the Y chromosome, which roughly one half of the species gets, and it allows the development of a specialized system in the form of male sex anatomy and physiology.

The fundamental order apportions to the individual's quantitative tendency this "pass" to develop its own system, which Quality needs as a means. This system is dedicated, specialized, to physically promote quantity. The means for this promotion is the great number of sperm. The testosterone is also a means that "flavors" the male individual's brain with its hormones so as to psychologically direct the individual's attention toward quantity. This male sex system is capable of maximizing the number of copies the male individual can transmit to the next generation. However, the same male, as individual, also has a Qualitative aspect, most importantly, the Qualitatively oriented, rational brain. This Qualitative aspect of the male individual contradicts the male sex tendency by controlling it in the form of paternal love, or in the form of compassionate behavior. Compassion arises when an individual sets Quality as a priority over quantity.

On the other hand, the **female** individual develops when the Qualitative tendency of the individual is not prevented by the Y chromosome from developing its own system with which to participate in reproduction, and enabling it to control the power of quantity. That which is called female is an individual whose Qualitative tendency has its

own system. This system represents Quality's own Qualitative interests during the process of reproduction. The Qualitative system, (uterus, Fallopian tubes, ovaries and, most importantly, the thinking brain) is indispensable for the intelligent individual female's participation in reproduction. However, as argued on p. 94, the purpose of the female's participation in reproduction is not to increase the quantity but to control it in order to protect and develop Quality. This specialized anatomical and physiological system of an individual dedicated to the Qualitative transforms this individual into a **female**.

However, this female individual also has a quantitative aspect. This aspect appears anatomically as women's external genitalia, which are erroneously called "female sex organs." They are legitimate women's organs, they are part of a complete entity, the individual female. But the organs themselves are not legitimately "female" if "female" is defined as Qualitative tendency, and if female sex organs are those organs indispensable for a woman to reproduce. Female sex organs are the ones a woman absolutely needs to conceive or bear a child. However, the external so-called female sex organs are of the same origin as the typical male sex organs. These are the same organs that would develop into a typical male sex anatomy in the presence of Y chromosome. But in the absence of the Y chromosome the male sex does not develop; instead, its homologue develops and it serves as a point of contact that makes possible the union of two tendencies that otherwise have nothing in common. The external "female sex organs" in women are the only common ground with the male sex, and what makes the

union possible. These “female sex organs” are of quantitative origin, they cannot properly be called “feminine” if feminine refers to the female sex.

Thus the two sexes are not simply two kinds of human beings; they are the two tendencies of life that form the anatomy and physiology of the individual. Typical sex psychologies are based on typical sex anatomies and physiologies. These psychologies are the Qualitative and the quantitative tendencies that exist within each individual because of their typical anatomies and physiologies.

Natural agent in charge of Quality. The female sex is in charge of establishing a balance with quantity that will favor Quality. The female individual represents the emergence of the Qualitative tendency of the fundamental order in individualized form. The female individual is an agent of the fundamental order in charge of executing its intent.

Thus the female sex is not in charge of the reproduction, the multiplication of the species because since the beginning of life, the power of quantity in the form of reproduction capacity did not need any help or improvement. The female sex has to participate in reproduction because its goal is Quality and its freedom, and the only way this goal can be accomplished is by participating in reproduction. While participating in reproduction, the female sex carefully reduces the power of quantity; quantity is a necessary means but it is also an opposition to Quality.

So, if nature favors the female sex, if the female sex is the tendency toward Quality, and then one can say that the facts of nature support the hypothesis that there is a fundamental order that favors Quality.

Male individual represents highest Quality. Since Quality and quantity exist in inverse proportion, the individual as a complete unit is like a dialogue or an argument between Quality and quantity that displays oppositeness. For example, the individual of male sex is an individual in which the quantitative tendency is strong. But he represents the highest Quality. He represents what the other sex seeks. The male individual in nature represents the highest Quality of the species, according to the female sex standard. These standards vary. When intelligence is not well developed, they are focused on the sensible Qualities, such as colors or size details of the body, such as antlers or length of tail. Among intelligent males, however, the Qualitative traits develop, as ethical behavior because these traits are preferred by females.

According to the fundamental order quantity is a means; the male individual tends toward quantity, but under the fundamental order this tendency to represent Quality and the tendency to reproduce it as much as possible, is used as a means to preserve and advance Quality. The quantitative tendency is a means under the fundamental order toward the preservation and the perfection of Quality. Also, the tendency of the male is to be the winning minimum number. The hierarchic order between males is used as a means to select the best male for reproduction, and also, as in the case of the male gorilla in a family, to protect Quality, as in offspring.

While females from among lesser intelligent animals look for great looking tails or antlers, the non-human females of intelligent animals no longer seem to focus so much on looks. Intelligent animals seem to have different standards that are not as visible. Their females tend to mate with many males. But they (females) are also the ones that

solicit (chose). Since female orangutans or chimpanzees, for instance, tend to shy away from disruptive behavior, it is possible that the chosen ones are the males with the most positive, ethical traits.

Female individual represents quantity

On the other hand, while the female individual embodies the tendency toward Quality, she represents the unit of quantity, or what the male looks for. She generally represents a unit, a minimum number of the total aspired by the male. When she belongs to a species where males display beautiful colors, as the peahen, for example, she, unlike the male, looks as if in a drab uniform.

Beautiful. Perhaps the Y chromosome and the second X chromosome determine the quantitative aspect as it conforms to the fundamental order and thus determines the individual's looks, movements, or even the ability to convey Quality, as in art. The information in the Y or the second X perhaps helps the individual to be Qualitatively superior, more beautiful, more resourceful, and more creative. This would account for the fact that the ones that display the most stunning colors, shapes and talents in nature are generally males. In addition, this genetic information, coming from the Y or the second X-chromosomes, would also account for the general good looks in women of androgen-insensitive syndrome, or XY women. It would also account for the absence of this external Qualitative manifestation among individuals with Turner syndrome.

Beauty is the manifestation of Quality by means of quantity. Perhaps using quantity to express Quality is not felt as strongly by women. Historically, males excelled in forms of art such as music, which is the manifestation of the Qualitative by means of

the quantitative. It is hard to judge women because they, during all eras, have been intentionally limited in what they were allowed to learn. However, it seems that music is one area in which women were not hindered. Yet, even when they had access to musical instruments, they never came close to being as productive as Mozart, for example. Could it be that there were excellent and very prolific female musicians but they were denied exposure?

CHAPTER 4

Female Sex

Female Sex: Agent of Nature

Since quantity is Quality's opposition, the fundamental order gradually but drastically restricts the power of the quantitative tendency, as illustrated on p. 75.

Because the male sex tendency is contrary to the Qualitative tendency, and because the fundamental order favors the Qualitative, the influence of the male sex power is strictly controlled by nature, particularly at the level of intelligence. The female individual is nature's agent that acts on behalf of the fundamental order. She has two functions: **control of the power of the quantitative tendency and promotion of the freedom of Quality.**

Control of Quantity

In the unicellular life forms, the quantitative tendency is free, judging by its astronomical capacity to reproduce, but the Qualitative tendency is not free. At the

beginning of life, the power of quantity does not have any opposition except from environmental conditions. However, the appearance of sexual reproduction introduces a systematic opposition to the power of quantity within life. This systematic counterbalance to the power of quantity is the female sex. The development of an individual agent in the form of a **female** individual supports the hypothesis that there is a fundamental order that favors Quality.

As an agent of the fundamental order, the female individual is in charge of the active control of quantity. While the capacity to reproduce stays the same in the male sex, regardless of the Qualitative state of the individual male, the actual reproduction rate in a species depends on the female's capacity to provide eggs for fertilization. A female oyster, for example, produces a million eggs a year. As intelligence appears, however, the number of available eggs diminishes drastically. The female ape or elephant releases only one egg at a time. Thus, as the Qualitative aspect of the individual grows, the number of fertilizable eggs diminishes.

The more intelligent the female is, the fewer eggs available per season she has. The higher the intelligence, the more the female controls quantity, as the chart on p. 75 illustrates.

Controlling space. The male individual embodies a system which actively promotes the tendency toward quantity. Through the evolutionary scale the sperm quantity is practically unchanged. All males are able to supply a great number of sperm. The main role of the female sex in nature, however, is that of developing Quality. For Quality to advance, freedom from quantity is needed. Thus, just by being there as a

material body, a system through which the sperm have to be processed, the individual of female sex begins to control quantity. As an intermediary between the unicellular (flagellate) system of the quantitative tendency and the next generation, the female sex in the individual begins to place a brake on the quantitative tendency. The anatomy and physiology, the whole body of the individual acts as a container that can hold only a determinate number of eggs. This anatomy and physiology, (under the auspices of the fundamental order and without the individual being conscious of it), progressively reduces the number of eggs available for fertilization and the space that holds the fertilized eggs. Thus the female sex uses space to control quantity

Controlling time. In addition to limiting the number that can fit into the gradually more limiting space available (uterus), the female sex also limits quantity by extending the time between fertilization at the same time as developing the Qualitative. The physiological function blends in with the psychological function, the caring for the helpless individual in the form of embryo, fetus, and the completely formed and born offspring. Thus the female sex uses time to control quantity

Control of Behavior. In addition, the female sex not only controls the number of offspring, it apparently is also implicated in the way testosterone masculinizes the brain; it intervenes in the way the structure of the male's brain is formed. Bruce McEwen, a neuro-biologist at Rockefeller University in New York, writes:

Of the steroid receptor system in the brain, the estradiol receptors have perhaps the most extensive and best studied role in neuroendocrine function and behavior. Not only do estrogens regulate behavioral estrus and gonadotropin secretion in the female, but also they have been

implicated (as cellular metabolites of testosterone in the brain) in the control of the male sexual behavior...(emphasis mine).⁶⁰

The brain is the center of Qualitative development in an individual. The male hormone “masculinizes” an already existing brain but, at the moment that the testosterone secreted by the testis arrives via the circulatory system to “masculinize” the brain, to give it male traits, it finds that the female sex has something to do with these traits. The involvement of the female sex as Qualitative tendency concerns the interests of Quality. The implication of the female sex in the process of masculinization concerns the quantitative tendency as a threat on the freedom of Quality. The male hormone, testosterone, is transformed into a female sex hormone when it arrives at the cells to masculinize them. This transformation is known as the “aromatization.” It is as if the male sex (as quantitative tendency) is not allowed to directly touch the brain. It is only after the male hormone is translated to female sex term, to estradiol, that the male hormone is free to masculinize the target cells in the brain. McEwen writes.

Paradoxically the hormone that elicits the male brain pattern in newborn rats seems to be estradiol, one of the estrogens, or female hormones. Although the hormone that reaches the brain of the newborn male rat is testosterone, secreted in the testes, the male hormone is converted into estradiol by enzymes in the nerve cells that are the targets of sexual differentiation.⁶¹

The female sex implication in the control of male sex behavior, McEwen refers

⁶⁰ Bruce McEwen et al., “Steroid Hormone Receptors in Brain and Pituitary,” in *Central Regulation of the Endocrine System*, eds. Kjell Fuxe, Tomas Hökfelt, and Rolf Luft (New York: Plenum Press, 1979), 261.

⁶¹ Bruce McEwen, “Interaction Between Hormones and Nerve Tissue,” *Scientific American*, July 1976, 48.

to, is about the control of the quantitative tendency in all individuals, not only of male sex. This control refers to the control of the quantitative tendency, to make room for the Qualitative tendency in both male and female individuals. If the male sex (quantitative tendency) trait is to fight for hierarchic status, the control of this tendency would mean less tendency in the individual (male or female) to fight for status in a group. Since the female individual is the agent in charge of Quality, it is not surprising that it is usually the female individual among intelligent animals who is less preoccupied with hierarchic struggles and more with caring for the offspring (Quality). The gaining of Qualitative freedom is slow and gradual. Among intelligent species such as elephants and most apes, the control over the quantitative tendency is not yet reached; interference from it is still a factor female mothers have to contend with. Females solve this problem by segregating themselves and their young from adult males when environment and human expansion allows.

Two different types of control. The effect of the Qualitative control of the quantitative is different from the effect produced by the power of quantity when it controls the Qualitative tendency. The power of quantity manifests itself in the form of hierarchic order, a pyramid of power. This power structure unites the group under fear of physical force of quantity.

On the other hand, the effect the Qualitative tendency produces when it controls the tendency toward quantity is also a unified group, but not under the fear of the brute force of quantity. It is based on respect and affection. An example of this kind of effect one can find among the bonobos in the Congo.

Bonobos (*Pan paniscus*) are a species of chimpanzees in which the Qualitative tendency prevails. The most striking advance of the Qualitative tendency is that they, including the males, do not kill their own kind. Female sex control brings about respect for Quality, and as a result there is no known infanticide, and males do not fight among themselves to the degree chimpanzees do. De Waal and Lanting write that “[s]tudents of animal behavior are accustomed to ranking individuals from high to low on a scale of dominance.”⁶² He says that the lack of pecking order is particularly true among adult females. Status is not wholly absent, but is so vague that Kano⁶³ does not wish to speak of “high ranking” females, only “influential” ones. He claims that females “are respected out of affection, not because of their rank.”⁶⁴

Sex as a means. The concession that individuals of female sex made to the still strong quantitative tendency in them as well as in individuals of male sex is “sex.” But the very interesting issue is that the use of sex among them does not compromise the **low rate of reproduction.**⁶⁵ They reproduce about one every 4.5 years, even though they neither have artificial methods of birth control such as humans have, nor do they resort to infanticide as a method to spacing births as some human tribes do. De Waal and Lanting write that scientists “...tended to downplay this side of bonobo behavior, whereas the few journalists who have written about the species naturally hyped it.”⁶⁶

⁶² Frans de Waal and Frans Lanting, *Bonobo The Forgotten Ape* (Berkeley: Univ. of California Press, 1997), 72

⁶³ Takayoshi Kano, of Kyoto University, studied bonobos in Wamba (Congo) since 1973.

⁶⁴ Waal and Lanting, 73.

⁶⁵ Waal and Lanting, 4.

⁶⁶ Waal and Lanting, 5.

The “downplaying” scientists are guilty of is failing to mention that, even though apes appear to be promiscuous, mothers manage sex in such a way that they do not conceive every year, even though their physiology allows it. Linda, a bonobo in the San Diego zoo, was made to give birth every year. Her newborn was taken away from her and raised in a nursery.⁶⁷ This separation showed that a bonobo can be forced to produce offspring every year, although that was not the intended purpose of the program. Since bonobos neither resort to artificial birth control, nor to infanticide, the only explanation why they do not normally breed every year is that their Qualitative tendency, their female sex, stays active, and uses the pleasure aspect of sex as a means to benefit Quality. De Waal offers some clarification. He writes:

I intend to give the topic [of sex] the attention it deserves, without reducing bonobos to the lustful satyrs that our closest relatives once were considered to be. Sexual encounters of the **bonobo kind** (emphasis mine) are strikingly casual, almost more affectionate than erotic. If the apes themselves are so relaxed about it, it seems inappropriate for us to give in to typically human obsessions. In addition, there is a lot more to bonobo natural history than sex. The entire social organization of the species is fascinating, as is its mode of communication, raising of offspring, remarkable intelligence and status in the wild.⁶⁸

The “typically human obsession” is that sex is an end in itself, and this leads to reproduction. However, the female sex role is to improve the environment in which the offspring will grow. Since a bonobo’s vocabulary is not as good as that of a human, it is thinkable that for lack of means to convey positive intentions to another bonobo, they

⁶⁷ Waal and Lanting, 12.

⁶⁸ Waal and Lanting, 5.

convey them in the next best way they can. They use, **as a means**, the pleasant feeling the clitoris (homologue of the penis in their bodies) provides, to avoid aggression, for example. Aggression harms Quality, the goal of the female sex. It is said that females are promiscuous. They seem to indiscriminately mate with different males. However, there are also indications that they prefer to stay around better-behaved individuals. While the hierarchic position of the male is determined between males, this hierarchic status can only be profitable to the male if it is useful to the Qualitative goals of the females, that is, if the winning male is also useful and gentle to the offspring and to the females. However, even though the Qualitative tendency in apes is strong, it is not always successful even among bonobos. Male (females very rarely) apes still harm other individuals of their own species.

Birth Control. The female provides a flexible, compassionate environment for the individuals of her species. This compassionate environment includes birth control that happens before birth and later in evolutionary times, even before conception. Some animals, such as rabbits or deer can reabsorb the embryos in time of stress.⁶⁹ Among apes the time between fertilization is simply extended (up to eight years, in the case of the orangutan).

The gestation period has to do with the size of the animal's body. Larger animals such as elephants gestate for twenty-two months, but smaller animals such as bonobos or

⁶⁹ V.C. Wynne-Edwards, "Population Control in Animals," *Scientific American*, Aug. 1964. Reprint, San Francisco: W. H. Freeman, n. d, 8.

orangutans, have a shorter gestation period. However, the overall time between births within the scale of evolution tends to increase as intelligence increases. There is no smooth ascent of the Qualitative or descent of the power of quantity. The chart on p. 75, if it were more detailed, would have looked like a chart of the stock market; as the index descends, it descends in peaks and valleys. The peaks do not mean that the overall market is going up.

There are cases in which the anatomy and physiology of the female sex release more eggs than is good for the Qualitative well-being of the animal. This is the case for some African dogs, wolves, and hyenas. The female apparently reacts to the high rate of reproduction among them. They have family packs, and within each pack only one pair is allowed to breed. It is the female who seems to enforce this policy. Because they are dependent on quantity, the method of controlling quantity is rigid; automatic, lacking compassion. The dominant female kills the offspring of the female who is not authorized to breed. The female as a means to reduce quantity uses the hierarchic tendency of quantitative origin. This drastic method does not seem to be the rule because in most cases there is a balance between the number of offspring and the level of individual well-being within the environment. The female sex restricts reproduction to make room for Qualitative development. The female sex in nature maintains the balance between Quality and quantity, which is a fine balance; it allows Quality to develop while at the same time reproducing enough to survive.

Opposite View: Male Sex Controls Quantity

There is a study by Wynne-Edwards that shows it is the male sex that is in charge of controlling the numbers of the species. First, he correctly establishes that animals themselves control their numbers, not the environment. He points out that:

For many of the higher animals one can see...that neither predators, disease, nor starvation can account for the regulation of numbers. All these considerations point to the possibility that the animals themselves must exercise the necessary restraint.⁷⁰

Then he finds that the male sex regulates the population by being the main participant in the different social conventions of its species. There is a necessity, he says, to adjust population in relation to the long-term food supply, and this necessity is at the root of animal (including man's) behavior. He writes: "Animals restrict their population by some artificial device that is clearly related to the food supply....What is required is some sort of automatic restrictive mechanism analogous to the deliberate conventions of agreements by which nations limit the exploitation of fishing grounds."⁷¹ He notes that one does not have to look too far to see that animals have such conventions.

The territorial system of animals is one such convention. By staking out territorial claims, the male limits overcrowding. In addition to this convention, there are other more abstract conventions. When seabirds cannot stake out a territory, they stake out a nesting place which "represents their fishing grounds." The overall size of the nesting colony is also restricted by this behavior.

⁷⁰ Wynne-Edwards, 2.

⁷¹ Wynne-Edwards, 4

Other conventions are even more abstract. “Often animals compete not for actual property, such as a nesting site, but merely for membership in the group, and only a certain number is accepted.” In addition, he writes:

Not the least interesting is that the competition itself tends to take an abstract or conventional form. In their interest for a territory birds seldom draw blood or kill each other. Instead they merely threaten with aggressive postures, vigorous singing or display of plumage. The forms of intimidation of rivals by birds range all the way from the naked display of weapons to the triumph of splendor revealed in the peacock’s train.⁷²

The males are the ones who offer their daily display that pressures the members of the group. If the stress is great enough, population is reduced because members leave or die. On the other hand, if the stress is light, new members come in and join the group. He writes that the “epideictic” displays, that is, the population-pressure demonstrations, are frequent at the outset of the breeding season, and the birds that demonstrate are males, the “epideictic sex.” Sexual selection is not at the root of the display of males in front of females; it is population control.

He reports that the “homeostatic control” of animal populations is strictly automatic, even the social conventions are innate. “The density-dependent control in many animals, including some of the mammals, is exercised by means of biological reaction—either reduction of the rate of ovulation through a change in the output of hormones or re-absorption of the embryos in the uterus as a result of such stress (as

⁷² Wynne-Edwards, 5.

occurs in rabbits, foxes, and deer).”⁷³ It seems that the role of the male is to provide the stress that causes the re-absorption.

All these natural controls are automatic, and the same automatic rules apply to man. He writes:

Primitive man, limited to the food he could get by hunting, had evolved a system for restricting his numbers by tribal traditions and taboos, such as prohibiting sexual intercourse for mothers while they were still nursing a baby, practicing compulsory abortion and infanticide, offering human sacrifices, conducting headhunting expeditions against rival tribes and so forth. These customs, consciously or not, kept the population density nicely balanced against the feeding capacity of the hunting range.⁷⁴

My Comments

Positive aspect. The positive side of Wynne-Edwards’ study is that he notices that external factors such as starvation, predators or disease alone do not account for the stabilization of the species’ population. He notes that there is an internal (to the species) control of the density of population. He also is right in attributing to the human male such practices of population control such as head hunting, infanticide and the like.

Negative aspect. The most negative aspect of Wynne-Edwards’ study is that it presents the deviant facts of human life as normal, natural, and therefore inevitable. If what happens among animals in the wild is “natural,” then the automatic, severe system of population-control such as humans have, and as Wynne-Edwards describes, is not natural for an intelligent animal. In nature, even though the power of quantity is strong,

⁷³ Wynne-Edwards, 8

⁷⁴ Wynne-Edwards, 8.

it gradually loses its weight as the Helen Kern chart, on p. 75, shows. Among the very intelligent animals there is no such cruel balance.

Among intelligent animals, males seem to remain prone to aggression, however, but even then one does not see a field of corpses after a fight as one sees among humans. In nature, aggression between males seems to serve as a means (under the fundamental order) to the selection of the best father for future offspring. Intelligent females seem to avoid violent behavior. Perhaps the lack of male participation in the care of the helpless, their shortcoming in the Qualitative inclination, is the reason that females often form groups that exclude males. For example, male elephants roam in “bachelor groups” or alone. Among humans, females are bound by traditions to the male and his aggressive behavior.

The primary symptom of quantitative power among humans is the increase in the chances of the individual to suffer and die prematurely. At the beginning of the Qualitative evolution, the individual has a very high risk of premature suffering and death. As Wynne-Edwards says, among the primitive tribes these practices actually “nicely balance” population and the food supply.

The only problem is that, from the Qualitative viewpoint, this balance is not “nice.” When the quantitative tendency in humans produces too many children, this excess is “balanced” by lack of hygiene, infanticide, and other practices that eliminate the surplus of helpless individuals. Automatic rules appear. Head hunting expeditions, infanticide, human sacrifices, wars, all are mechanisms that balance the effects of the power of quantity at the expense of Quality. The agent that is in charge of protecting

Quality, in this case, is inactive, mute. These cruel “balances” are not fitting for a rational being, but they “work” because they devalue Quality by instituting the prohibition of thinking.

Good deeds backfire. It is worthwhile to note that because the Qualitative and the quantitative complement each other as opposites, the “fine balance” that exists among Wynne-Edwards’s primitive tribes suffer when altruistic missionaries intervene, out of compassion, with vaccines and hygienic practices to prevent infant deaths or to prohibit human sacrifices. As well-intentioned people stepped in to reduce deaths, overpopulation, which had not been a problem, became one. Doing good (Quality oriented) deeds without diminishing the power of quantity only makes the good deeds serve as a means to the quantitative tendency.

Thus, there is no question that primitive man keeps population density “nicely balanced.” The problem is that this balance involves unnecessary suffering. Animals in nature suffer inevitably because quantity still has a great influence on their lives; they have not reached the necessary Qualitative development. Even though they are still not rational, there is less suffering among the very intelligent animals. They experience only occasional threats from predators. Except on very rare occasions, they appear to avoid harming each other. There are certainly no head hunting expeditions or infanticide that are condoned by the mothers of intelligent animals. The human problem is that the human male secured the power of the quantitative, the power of his sex, and this power, in turn, automatically produces ignorance, especially ignorance about Quality and its primacy. In nature, according to the fundamental order, quantity is controlled. If it is not

controlled Qualitatively, when mother spends her time cuddling her offspring day and night, as apes or elephants do, it is controlled cruelly (automatically, rigidly), the way of the quantitative, as Wynne Edwards describes.

In sum, if “natural” is what happens in the wild, then the automatic, severe system of population control that exists among humans as described by Wynne-Edwards is not natural for the being that is born rational.

Female Sex Protects and Fosters Quality

The fundamental order orchestrates the psychological behavior of the female individual. But since the Qualitative tendency (from the fundamental order) is mediated by quantity and its laws by means of physical laws, caring behavior begins as a knee-jerk reflex, known as maternal instinct. It starts in an automatic mode.

The will of the individual of female sex (based on her anatomy and physiology, especially of her brain function) consists of the movements that enforce and execute the intent of the fundamental order. As intelligence develops, these movements become the flexible will of the individual female. This will is directed toward the care, protection and development of Quality as the helpless individual. This will is the will of any individual, female or male, not obstructed by the quantitative tendency.

After acting as birth control to make room for Qualitative development, the sex anatomy, physiology and psychology of the female individual build and protect the offspring. The offspring represents pure Quality because its quantitative (brute force) value as an individual is still non-existent.

Judge of Quality. The building of the Quality of the species begins when the fundamental order uses the male's aggressive tendencies to select the best Qualitatively fit male as future father of the next generation. The female individual who is not so intelligent (seals, bovines) seems to be passive in this selection. However, as intelligence grows, the female individual begins to choose the father for her offspring.

It is known in biology that males display themselves in order to be chosen by the females. Alcock's satin bowerbird is an example. The male goes to a lot of trouble to become attractive as a prospective mate. Alcock writes that a bower is

a carefully interwoven platform of twigs from which rise two parallel walls of twigs tightly aligned and arching over to create a little avenue. Males spend hours making sure that the bower is in good condition, painting a mixture of saliva and charcoal or plant material on the twigs, and gathering blue parrot feathers and yellow blossoms from surrounding forest with which they ornament the entrance of the bower.⁷⁵

He also writes:

When a female cautiously comes to a bower, she is treated to a dramatic dance by the male, who bounds about her singing noisily while holding a prized decoration in his beak...

The elaborate show of visual and vocal display notwithstanding, most females fly away before the courting male can copulate. Females reject male after male before finally settling on a partner⁷⁶.

The female is nature's judge of Quality. The female is directed toward the Quality that the male represents.

⁷⁵ Alcock, 372.

⁷⁶ Alcock, 373.

Select the best behaved male. While peahens and female moose choose males based on the length and color of the tail or size of the antlers, the females of macaques and apes, because of their higher intelligence, seem to prefer the males that are kind and attentive toward the offspring. Thus the intelligent female selects the male based on his behavior. The males are selected as mating partners from among those who observe what we call ethical standards. The males establish their own hierarchic position. However, they also have to know how to be polite and considerate to the offspring. Only then they are rewarded by getting what they really want, that is, reproductive success because females prefer to mate with them.

Female sex builds capacity to think: thinking brain, a typical female sex organ. The female sex, as Qualitative tendency, promotes thinking. If the organs built by male sex hormones can be labeled as being male sex organs, it is reasonable to say that the cortex, the thinking part of the brain without which rational thought is impossible, is a typical female sex organ. There is a study that shows that at the beginning of the fetal formation, the future thinking part of the brain begins to grow only when estrogen comes in contact with receptors that are specific to estrogen. Even when testosterone masculinizes the brain it has to be first converted into a form of female sex hormone, estradiol, as previously noted. Bruce McEwen, neurobiologist from New York's Rockefeller University, studied the cerebral cortex in rats and found that receptor sites are hormone-specific, a testosterone site, for example, is insensitive to estrogen. "Perhaps more importantly, he has learned that once hormones pair up with receptors, they mold

the structure of the brain by directing nerve cells to manufacture proteins.”⁷⁷ Thus it can be said that the female sex builds the thinking part of the brain the male hormones only “flavor” it. But even without this particular study, it is clear that the Y chromosome does not have anything to do with building a rational brain. The Y chromosome does not carry the necessary genetic information needed to build a rational brain.

The actions of mothers also contribute to the building of the brain. There are studies that show that physical contact with the offspring, starting from birth, increases the number of neuronal connections, as measured by the increase in the number of brain folds in the cortex. Among intelligent species, mothers have prolonged, close contact with their offspring. Mothers also teach survival skills (preservation of Quality). Finally the offspring learns to care by being cared for.

The manifestation of the Qualitative tendency as parental care starts as knee-jerk reflexes programmed by the fundamental order to benefit Quality. They are “instinctive” and they are “reflexes” because of the mediation of quantity in these movements. Quantitative movements are rigid, showing no mercy toward the individual; they function according to physical laws, as a machine does. Quantitative movements are the only means Quality has available when it is not free.

The fundamental order makes the automatic reflexes react in such a way that they benefit Quality. Automatic caring can be seen at the insect level where intelligence is still absent. Some beetles care for their grubs. Also, it has been observed that when a

⁷⁷ Pamela Weintraub, “The Brain His and Hers,” *Discover Magazine*, April 1981, 18-19.

goose picks up a stray egg and guides it with her beak to the safety of her under-belly and makes sure it stays under her, she does it automatically, by instinct. She will pick up and roll to her under-belly a beer bottle with the same devotion she shows when picking up the egg

Tendency to care is progressive. As intelligence increases, there is less automatic (instinctive) parental movement because the Qualitative direction is less modified by the power of quantity. The knee-jerk reflex or the maternal instinct evolves into a flexible, intelligent action that involves intelligent choices. The Qualitative tendency (female sex) directs the individual toward freedom of Quality, thus away from automatic reflexes and toward flexible action adapted exactly to the need of the helpless individual. This is compassion. The Qualitative tendency aims more precisely at Quality (the individual). There is less chance to err when intelligence increases because intelligence, with its logic, can change the course of the movement according to the needs of Quality.

In sum, as intelligence develops, the Quality-oriented, caring movements become less automatic; the female individual is able to adjust her actions to the immediate needs of the offspring. Thus the will of the intelligent female becomes the active agent of the fundamental order that is able to bypass automatic movement and benefit Quality directly, when needed.

Teaching and Learning

However, the advantage of intelligent flexible movements brings with it a disadvantage. Because the intent of the fundamental order shows itself in the form of an individual's good will, with intelligence comes the need for every new generation to

learn the skills of caring from the previous generation. Practical knowledge is no longer given automatically; it has to be learned. While a duck cares automatically for her eggs, apes have to learn. Qualitative freedom means independence from automatic innate movements. The individual of female sex, as the agent that represents the Qualitative tendency, is the teacher that fulfills the need of the offspring to learn about Quality and its care. Female apes especially, but other intelligent animals as well, not only teach basic necessary skills like catching termites with a twig; they also teach the next generation of females, always by example, how to care for another being. The recent photograph of Binti Jua, an 8-year old Western Lowland female gorilla in the Brookfield Zoo in Illinois, shows how she carefully carried a 3-year old boy who had fallen into a primate exhibit to a door where humans could help him. She was born in a zoo and was rejected by her mother. However, humans, as surrogate mothers, taught her mothering skills using stuffed animals. The everyday practice of a female in nature is to feed the hungry, protect the defenseless, and warm the naked. Her intelligence enables her to bypass the automatic nature of instinct and carry out the intent of the fundamental order more precisely. The female sex, the Qualitatively-oriented will in the individual female reflects the fundamental order that has Quality as a goal of life. The intelligence of an individual and the Quality-oriented direction of the individual is not stagnant; the agency of the fundamental order evolves with intelligence. The individual (during the Qualitative evolution) was able to go from its original automatic response, as seen in reflexes, to a response that is helped by intelligence in the form of a Quality-oriented

will. In nature, this will comes usually from the female. The male, however, when intelligent, also can manifest his Qualitative tendency.⁷⁸

Moral Behavior

The intelligent female and her Quality-oriented will, becomes the active agent of the fundamental order. Without mediating quantity, she is able to bypass automatic movement and benefit Quality directly, when needed. As agent of the fundamental order, the individual of female sex, in addition to controlling quantity, **promotes** the development of Quality, which includes teaching, by example, how to be kind and caring. Nel Noddings thinks that caring and being cared for is the basis of morality in humans. She writes:

when I encounter an other and feel the natural pang conflicting with my own desires—"I must - I do not want to"- I recognize the feeling and remember what has followed it in my own best moments. I have a picture of those moments in which I was cared for and in which I cared, and I may reach toward this memory and guide my conduct by it if I wish to do so.⁷⁹

Noddings is speaking here of humans. However, I think that her words apply equally to other intelligent animals. This is especially true if one considers that Qualitative superiority, the ability to act morally of which Homo sapiens is capable, is

⁷⁸ Hitler and his Pursuit of "Quality." There is a need to say that Hitler, by wanting to improve his race, did not pursue Quality as an end in itself. He pursued quantity, his race, and wanted to adorn it with particular characteristics. The lack of clear distinction between Quality and quantity and the way that they exist allows the false notion to arise that Hitler pursued "quality."

⁷⁹ Nel Noddings, *Caring, A Feminine Approach to Ethics and Moral Education* (Berkeley: Univ. of California Press. 1984), 60.

only a prolongation of the Qualitative progression that produced the Qualitative evolution in our non-human ancestors.

It is not out of place to say that Binti Jua, the female gorilla in the Brookfield zoo, did the “right thing,” that is, she acted morally because she possessed the memory of being “cared for.” She learned moral behavior from the caring she received.

“Ethical” care and the care the offspring receives is the same thing, only differing in degrees of the understanding of Quality as an end in itself. At the lowest level, the Qualitative tendency to preserve Quality stops at the boundaries of the individual’s own body. This is what has been labeled as “selfishness.” However, gradually, Quality, as the goal of the individual, includes genetic relatives. Finally, with more advancement this caring tendency encompasses any helpless individual. For a Qualitatively free individual as the rational being, Quality (oneself and other) is an end in itself, and end that is equally valid for all Qualitatively oriented individuals

Biologist Frans de Waal shows that morality is as firmly grounded in neurobiology as anything else we do or are:

Once thought of as purely spiritual matters, honesty, guilt, and the weighing of ethical dilemmas are traceable to specific areas of the brain. It should not surprise us, therefore, to find animal parallels. The human brain is the product of evolution. Despite its larger volume and greater complexity, it is fundamentally similar to the central nervous system of other mammals.⁸⁰

⁸⁰ Frans de Waal, *Good Natured: The Origins of Right and Wrong in Humans and Other Animals* (Cambridge: Harvard Univ. Press, 1996), 218.

There is no clear dividing line that separates human from non-human animals. One salient mistake biologists and some philosophers make when comparing animals to humans is to assume that all animals are the same. However, if there is a Qualitative evolution, animals differ depending upon their degree of freedom of Quality from quantity achieved.

However, human (quantity-oriented) arrogance assumes that rationality and therefore morality is exclusive to humans. Even though biologists take it for granted that the evolution of life is a fact, they still draw a single line that clearly separates humans from non-human animals.

As Alasdair MacIntyre argues, animals are not all the same; he thinks that there is continuity in life. Thus, because of this continuity comparing spiders and dog to humans is not right. One has to compare humans with those animals that are closest to humans in intelligence such as apes or even dolphins. He writes that:

from Darwin we should by now have learned that human history, whatever else it is, is the natural history of one more animal species and that to understand such history comparison with the history of certain other animal species may always be and often is necessary.⁸¹

I would say that what determines the position of an animal in the Qualitative scale or spectrum is their capacity to have a caring form of thinking. This is reflected in the

⁸¹ MacIntyre, 9.

kind physical contact that an animal is capable of providing to other beings, not necessarily as parent. There is no single sharp line that divides apes from humans in Qualitative behavior regarding what we call “morality.” Morality begins with the fundamental order; it is cultivated by the Qualitative tendency as female sex, and with intelligence, pre-Homo sapiens animals begin to develop a Qualitative will that is the reflection of the Qualitative knowledge we call morality.

Kant’s Moral Philosophy

This view of morality does not agree with Kant because he neither thinks that morality comes from nature or that feelings (especially not maternal feelings) have anything to do with morality. However, his moral philosophy is important because he is right in many aspects.

He does not classify things into Qualitative and quantitative, but one can say that the Qualitative and the quantitative correspond to what he calls the “sensible” and the “intelligible.” Kant does not see morality as coming from nature, but his morality does not conflict with a morality that originates in nature. Even though Kant does not account for the origin of freedom he still thinks that **rationality and freedom of the will** are inseparable because

As a rational being and hence as belonging to the intelligible world, man can never think of the causality of his own will except under the idea of freedom; for independence from the determining causes of the world of sense (an independence which reason must always attribute to itself) is freedom. Now the idea of freedom is inseparably connected with the concept of autonomy, and this in turn with the universal principles of

morality, which ideally is the ground of all actions of rational beings, just as natural law is the ground of all appearances⁸²

Kant also sees the rational being (Quality) as the source and as an end of all maxims of moral actions when he says that a rational being himself, must be made the ground for all maxims of actions. The rational being must also never be used merely as a means but as the supreme limiting condition in the use of all means, i. e. always at the same time as an end.⁸³

However, even though Kant's moral philosophy seems to follow the Qualitative path, it is still subject to the hierarchy of quantity over Quality. Kant's moral philosophy is influenced by the ubiquitous veneration of the power of quantity. He gives three versions of the categorical imperative, or his principle of morality. He sums up these versions as follows:

1. A form, which consists in universality; and in this respect the formula of the moral imperative is expressed thus: maxims must be so chosen as if they were to hold as universal laws of nature.

2. A matter, viz., an end; and here the formula says that a rational being, inasmuch as he is by his very nature an end and hence an end in himself, must serve in every maxim as a condition limiting all merely relative and arbitrary ends.⁸⁴

3. A complete determination of all maxims by the formula that *all maxims proceeding from his own legislation ought to harmonize with a possible kingdom of ends as a kingdom of nature*. This progression may be said to take place through the categories of the *unity* of the form of will (its universality); of the *multiplicity* of its matter (its objects- that is , its ends); and the totality or completeness of its system of ends. It is however, better if in moral judgments we proceed always in accordance with the

⁸² Immanuel Kant, *Grounding for the Metaphysics of Morals*, trans. James Ellington (Indianapolis: Hackett, 1983), 53-54.

⁸³ Kant, *Grounding*, 43.

⁸⁴ Kant, *Grounding*, 41-42.

strict method and take as our basis the universal formula of the categorical imperative:

Act on the maxim which can at the same time be made a universal law. If however, we wish also to secure acceptance for the moral law, it is very useful to bring one and the same action under the above-mentioned three concepts and so, as we can, bring the universal formula nearer to intuition.⁸⁵

As Kant presents these three versions, he gives priority to the universality of the form. However, one can argue that universality is only a glorification of quantity. It is only an abstract idea of the repetition of Quality. Universality is idealized quantity treated by the human mind as Quality because it is idealized as a single entity. The character of “universality” is only the effect of the fact that the rational being, by definition, excludes the mediation of quantity (multiple external things), and pursues only what is Qualitative, which is instantiated in every rational individual. It can be argued that universality is only the effect of the rational being existing as an end in itself, the goal, and also the one ground that is equally valid for all rational beings. This leads to a one-directional, general (for all rational beings) action, an action that focuses on free Quality, the rational being as an end in itself. The universality of moral laws that the rational being can legislate are the consequence of the objective (real) nature of Quality, and the fact that the rational being is aware of it.

Kingdom of ends. Kant’s third version of his categorical imperative, the kingdom of ends, is also only an effect of the fact that all rational beings see in the rational being an objective reality, an end in itself. Science deals with objective realities, which are

⁸⁵ Immanuel Kant, *Groundwork*, trans. by J.H. Paton (Indianapolis, Hackett, 1983) 103-104.

quantitative and expressed numerically. However, the importance of Kant's moral philosophy is that he recognizes a Qualitative objective reality, the rational being.

Since the end, the target of each and every rational being is one and the same, the effect is unity. The result is unity even though there is a multiplicity of rational beings. Each being respects the other's personal side goals. Since by definition the rational being respects the rational being as an end in itself, the maxim of this action cannot contradict this respect.

Social Structures

Every individual, low or high in the Qualitative evolutionary scale, male or female, has both the Qualitative and the quantitative tendencies.

When each of these tendencies develops its own system for the purpose of reproduction or its control, then they are known as "the sexes." However, these tendencies exist in animals without being "sexual." These tendencies, as life movers, gather and organize groups of individuals not only for the preservation (survival) of Quality, but also for the increase of its self-value.

The quantitative tendency gathers animals in groups. The Qualitative tendency also gathers animals in groups, usually in family groups. These two tendencies complement each other. Among lower forms of life, among insects such as termites, the quantitative tendency gathers them in groups, but this devalues Quality and reduces it to a disposable means. As a part of a group Quality is not an end in itself. On the other hand, the Qualitative tendency helps Quality by organizing quantity into a useful means. This organizing Qualitative tendency is not free in lower forms of life. It is subjected to

the mediating power of quantity, which limits the direction in which the individual will move.

Hierarchic Structures. When not free, the Qualitative tendency organizes the quantity as a rigidly functioning **hierarchy**. The mediated power of quantity interprets “Quality,” as a winning **minimum number**, which is an inaccurate interpretation. However, because the origin of this hierarchy is Qualitative, the resulting termite structure, including the queen and the king, becomes a means to the Quality. Each helpless larva accurately represents Quality because it is without any power of quantity.

Herd animals are not very intelligent and they have a strong quantitative tendency. They gather in large groups. Within these species, the males follow the quantitative tendency of their sex, and work hard to multiply themselves as much as possible. But, they also follow their Qualitative tendency. Since this tendency is strongly mediated by quantity, it interprets “Quality” as minimum number. As such, the male who represents the Quality that females are looking for, seeks to increase his diminished self-value (that of an insignificant minimum number) by dominating others. Once dominant, he protects his group against competitors and predators. The female of herd animals, on the other hand, being the agency in charge of the protection and care of Quality, needs help and seeks it in the group. Nature helps her by the fact that the calf is born ready to walk. But she still needs protection against predators, and the group with its dominant male provides it.

During the Qualitative evolution the power of quantity regressed while Qualitative tendencies progresses (see p. 75), and a progressively less mediated

Qualitative tendency appears in the scene of life in the form of an individual of female sex who evolves along with intelligence and who interprets “Quality” accurately.

When species do not form large quantities, females resort to family groups. There, brute force (power of quantity) is replaced by mutual respect and friendship (Qualitative freedom). Since the goal of intelligent females in nature is always Quality, and since the helpless Quality is an end in itself that is valid for every female in the group, the effect is unity.

Biologists tend to assume that a dominant male must head groups. This is the model in which life of intelligent animals must fit, according to some. The bonobos are very intelligent, but they do not fit in this model. The male is not dominant among them, even though he is bigger and has impressive canines. The bonobo groups do not have leaders that enforce rules with brute force. There are influential females who maintain their leadership position through respect and affection. Among bonobos, as it is also among elephants, females have the same goal: Quality. Every helpless individual is an end in itself that is equally valid for all of them, and thus, they are united.

Female bonobos defend their Qualitative tendency. The bonobo females form groups as a means to protect themselves against male aggression. Female orangutans as well as chimpanzees fall victim of male brutality because they do not have female groups that can, on the spot, defend an attacked female. Even though the bonobo males, as male chimpanzees, are larger than females and have threatening canines, female bonobos do not fall victim to male aggression. They are not intimidated. The strong presence of the

Qualitative tendency (female sex) in them, reinforced with the power of their group, prevents aggressive males from abusing females and infants.

Human hierarchic structure. In both human and termite hierarchies, it is the case that the Qualitative tendency of the individuals that compose them are strongly mediated by the power of quantity.

Termites are highly dependent on quantity, and the hierarchic structures provide a necessary means for Quality (larvae) to survive. They need quantity to survive because they are not Qualitatively free compared with humans. The rational being, on the other hand, is born rational, but grows up within a hierarchic system that is the symptom of a high dependence on quantity. A way of life that is based on a hierarchic system is damaging to rationality. Furthermore, while among the termites, the hierarchic structure, queen and king included, is used as a means to benefit Quality, the hierarchic structure among humans violates the natural order by benefiting the quantitative tendency, treating Quality as a means. Being born rational, the human being does not need to degrade Quality in order to survive and much less to perfect himself. How could one increase self-value by degrading one's Quality? . The rational being can already know that quantity is a means, and if this means (hierarchic structure) defeats the goal that it is intended to serve, it does not make sense to use it.

Female individual, a willing means to Quality. The freer her Qualitative tendency is, the more willing she is to lend (to “sacrifice”) her quantitative aspect. This “sacrifice” is not a negation of the *self*; it is the manifestation freedom of the qualitative tendency to transcend the needs of her own body to help Quality.

By choice, females lend the quantitative aspect of themselves, their body, their energies and their time to protect and free Quality.

In nature, the “head” of family is not some individual with a particular anatomical system that promotes either tendency. It is the individual with prevailing Qualitative tendency. Even when a grayback is the “head,” he is part of a family because he uses his power, his quantitative assets as a means that benefit the offspring. What qualifies an intelligent animal to be a member of a family is his or her ability to see that “Quality” is helpless. The target of this tendency is not limited to the family members, however. Matriarchal groups among elephants help individuals in distress. There was a case where a scientist sedated a young bull with a tranquilizing shot. The bull sounded an alarm, and a nearby matriarchal group came and tried to help it to stand up.

Because female sex is one and the same with the Qualitative tendency, hierarchies among intelligent females in nature are not the same as those among insect or human societies. A high-ranking female elephant, for instance, does not engage in brute means of power plays. She has that position because she gained the respect and affection of other females by using her power to serve Quality. Female hierarchy is a means that replaces the still unrealized freedom of the Qualitative tendency. However, when the Qualitative tendency is strongly present as among bonobos, hierarchic structures as those of less intelligent animals, become less noticeable.

On the other hand, the male as individual represents, displays the Quality of its species. Perhaps this is the reason why he does not want to use it as a means to help helpless Quality, especially when, from his own viewpoint, “Quality” is not the helpless

one but he, as a minimum number in power. More likely, however, he does not wish to limit his quantitative tendency, so he roams around instead, in bachelor groups like the elephants in Africa, or alone like the orangutan.

No deception. Hierarchic groups, as quantities, are deceptive. They give the appearance of being primary. On the other hand, groups that are united by each individual's respect for Quality do not have importance other than as a means.

Had the Homo sapiens respected the Qualitative tendency and not interrupted the rationality-producing Qualitative evolution, human life would be different. It would have some resemblance to Kant's kingdom of ends. Even though bonobos do not have the ability to talk, a handicap that is in the way of solving social problems, they found a way to live in peace. They pacify the aggressive quantitative tendency and convey their positive ideas to each other by exploiting the sexual pleasure available from the quantitative aspect within their body. It is imaginable that by activating the now dormant Qualitative tendency, a world that is worthy of a rational being could become a reality, especially when humans already have the ability to talk and think rationally.

Duty. At the center of Kant's moral philosophy is the concept of "duty." An action taken for the sake of duty is what makes it moral. Kant finds it difficult to explain why one should act for the sake of duty since it is a "disinterested" action. His notion of duty appears as a senseless demand that can only be justified with a God from religion. This is because he does not classify feelings into Qualitative and quantitative. Traditionally, humans have worshiped quantity while hiding Quality. Any tendency other than that toward some quantitative value is seen as "disinterested." The Qualitative

tendency is unknown. The Qualitative tendency is manifested as Qualitative feelings which can be liberated in humans. The human world is dominated by the power of quantity, and this power separates Qualitative feelings from the category of “feelings.”

However, all feelings come from Quality. Quality, the individual, has feelings related to the quantitative, but he can also have feelings related to Quality, the *self*, which evolves with intelligence. These feelings start as maternal instinct, and they cultivate those same feelings in the offspring. Qualitative feelings are not “disinterested.” They are very much interested in the state of Quality. However, since the quantitative tendency prevails among humans, it obscures, it weakens the value of maternal feelings and of Qualitative feelings, in general. So, what Kant calls “duty” is an urge, a feeling to act in favor of Quality that, at the same time is contradicted by quantitative considerations from within oneself and from outside influences.

Kant rejects the natural Qualitative feeling manifested as maternal or parental feelings as morally invalid because their caring actions are the result of their inclinations, their interest in what there are doing. The intelligent female in nature loves to do what she does. If the Qualitative tendency in her is Kant’s divine will, then, “the *ought* is here out of place, because the *would* is already of itself necessarily in agreement with the law.”⁸⁶ Caring for the helpless is in agreement with the Qualitative tendency in a mother (and father) and with the intent of the most fundamental law of nature.

⁸⁶ Kant, *Grounding*, 24.

But, under the power of quantity, only the quantitative is seen as of interest. The Qualitative therefore is seen as something that involves “disinterest” and therefore, it involves a senseless action. Why should one do one’s duty? But, if one realizes that Quality, as the “whatness,” is the only thing that really exists and that the rational being is its direct manifestation, to do what is in the interest of Quality is of interest.

Additionally, if one recognizes that there is a fundamental order in nature whence the Qualitative tendency in nature comes, and if one sees that what Kant calls “good will” is the Qualitative tendency manifested without quantitative mediation, then Kant’s claim that the rational being is able to legislate his own universal laws makes sense. The rational being can, by himself, “legislate” his own actions according to the fundamental order. If his Qualitative tendency is one and the same with the fundamental order’s direction, the freedom of this tendency, his “good will” he is able to see all rational beings without exception, as well as himself, as an end in itself. Kant writes:

Now, there follows incontestably, ... that every rational being as an end in himself must be able to regard himself with reference to all laws to which he may be subject as a being at the same time as a legislator of universal law, for just this very fitness of his maxims for the legislation of universal law distinguishes him as an end in himself.⁸⁷

Thus the hypothesis that there is a fundamental order that has Quality as its target, and the idea that rationality is Qualitative freedom and that the manifestation of this freedom is what can be called “morality,” coincides with Kant’s moral philosophy. However, his alienation from Qualitative feelings takes his philosophy into a realm of

⁸⁷ Kant, Grounding, 43.

mysterious, sterile, and lonely morality. He does not recognize morality as coming from the female sex, much less that this sex is the primary agent of nature in charge of the preservation and freedom of Quality.

Kant's concept of "duty," however, is helpful within the general environment where the Qualitative feelings are subject to the demands of the power of quantity. In such conditions women live. Since their lives are overshadowed by quantitative interests, they must resort to their sense of "duty" to do the right thing. The Qualitative tendency, a women's female sex feelings, her inclinations to care is subdued by the power of quantity. If a woman says that she hates to get up at night to assist her child in distress while she actually gets up and assists, it is simply another way of saying that there is a conflict between the Qualitative and the quantitative within her own person. Her quantitative aspect (her body's chemistry) demands sleep. However, as she gets up she gives attention to the Qualitative. Therefore, as Kant says, to do one's duty is the right thing to do. The Qualitative tendency, within the power of quantity, retreats to the state of an inner "voice" that says, as Nel Noddings writes: "I must- I do not want to," but it is sometimes hard to hear. The Qualitative tendency is felt provided, again as Nel Noddings writes, "I recognize the feeling and remember what has followed it in my best moments, moments in which I was cared for and in which I cared, I may reach toward this memory and guide my conduct by it if I wish to do so."⁸⁸ The sense of duty is the tendency of our own Quality (our own self) to treat itself as primary, which it is.

⁸⁸ Noddings, 60.

Female Sex, the Moral Agent

The female sex, as the agent in charge of the Qualitative tendency, is the natural origin of morality. The individual of female sex is the entity that executes and enforces the most fundamental order of nature, and as such it is nature's moral agent. It can be said that the female sex is the author of the Qualitative evolution as illustrated by the chart on p. 75.

Apes not as quantity oriented as humans

Even males in nature who fight and even kill infants of their own kind do not engage in collective massacres as humans do. Ethologist e Goodall noted that some of her helpers reported multiple killing among groups of male chimpanzees, similar to human wars. However, this claim has not been confirmed. Michael Ghiglieri⁸⁹ attempted to confirm the report of many bodies in a battlefield of chimpanzees without success. Thus, if there is mass killing among chimpanzees it must be a very rare occurrence. Zoologist Dian Fossey dispelled the myth of violent gorillas, even though she witnessed very aggressive males. Also Birute Galdikas, a Canadian researcher working with orangutans in Indonesia, writes of the gentle nature of female orangutans. The male lives separately; he is not the very gentle, and perhaps this is the reason he withdraws from others. These researches support the idea that the Qualitative tendency is strong among apes, especially among females. Apes are close relatives of the Homo

⁸⁹ Michael P. Ghiglieri, *East of the Mountains of the Moon: Chimpanzee Society in the African Rain Forest* (New York: The Free Press, 1988).

sapiens. It is true that these relatives are of different character and their ethics vary as widely as those of humans; however, one can say that their overall attitude is “civilized.” Male chimpanzees have wars. However, their “wars” are usually finished without leaving a field littered with bodies. Is there a recorded scene of a field littered with dead chimpanzees after such wars? Mother apes are attentive to their offspring; and at worst, do not intentionally abuse them. They do not stay in an abusive situation, as some human mothers do. They protect Quality (the offspring) and the tendency toward Quality (the female sex). They protect each other against abusive males. Among bonobos in the Congo, for example, the Qualitative tendency is apparently strongly manifested:

Since bonobo females tend to be dominant, attacking them of their offspring is a risky business. Most likely, if a male were to make a suspicious move, females would band together in defense. We do not know this for certain, because infanticide has thus far never been documented in the species. Perhaps the female counterstrategy is so effective that no even attempts in this direction take place.⁹⁰

It seems that bonobo males rarely threaten females, and if they do, the females immediately support each other. They defend Quality, and support the Qualitative tendency.

Humans, on the other hand, regressed Qualitatively. I am claiming that this regression comes from the power of quantity, from collectivism, from the force of numbers. Ape individuals are not subjected to their species’ power of quantity to the degree that a human individual is. They do not form large, permanent groups. Jane Goodall writes, “My early study showed that the only group with a membership that

remains constant over many months is a mother with her younger offspring. All others at times travel alone, as well as alternating between small temporary groups and large gatherings of up to 40 individuals.”⁹¹ The individual ape does not have to endure the aggressive, violent tendency, he is free to wander away. Apes, especially females with offspring, tend to keep a distance from rowdy behavior. They are not as free to leave groups in order to stay away from abuse as apes in the wild are.

The males sometimes kill infants, and perhaps even some females kill infants. The instance of a female killing infants can be questioned. It is known that when females are in captivity such as in cages in old zoos, they lose their maternal feelings. They may become abusive and even kill infants. Man’s encroachment on the apes’ habitat limits the freedom of the individual ape to retreat from an unpleasant environment. This encroachment perhaps has the same effect on apes as captivity does, in that it decreases the tendency toward Quality. The Qualitative tendency needs freedom to manifest itself. The problem now is that a burgeoning human population. Is there an assurance that some wards do not disrupt the natural way of life of these animals? Also, since apes can learn, male apes might start learning from man the art of killing; however, this has not been confirmed. But it seems that peacefully roaming “nursery groups” among chimpanzees⁹² are not as visible anymore. It is possible also that the rate of infanticide may increase among chimpanzees since females can no longer unite against aggressive

⁹⁰ Waal and Lanting, 122-23.

⁹¹ Jane Van Lawick-Goodall, *My Friends The Wild Chimpanzees* (Washington: National Geographic Society, 1967), 167.

⁹² Vernon Reynolds, *The Apes* (New York: E. P. Dutton, 1967), Plate 46: A “nursery group.”

males to protect themselves and their offspring, as bonobo females do. In all, one can say apes are, as a rule, gentle compared with humans.

But by looking at the human species, it is evident that, within it, the order that favors Quality is violated. And the fact that it is a “man’s world” shows that the male sex, as the agent of the quantitative tendency subjugated and silenced the Qualitative tendency by subjugating women. Once the Qualitative tendency was silenced, the agency that promotes Quality by treating it as an end in itself, was also silenced. Women are made to forget their natural tendency, their true sex, the sex that is opposite to the male. Instead, they known themselves only as representing the homologue of the male sex, erroneously known as “female sex.” This ignorance totally obscures the role of woman as the agent that executes and enforces the intent of the fundamental order. This fundamentally important role is not stagnant. It evolved during the Qualitative evolution from mere reflexes to intelligent concern and caring actions. Intelligent mothers in nature teach their offspring, by example, about the primacy of Quality. At the rational level, however, teaching about Quality expands to knowledge in addition to example. At the rational level the teaching reaches the theoretical aspect of the knowledge about Quality and quantity. This is the knowledge that will provide to every child comfort and safety beyond the limits of a home. The knowledge about the primacy of Quality can make a better world a reality. But, the fact is that the world is not safe. Humans persecute and kill each other for the sake of territories, money, or “ideals” external to Quality. The power of quantity rules, and Quality is a disposable means. One might ask if the woman is a rational being, how could she have allowed this violation to happen?

CHAPTER 5

Violation of the Fundamental Order

Is the Human Male Responsible?

If the main hypothesis of this thesis is true, if in fact humans pursue quantity at the expense of Quality, if the power of quantity comes from the male sex, and if the human world is a male's world, then the human male is suspect as being the one who inverted the natural order because he had a motive. The human male could have rebelled against the natural order because this order had been restricting his quantitative tendency during the Qualitative evolution, as the Helen Kern chart illustrates.

However, this assumption is hasty. First of all, a sex is not one and the same as an individual. Even though each human being is one indivisible entity, each individual is made of both the Qualitative and the quantitative. What divides the human species into "male" and "female" groups is that each half of the species has its **own system** that is specific to each tendency and only in regard to reproduction or its control.

Thus, even though each individual has his own specialized system that acts in the interests of either Quality or quantity, each individual also has the tendency of the other

sex, so one cannot simply point to the human male and accuse him of the inversion of natural values. The claim that the male sex disobeyed the fundamental order does not mean that men are bad and women are good. It means that the question of whether human males violated the fundamental order and brought misery to our world has to be carefully posed.

The first thing one can say is that human defiance of natural values by pursuing quantity as a goal could not have been the work of a rational individual if “rational” is one whose Qualitative tendency (will) is free from quantitative influence. The pursuit of quantity at the expense of Quality is not rational. So it is rather clear that it may not be the case that the rational male is the culprit. But even though the rational male could not have inverted the natural order, the almost rational human with a strong quantitative tendency could.

Rebellion - Its Possible Start

One can assume that at the beginning of the human race, human males lived just like male apes or elephants live today in the wild. The original human males very likely also roamed around in bachelor groups, or simply waited within the group for the females to be ready to mate. The grayback gorilla forms part of his family because he is kind toward the females and the young. However, since there is a strong competition for the top of the hierarchic order among males, most males are left without females. In addition, females wait for a long time before mating again after having given birth because they are busy caring, protecting and teaching their offspring. Apes such as

bonobos, for example, do not have artificial methods of birth control at their disposal. However, they give birth to only one offspring every four and one half to five years. They do not practice infanticide as a method of spacing births either, as some humans do.⁹³ The anatomy and physiology of female bonobos is similar to that of women, and they are able to give birth every year as it happened in the San Diego zoo (p. 117). But the fact that in the wild they do not give birth every year as some humans do, can only mean that the “sex” they are so famous for is not really practiced by the bonobo mother, or it is restricted to harmless stimulation. They apparently wait at least three and a half years before mating again. This fact limits the time when females make themselves available for reproduction. It means that they are not available as sex partners to the male in the way women are expected to be available.

It is conceivable that young Homo sapiens males, being intelligent but also having strong quantitative tendencies, whence the sex drive originates, questioned the restricted life they led. They no longer wanted to wait for the female to agree to mate, as intelligent males especially have to do in the wild. They attacked that aspect of women that opposed their tendency to mate. This aspect is the Qualitative tendency, the tendency to care and teach the young. It is also what diverts the attention of any individual in nature from its own quantitative tendency. The Qualitative tendency is in opposition to the quantitative because it distances the individual from the urge to breed while the offspring is still helpless and requires care.

⁹³ Marjorie Shostak, *Nisa, The Life and Word of a !Kung Woman* (New York: Vintage Books, 1983).

There apparently was a point in the evolution of Qualitative freedom when the human male rebelled against the existing order and submitted himself and others to his own quantitative tendency. He decided that he would no longer wait for the female's approval to mate with him.

Collectivism: Tool of Rebellion and Control

It may be that among the very intelligent Homo sapiens **one dominant** but not yet totally rational male, (that is only marginally rational, with only “one foot in the door” of rationality), already had the conscious will to act Qualitatively, but this “good will” was not yet strong and free enough, as it is in Kant's rational being. His good will **succumbed** to his quantitative tendency. The fact that the original males were in a group devalued their Quality and gave strength to their quantitative tendency. The dominant male led his group to act in favor of the quantitative tendency. As a group with physical strength the males imposed the quantitative tendency not only on women, but also on each male as part of the group. Human groups are based on collectivism, the submission of the individual to the group, the submission of Quality to quantity.

Pre-Historic Beginning

The fact that collectivism is found in the most remote places of the world indicates that collectivism already existed at the beginning of human race, before humans scattered over the globe. One can find collectivism in its pure form among preliterate peoples. Collectivism is contrary to the Qualitative tendency and thus stops creativity, stops change. Collectivism preserves the mode of life of tribes in the same condition as

they existed thousands of years ago, perhaps as they were at the beginning of humanity. Thus simple societies of the world are like preserves of life sitting on the shelves of time. They reveal a way of life practiced from the earliest periods of human existence and thus offer an opportunity to get a glimpse into the past.

United Males. Early human males united in order to boost each other's male sex pride and overpower the Qualitative tendency. The existence of all-male groups that imposed their will on women is not difficult to imagine. If preliterate cultures are an indication of what life was like long time ago, the presence of all-male clubs among people in the most remote corners of the world, (as in Melanesia, for example, where men have "ghost" clubs), suggests that this scenario is possible.

Brute Force. It is difficult to imagine that the female gave up her female sex tendency voluntarily. The male sex dominated by means of physical force. During this period all women became slaves, their Qualitative tendency was subjugated and silenced. The children born from that time no longer had a natural protector; they were abandoned, roaming alone, stealing to survive, running in wild packs. They were mistreated and even hunted. This happens in the present-day slums of Brazil; it could have happened then.

In addition, during the takeover of the quantitative power, children not only ran abandoned and mistreated in wild packs, they perhaps were also killed and even eaten. Chimpanzees or gorillas kill infants and eat them. Both infanticide and cannibalism are signs of power grab. They are the **manifestation of the power of quantity over the Qualitative tendency of the mother or another individual.** When any individual grabs

an infant (or another helpless Quality) away from defending hands and kills it, this marks an instance of defeat of the Qualitative tendency under the power of quantity (brute force).

It is conceivable that the original human males, as they grabbed power over the Qualitative tendency in women, might have supplemented their diet eating young humans. They were too busy imposing their power and indulging in sex to have the time to gather food or hunt elusive wild life. The human male loves women, the quantitative aspect of her that is conflated with the female sex, that is. He does not always love the true female sex, that is, her tendency to pursue Quality. Infanticide and cannibalism are obviously very crude methods of power grab that later graduated into ceremonial events. If cannibalism is practiced by some humans, especially among those tribes that can be seen as relics of the past, it would reveal that the same thing happened at the beginning of humanity.

Thomas Davitt writes about cannibalism under the heading of "Occasional Infanticide and Senilicide":

The motivating values for infanticide are varied. Among Eskimo, infanticide is looked on as an institution necessary for the protection of the group. The proportion of infants to adults in each group cannot be allowed to rise too high. Eskimo female children are the most frequent victims of infanticide because the male is the main food-getter. Shortage of food is also given as the motive for infanticide for other people. The Bushmen practice infanticide for this reason. In Australia, shortage of food is one of the reasons for killing and eating children. Among the Maori, children were killed and eaten during times of famine. Parents exchanged children so that they would not have to eat their own children. Other reasons given for infanticide are that mother finds it too hard to carry a child over long distances and keep up with the group, that the child

is weak and cries too much, that the first or the second child should be killed because it will not grow up to be strong⁹⁴.

George Forster, who was a scientist on Captain Cook's second voyage, describes the cannibalism of youth. When they anchored the Britannic Majesty's Sloop Resolution during the years 1772, -5, and stopped by in New Zealand, natives let them take drinking water from their water hole. As they went to get the water they noticed a heap of human remains. George Forster describes:

The first objects that struck them (the captain, with Mr. Wales and Forster Sr.) were the entrails of a human corpse lying on a heap a few steps from the water. They were hardly recovered from their first surprise, when the natives shewed them several limbs of the body, and expressed by words and gestures that they had eaten the rest. The head without the lower jaw-bone, was one of the parts which remained, and from which it plainly appeared, that the deceased was a youth of about fifteen or sixteen years old.⁹⁵

This corpse could have been of an "enemy" youth.

In all, the above-suggested scenario of the beginning of humanity is thinkable. It consisted in the submission of the Qualitative tendency to the power of quantity.

Interruption of Learning

During this period women could not take care of their offspring. They were physically prevented from doing what mothers of intelligent animals do in nature. The

⁹⁴ Thomas E. Davitt, *The Basic Values in Law: A Study of the Ethico-legal Implications of Psychology and Anthropology*, vol. 58, of *Transactions of the American Philosophical Society*. (Philadelphia: American Philosophical Society, 1968), part 5, 163.

⁹⁵ George Forster, *Voyage Round the World* (London: B. White, 1777), 511.

abandoned children grew up without Qualitative guidance, without Qualitative learning how to care. They grew up as delinquents.

With rationality came vulnerability. Before intelligence, caring maternal actions are instinctive, automatic. When the brain is still not enough developed for the will to be unmediated, the fundamental order “wires” the individual in such a way that its automatic reflexes benefit the Qualitative, the helpless offspring. The individual’s anatomy is programmed so that certain stimuli provoke certain responses. A female duck, for example, becomes a good mother without having to learn from her mother.

However, among the very intelligent animals such as gorillas, mothering is mostly learned, not instinctive. Intelligent females in the wild are kind and caring to their offspring, and this teaches the next generation how to care; thus the Qualitative tendency is transmitted to the female in the next generation by example.

The human female, because she is rational, **is the most vulnerable female in nature**. If only one generation fails to learn how to care, the next generation of un-cared for humans will be a generation of delinquents because they will have failed to learn from their parents the Qualitative knowledge. They will not have the memory of being cared for, as Nel Noddings would say.⁹⁶

Thus one cannot blame women for not recuperating from the original blow and

⁹⁶ In addition there was the role model these delinquents had. The “leader” solved this problem with the “rod” that, if spared, would have made life difficult; delinquents would have been running wild making life difficult for everyone. This was the beginning of humans harming each other to a much higher degree and force than intelligent, but still non-rational males are capable of. The human world became ugly and had to be kept in line by a coercive outside force.

expect them to reinstate their Qualitative tendency. It took the Qualitative evolution millions of years for this tendency to reveal itself. At the rational level its interruption in just one generation is a loss of all the previously accumulated knowledge. The loss of the knowledge how to care can be compared to loss of the knowledge about mathematics. If a parent or a teacher does not teach mathematics to a child, he will not know mathematics.

The generation of those that have not been cared for will be totally ignorant of Quality, of the fact that the helpless individual is an end in itself. At the most basic level of learning by example, there will be no memory of being cared for. The child will not have the memory of being cared for and the feelings associated with this memory. If he is abused, he will learn to abuse. Even if he is not abused himself but sees the abuse of others condoned by those close to him, he learns to be abusive. This is probably true of apes or even dogs also. For the rational being the experience of being cared for, and seeing this caring attitude practiced, is more involved than the same experience is for an ape. For the rational maternal feelings include the fulfillment of the urge to **understand** why an individual is important (an end in itself) and not just a mere means.

The stronger the Qualitative tendency the higher is the degree of Qualitative freedom, that is, the degree of knowledge about what is primary. The ape mother provides this knowledge but only with examples, in practice, by tender physical caring. She lacks language and the intelligence to explain why things are the way they are. She is unable to give a rational explanation of why the individual is primary. At the rational level, this explanation is necessary. This explanation, in addition to the care and the

examples, is what makes motherhood rational. This explanation is the rational base of the Qualitative tendency. Without this explanation the Qualitative tendency cannot withstand that assaults to its freedom. Thus, in order to be able to stand and not fall, the Qualitative tendency needs a rational base. History shows that once in a while there were periods when women were less oppressed. But since this freedom lacked a rational base, quantitatively directed justifications invariably returned women's Qualitative tendency back to bondage. Justifications for male sex superiority can and were introduced without meeting opposition at the rational level

Kant does not address women's freedom but he seems to refer to the fragility of the Qualitative tendency, which he refers to as "innocence." He writes:

Innocence is indeed a glorious thing; but unfortunately, it does not keep very well and it easily led astray. Consequently, even wisdom- which consists more in doing and not doing than knowing- needs science, not in order to learn about it, but in order that wisdom's precepts may gain acceptance and permanence. Man feels within himself a powerful counterweight to all the commands of duty, which are presented to him by reason as being so pre-eminently worthy of respect; this counterweight consists of his needs and inclinations, whose total satisfaction is summed up under the name of happiness...⁹⁷

The counterweight Kant talks about can be seen as the quantitative aspect of life. It is very "heavy" within the quantitative human trap because it has been overly stimulated at the expense of Quality. Without the knowledge of Qualitative and its quantitative aspect, the female sex as Qualitative tendency cannot regain its identity. The

⁹⁷ Kant, Grounding, 16.

main weapon the power of the quantitative tendency has against the Qualitative tendency (female sex) is **ignorance**, especially about Quality.

Hence, women have been historically kept in ignorance. Today they can study; however, the Qualitative and the quantitative are not included in any study. The sciences related to life are one-sided by omitting the Qualitative aspect, thus not revealing the true nature of the female sex. Only thanks to some true scientists in the biological field such as Dian Fossey, Birute Galdikas, Michael P. Ghiglieri, Jane Goodall, Tokayoshi Kano, and other brave individuals who risk their lives studying the life of the closest human relative, do we know that very intelligent individuals, especially females, are excellent mothers, that is, have a very strong Qualitative tendency.

Rationality not Free from the Quantitative. Even though rationality is a free Qualitative tendency and the rational being is free to pursue its own freedom without being mediated by the quantitative, the will of the female sex is still dependent on quantity. It is dependent on **remembering**, and remembering can only happen with a sound brain with the right connections. Lacking this memory, the female individual does not know the intent of her direction. She needs the memory of being cared for.

Beginning of Mutual Abuse and Killings. The institution of collectivism greatly decreases the chances a human individual being has to be treated as an end in himself. The helpless individual begins to see himself as an insignificant part of the group. Since no one wants to be insignificant, this prompts individuals to resort to accumulation of quantitative values, not as a convenient means of exchange, but for the purpose of acquiring power over others by increasing quantitative self-value. This is an ignorant

self-protective move. This is assumed to be the only way to reach individual freedom. The only value that is acknowledged within the human trap is the quantitative “self-worth.” Each individual hopes to be the favored minimum number on top of the pyramid of power by controlling groups or money. Under these conditions, the human being sees others as a means to reach this control.

Since others are seen as only a mere means, and since quantity is seen as the only reality worthy of pursuit, abuses and killings of individuals for the sake of quantitative values becomes possible. These quantitative values can be territories, money, simply trinkets that are seen as “status symbols.” In addition, torturing and killing are also done in the name of quantitative impersonations of Quality, (idols, or invisible entities) that is, to causes external to the individual (Quality).

Rebellion-Amazons. Not all of the originally subjugated females were willing sex slaves; some rebelled. The perfect collective life of primitive man gradually bred resentment. As brute force breeds anger, the initial assault on women was very likely the reason for the appearance of the armed females known as “Amazons.” They were thought to be a myth; however, there is now archeological evidence that such women actually existed.⁹⁸ If female sex is the Qualitative tendency in an individual, however,

⁹⁸ Jeannine Davis-Kimball and other Berkeley scientists reported that deep inside ancient burial mounds along the Russian-Kazakhstan border were uncovered bones and weapons of women warriors she believes they belonged to the “Amazons” whose existence has been legend since Herodotus, who described them nearly 2500 years ago. Reported by David Perlman, science editor, S. F. Chronicle, January 28, 1997. In addition, Hendrik van Paasen a Dutch archeologist found “Amazons” in West Irian, on the northwest tip of New Guinea. The same “Amazons” were also reported by Reuters from Jakarta Indonesia on April 27, 1977, that in the remote part of West Irian there are “Amazons.” They kill all male babies, according to police commander, Brig. Hadji Suhandi.

these "matriarchs" were not the manifestations of female sex power. They were the manifestation of revengeful slaves; ignorant of their true strength, they followed the same quantity-oriented, aggressive route as their captors. They **did not know** that their power lay in their Qualitative tendency. Thus women's rebellion failed. It did serve, however, as a warning to the male sex.

Male Sex Redirects Search for Increased Self-value

Learning that brute power alone cannot maintain the enslavement of the female sex, the male sex in power realized that a better strategy was needed. A slave held by brute power is not a good slave. The best slave is the one who is convinced of the master's superiority. Since the female sex is a tendency toward Quality, the males in power realized that by presenting the male sex as Quality. (he does represents it, but inaccurately, see p. 138), women's Qualitative tendency could be redirected.

Quantitative Direction

The main point of all-male clubs is to re-route the tendency that individuals have to increase self-value from Quality to the quantitative. The intention is to replace the Qualitative target, the innate values of the human being with quantitative values by teaching every generation quantitative values that are disguised as Qualitative. The individual thus indoctrinated chooses the quantitative. They replace Quality with quantity dressed as Quality, and thus transform quantity into an end in itself. This reduces Quality to a means. Each individual loses his or her highest power, rationality.

Thus it is not that the power of quantity ignores the human direction toward the good and the justifiable; on the contrary, it exploits the fact that every born rational being prefers Quality, and all it has to do is teach every child that this Quality is in the power of quantity (disguised as it may be), and its interests.

The focus of all-male groups and their customs is to cause an individual to switch priorities from Quality to quantity. Children developed under normal conditions are born with a prevailing appeal for the Qualitative direction. They are “innocent.” The purpose of all-male clubs is to use the individual search for the good to the benefit of the power of quantity by instilling in the “initiated” individual the value of the power of quantity, dressed in Qualitative clothes. Every new generation has to forget its own Qualitative value and replace it with the quantitative pride of the group and of the male sex. “Manhood” is stressed. This “manhood” is understood in terms of sexual performance, which is associated and adorned with moral (Qualitative) traits such as valor or honor.

The main point of these clubs, I would argue, is to eradicate individual initiative, diverting the natural search for Quality present in all humans toward quantity. This diversion constitutes the replacement of individualism (value of the Qualitative), with collectivism, the fear of the power of quantity, with the group, its customs, and traditions.

B. A. L. Cranstone describes some customs:

A man usually belonged to several ‘ghost’ societies... Entry was by purchase and accompanied by initiation rites. Members, wearing masks, impersonated ancestral spirits, and so disguised terrorized the uninitiated.

The function of these societies was to protect the property of members and to punish breaches of custom,⁹⁹

Military colleges and their recruiting system have preserved the flavor of the original all-male clubs. The salient features of these clubs are the elevation of the group over the individual, the elevation of the quantitative over Quality. These all-male societies have “initiation” ceremonies designed to send a message to the person that, as an individual, he is not an end in himself and is only as significant as a minimum number can be in comparison to total numbers of the group. The chances that an individual within collectivism will be treated as an end in himself as in Kant’s kingdom of ends, is very small. Only the winning minimum number is treated well. The “chief” is in practice, not in theory, well treated. He is the one who gets the best place to live, the best protection from outside danger, and the best amenities available.

Thomas Davitt, a professor of jurisprudence, writes about laws and customs. He maintains that: “The essence of what was termed law in literate societies was present in the custom law of preliterate people.”¹⁰⁰ He also says that the main purpose of his book is to show that there is value in law necessarily. According to him “the findings of psychology show that there are certain value judgments which are necessarily present in

⁹⁹ B. A. L. Cranstone, *Melanesia, A Short Ethnography* (London: Trustees of the British Museum, 1965), 19.

¹⁰⁰ Thomas E. Davitt, *The Basic Values in Law: A study of Ethico-legal Implications of Psychology and Anthropology*, vol. 58 of *Transactions of the American Philosophical Society* (Philadelphia: American Philosophical Society, 1968), 33.

the thinking of all men and consequently in the laws of all men.”¹⁰¹ The behavior of humans had to be regulated. These regulations, as he points out, always have the basic human drives as their motivation.

Humans, even though they live in a psychological quantitatively oriented cage that obscures Quality and therefore promotes ignorance about it, nevertheless yearn for it. Life is Quality on its way to freedom and all regulations include respect for this basic freedom, which is survival. This is a universal judgment in all societies. Davitt writes “All normal men form the given value judgment that self-preservation is good...it is found then, in all individuals and in all societies.”¹⁰² He quotes Ralph Linton’s *The Study of Man*: “no society approves murder.”¹⁰³

Even though some basic rights are preserved in the customs and laws, the values that guide human customs and laws the most are quantitatively oriented and favor the quantitative tendency of the male sex. These quantitative values embedded in all laws and customs concern woman and the rational individual because they assure the submission of Quality to quantity.

“Education.” The main task of the power of quantity is to “educate” individuals in general and women in particular to believe that quantity, as in male sex power, is supreme over the helpless individual Quality. This is facilitated by presenting quantity dressed in Qualitative clothing. This misinterpretation is accepted only because

¹⁰¹ Davitt, 3.

¹⁰² Davitt, 42.

¹⁰³ Davitt, 433.

collectivism devalues the ability to think. The most salient feature of collectivism is that it forbids creative thinking. The power of quantity over Quality is based on the formula of **authority and obedience**, which is a literal prohibition to think. This authority is traditionally represented by the power of the male sex.

In nature, the Qualitative tendency of intelligent parents educates the offspring. Among humans, it is the power of quantity, always **appearing** cloaked as Quality and occupying a top hierarchic position that “educates” as the “moral guide” of every new generation, and this “guidance” is directed toward quantity, which is the value that is important to the male sex. Since the quantitative tendency opposes Qualitative freedom, (rationality) it is not surprising that the method it uses to educate the young is based on authority and obedience. Neither is it surprising that the implementation of this “education” is by methods of agony, and even bloodshed and death.

Among humans, the intent of the fundamental order has been inverted, violated. Quantity’s power rules over men and women. As such, the power of quantity presents itself as the only reality, and it is seen as a worthy goal of life. As the opposition to the Qualitative tendency (which stimulates thinking), the power of quantity is manifested as the tendency to prohibit thinking.

Tools of the Power of Quantity. The silence of the Qualitative tendency in women left room for the power of quantity. The power of quantity in the mother or father, substitutes self-discipline with painful means, by “correcting” the child with a belt, a switch, a whip, or a rubber spatula. The Biblical “rod” exemplifies the brute force of the power of quantity over the helpless individual. It is quick, often deemed necessary

but only superficially effective. It is only a substitute for absent Qualitative (moral) guidance. It seems that a barrier is always provided by the power of quantity to separate the child from the guiding Qualitative tendency, usually represented by the mother. The child is often left alone or with strangers while parents pursue quantitative goals.

The guidance and compassionate care that comes from the Qualitative tendency is time consuming. The power of quantity does not provide for this time. The human Quality is exemplified in the child who is helpless. In nature the intelligent offspring is not left to wonder aimlessly, or in unfamiliar hands. The offspring is not brutally controlled. It has a defender and most importantly, this defender is also a **guide** available at all times. The human infant is the only intelligent offspring in nature whose **natural protector**, his guide and his teacher is rarely available.

Methods of Maintaining Power of Quantity

The whole purpose of the male sex was to preserve its power over Quality by inactivating the Qualitative tendency that, in nature, controls it. After breaking the continuity of Qualitative learning, there was still a need to prevent the sprouting of any new growth of the Qualitative tendency. Every new generation presents a threat because of the basic Qualitative nature of the individual, and so a system that would prevent Quality's manifestation was instituted. The males in power took three basic steps that can be summarized as follows:

- 1 Devaluing Quality
- 2 Promoting quantity to Quality's position

3 Concealing Quality

Devaluing Quality.

The intent of the power of male sex was to make slaves out of women, slaves that believe that the male sex (quantity and the tendency toward it) is superior Quality. Since the female sex is the defender of Quality, in order to devalue Quality and replace it with quantity, the power of quantity had to first silence the female sex. The Qualitative tendency is silenced by making women believe that they are Qualitatively inferior. The reasons why women are said to be inferior are many. It is usually both because of guilt, guilt of having violated Quality, and because the male sex is presented as being superior to the female sex. A master cannot relax when he knows that his slave resents him. However, if the slave sees the master as being Qualitatively superior, and if this slave is Quality oriented, as women naturally are, then it is likely that women will be good slaves.

It can be expected that women will look down on whoever offends Quality, even if it is herself. Therefore, the secret of male sex power over the female sex is to “prove” to women that they have contradicted Quality.

Convincing women of their guilt. The first step in convincing women of their own moral (Qualitative) inferiority was “proving,” with fabricated stories, that they were Qualitatively inferior to men, thus “proving” male sex superiority.

Blame women. With delinquents already running wild as a result of the abandonment of the children during this forcible take over, males blamed the female sex for all the bad things that were happening. However if the female sex is the Qualitative

tendency, and if morality refers to the Qualitative, then accusing the female sex of being the source of evil constitutes a **false accusation**.

Proof of inferiority. Within religions that follow the Bible, for example, the inferiority of the female sex is linked to her alleged disobedience to God. However, this kind of accusation apparently began even before organized religions existed the way they do now. It can be traced much further back in time by observing the natives of Papua, New Guinea, for example. One of their tribes, the Sambia, “regard women as hostile, even evil.”¹⁰⁴ Because they believe that women are polluting manhood, boys as young as seven years old are initiated by a painful nose-bleeding ritual intended to free them from the pollution that came from their mothers. Also in later nose bleedings men attempt to rid themselves of the same female-originated pollution; “female substances” - such as skin flakes, saliva, sweat, and especially vaginal fluid - are also classified as polluting and dangerous to men.”¹⁰⁵ This practice seen among these New Guinea natives seems to be an extreme case. However, “intermediate” cases exist, where women are not openly identified with evil but are still burdened with enough guilt to warrant their servitude to the male sex.

But, if the female sex is the Qualitative tendency of her species, and if the Qualitative tendency is the source of morality, then, these stories are in error. They amount to **slander** against women. “Slander,” according to Webster’s Dictionary is the

¹⁰⁴ Gilbert Herdt, *The Sambia: Ritual and Gender in New Guinea* (Fort Worth: Harcourt Brace Jovanovich College Publishers, 1987), 34.

¹⁰⁵ Herdt, 77.

utterance or spreading of a false statement or statements harmful to another's character or reputation. To slander is to disgrace, to discredit, to dishonor.

Women have been, and still are in some parts of the world, severely punished for their "original sin." They are punished for being immoral, promiscuous, sinners in one way or another. However, knowing that the sensual part in a woman is not of female sex proper, but of the same origin as the male sex organs, it can be said that the only reason a woman can be immoral or promiscuous, is that she is not of pure female sex. She also has a quantitative aspect, the same one of the male sex. She also has as part of her own body that comes from the quantitative tendency, just as men do. Only in men, this tendency has its own system that is fully developed and that can actively promote quantity. Thus women were and still are slandered, portrayed as guilty in the eyes of the group, but, most significantly, in their own eyes.

Contempt. From the assumption that women are guilty from birth springs a contemptuous attitude toward the female sex. George Forster, a scientist who, with his father, accompanied Captain Cook on his second voyage, witnessed contemptuous treatment of women when they landed in New Zealand. While the crew was refilling their drinking water containers, he writes:

A boy about six or seven years old demanded a piece of broiled penguin, which his mother held in her hands. As she did not immediately comply with his demand, he took up a large stone and threw it at her. The woman incensed at this action ran to punish him, but she had scarcely given him a single blow, when her husband came forward, beat her unmercifully, and dashed her against the ground, for attempting to correct her unnatural child. Our people who were employed in filling water, told my father they had frequently seen similar instances of cruelty among

them, and particularly, that the boys had actually struck their unhappy mother, whilst the father looked on lest she should attempt to retaliate..

... At New Zealand it seems they carry this tyranny to excess, and the males are taught from their earliest age, to hold their mothers in contempt contrary to all our principles of morality.¹⁰⁶

As part of the contemptuous attitude toward women, the united males created an artificial dependence in women's lives. They are artificially prevented by traditions from being self-sufficient, e. g. in the Marquesas islands of the Pacific, canoes were taboo to women and African Kaffirs did not let women tend cattle. When women are able to sustain themselves and their children, when they can get their own food, as most women of pre-literate peoples apparently can, they are obliged to toil much more than they and their children need in order to survive. They have to work to sustain the men and their aggressive occupations as well. In the "civilized world," this contempt is less pronounced, but it is present also. Women are seen as born to serve men.

Among humans, **the male sex power** (quantitative tendency) lays a heavy burden on women. The Qualitative tendency, in order to function, needs freedom. Without it, it suffers.

Male sex Parasitism. Family in nature is for the benefit of the offspring. Among humans, it is for the male sex power. The male in nature, such as the lion, bear or even chimpanzee, has a parasitic streak that uses the female mother's labor for his own benefit. No female, among intelligent animals, is forced to endure the male who exploits or terrorizes her, however. This is not due to the absence of males who attempt to bother

¹⁰⁶ George Forster, *A Voyage Round The World* (London: B. White, 1777), 510.

or exploit her and her offspring. The male orangutan wants to rape; the male lion often steals the hard-earned food that the mother has obtained for her family. The male bears eat cubs. But if males are threatening, the female is free to leave, and nature does not provide for the collective force of the group to prevent her from leaving on moral, Qualitative grounds, as still may be the case among humans.

The human male, especially in pre-literal peoples, exploits women's labor, not contributing anything except protection from the ills he himself causes. Is there a place in the world where men as a rule cook, and wash clothes for women while caring for the children and earn a living at the same time? Women are often seen with their children on their backs, working in the field. Where are the men who work with their children tied on their backs?

It is interesting that one reason given for female servitude to the male is women's "nurturing" nature. In nature the female nurtures her offspring, but she does **not** nurture the male sex. Even though the female cares for her offspring and even though she might live in proximity to the male, she does not put the male's demands before her offspring, as women are expected to do (on "moral" religious grounds). The fact that the female is often attentive toward a desired male does not mean that she is submissive. The female in nature might groom the male, but this is not servitude; it is her Qualitative orientation to care, and the male who receives the attention probably earned it by behaving well. This also happens among humans, especially when the male respects his own and women's Qualitative tendency. However, as a rule, and all over the world, women serve

because they are expected to serve. They learn (and believe) that “their place” is to serve the male sex.

Promoting Quantity to Quality

The worship of the penis. The crudest identification of male sex with Quality is the adoration of the penis. Since the quantitative tendency is based on the anatomy and physiology of the male sex, the adoration of male sex organs, the deification of the penis, represents the boldest portrayal of Quality by the power of quantity. It was the practice in Ancient Greece, and it can still be observed in the many parts of the world such as India, the outskirts of Singapore, Laos, or Cambodia. There, women are seen lighting candles and praying to the effigies of penises. There are museums with relics that remind us of past beliefs and practices. A little one in the Almaden area of central California, for example, shows American Indian artifacts. Among these artifacts, are carriers in which babies were kept. The carriers meant for girls were simple. However, the ones made for boys were more comfortable because they provided shade from the sun, and are also adorned with little penises made of shells. In all, the idea that the penis represents what is primary is false. It is **deceit**.

Male sex promotes men to Quality. The male sex anatomy is considered sufficient to qualify a man to be the head of a family. Family in nature is a union of individual with the exclusive purpose of caring for the helpless offspring. It is the kindness, the dedication of the male that makes him part of the family, not the fact that he has a sex system that promotes quantity. Family in nature among intelligent animals

is comprised mainly of females and offspring. Apparently, the males do not want to be the means to Quality. They do not want to submit to the Qualitative tendency (female sex), except for some gorillas. Not every male gorilla has a family however, only the dominant one. The peripheral males may be included in the group and even mate, but it seems that the dominant one imposes his will on the other males. However, among humans the idea is that it is the male sex organs, specifically, the system that promotes quantity, not the ethical behavior of a man what qualify him as a “head” of family.

Concealing Quality.

In order to preserve itself, the power of quantity has always made sure that the female sex is not seen nor heard especially when the subject is Qualitative, as it is the case in religions. Concealing Quality is done by keeping women ignorant, and quiet, especially about her Qualitative feelings. The silencing of Qualitative feelings has always been accomplished by systematically desensitizing those feelings.

Keeping Women Silent

Terrorize women. Marriage is desirable for women because it offers protection for mother and child. This protection however, is perhaps only against the dangers that the excesses of the quantitative tendency in power created. The main object of marriage, however, is to silence the Qualitative tendency in the woman before she gives birth. First, the marriage vows of some groups (Russian Orthodox, conservative Catholics), have a clause that the wife should be afraid of her husband. Of course these religions often hedge by preaching that the husband should love his mate more than he loves

himself. But they do not address the case when he does not feel so. He is allowed to act in ways that leave her terrified and fearful for her safety, and this is not only acceptable but is the guideline of relations between male and female. And while she feels afraid, she can console herself by remembering the clause in the marriage ceremony; she can resign herself, and endure. This is how a perfect slave is made.¹⁰⁷

Women promise to obey the male sex.. In addition to collectivism “educating” each male and giving him the knowledge that suits quantitative values, in addition to submitting women to all the necessary conditions that lead her to abandon Quality in favor of quantity, there is a direct extraction of promise from women to be silent. She is expected to promise to obey, to submit to the quantitative tendency, as a necessary condition, **before** participating in reproduction. It is the final knot that strangles the freedom of the female sex as agent of nature to control and perfect Quality. Without this promise, the collective force condemns the mother as “immoral,” and the child as “bastard,” and in some places the mother is physically punished.

It is true that a mother needs help to care for the child. It is true that marriage theoretically provides for this. But this is only a side benefit of marriage; it is a little concession that a mother gets after renouncing to her own tendency to defend and

¹⁰⁷ And this perfect slave is the mother of all slaveries. As she does what is normal to her, that is, teaching, she teaches quantitative value instead of Qualitative. She teaches children to adopt what is contrary to the Qualitative tendency and to rationality. She teaches using the Qualitative as a means toward an end that is quantitative. This is the base of slavery in general. In nature, the quantitative tendency of the male is excluded from the family. Among humans it rules the family. In nature, if a male is included in the family such as gorilla is only because he is useful and kind to the young and to the females; it is only because he follows his Qualitative tendency, using his quantitative tendencies only as a means.

educate her offspring. That is after she renounces to her identity as female. If the man is not Qualitatively oriented, his “help” does not benefit the offspring.

Among simple people, this “education” is formalized during female “initiation rites.” These are not in essence different from the rites of marriage in other societies. The center of these rites is the bride’s promise to obey her husband and the group. Among preliterate peoples, it is the mother who usually provides all that is needed for the child. The protection that males provide to these mothers is again, mainly against the dangers of their own making.

Desensitizing the Qualitative Tendency. The most desperate system used to silence and dispose of the Qualitative tendency is the method of desensitizing the Qualitative tendency. Since this tendency is based on Qualitative feelings and inclinations, the numbing of these feelings and inclinations is necessary to debase the female sex. There are many methods of desensitizing the Qualitative tendency and all of them involve the subjection of the helpless individual (newborn or older offspring) to intense pain, with the approval of the mother.

Ancient Assyrians sacrificed the first born to the red-hot oven of Baal. This is an example of an extreme method where the power of quantity carried itself too far for its own good. There were methods such as the deformation of the head of the child by placing it between the rigid confine of boards, neck elongation with metal rings, feet deformation with tight bandages.

However, as civilization progressed, as human intelligence slowly grew, the powerful males, being intelligent, began to reason that a less drastic method was better.

They settled for little rituals that are also extremely painful but do not usually involve long-term suffering, though once in a while they can cause death, such as female and male circumcision. These methods did not originate with the “great religions.” Among many tribes in many parts of the world one can see genital mutilation as part of life. These less extreme forms of sacrifice are more tolerable, easier to enforce, and just as effective as earlier, more drastic methods. They effectively desensitize and silence the Qualitative tendency in both men and women - to run to the rescue of the helpless tortured individual. In all, different methods of inflicting pain on the offspring **with the approval of the mother and her relatives** abound in history. All involve “boiling the calf in its mother’s milk,” and all are intended to desensitize, to silence the Qualitative for the sake of the power of the quantity.

Where no drastic ritual exists, there is still a desensitizing method in place. Parents “guarding against spoiling the child,” is the remnant of this desensitizing process, allegedly enabling the child to adapt happily to life. It is not to life that parents adapt the child, but to collectivism. Mothers want the best for their children; they know that by not complying with customs, children (and the mother) will be ostracized and ridiculed. Life for the Chinese girl whose mother spared torturing her by allowing her feet to grow normally was made miserable because she was treated with contempt by society (quantity) for having normal feet instead of mutilated ones. Thus mothers learn not how to care, but how to distance themselves from their feelings toward their children or suffer the consequences.

Precautionary measures. Bad treatment breeds resentment. To insure that women do not kill their husbands, another custom existed. This was the expectation of the group that a wife should also die when her husband dies. Thomas Davitt touches on the subject when describing suicide among preliterates. He writes:

The function of integration-segregation in suicide also bears on our understanding of the relation between the conditions of suicide among preliterates and their motives for committing the act. Most suicides among preliterates reportedly occur among men who are old and sick, among women who have lost their husbands, and among followers of a chief who has died. But the reasons why these people kill themselves is not simply because they are old and sick, or women without their husbands, or followers without their chief. The reason why they take their own lives is that the condition in which they find themselves is looked on by others as a state which separates them from the rest of the group who should go on living. These men and women are expected to have a duty to do so. If they fail to fulfill this duty, they lose public respect.¹⁰⁸

Davitt talk about “preliterates,” but it seems that literate people, such as until relatively recently, people in India, forced a wife, through public pressure, to join her dead husband on his funeral pyre.

Devaluation of female to property of male. The quantitative tendency in the male as well as the female is natural and useful. However, the power of quantity as a moral head of family is neither natural nor useful except to the power of quantity. Patriarchy is based on a hierarchic order on top of which is the male. This order put women, children, animals, and things to property that belonged to the one on top. Even the poorest male, the Russian peasant in pre-communist times, for example, had to be lawfully wedded in

¹⁰⁸ Davitt, 48.

church. There, the bride was told that she should be afraid of her husband. Her husband often gave her many reasons for fearing him, in the form of physical abuse. Running away was not the solution; she would be returned to her owner. The Russian male may not have had as encompassing rights as the Roman patriarch had. In Ancient Rome a mother, after giving birth, laid the baby at the feet of the sitting patriarch. He had the right to reject (kill) or accept the child. Theoretically the Russian male (a slave himself) did not have those rights. But his wife had to serve him after he finished working even though she also worked in the field. Her work was never done, and there was no time to spend with her children. They often died for lack of hygiene

The power of quantity as in power over the children's life and death that a male had did not start in Rome. This practice can be traced back further in time. If the life-style of preliterate tribes is seen as reflecting the life-style of people in ancient times, then one can infer that the right of patriarchs over the life of their children did start early.

Misha Titiev, writes in "Tikopian Kinship and Socio-religious Behavior" that "infanticide is sometimes practiced at the father's discretion."¹⁰⁹ In spite of the pain very likely experienced by the mother of the condemned child, she did not expel the father from the family, as a mother elephant would do. The Roman or the Tikopian mother accepted the male in the family. She learned that it was "the way it should be." Besides, she had no choice because society, the group (quantity) and its brute force stood as a reinforcement of the power of quantity. Even though fathers no longer have the power of

¹⁰⁹ Misha Titiev, *Introduction to Cultural Anthropology* (New York: Henry Holt, 1959), 411.

life and death over their children, they do have the power to “discipline” them with brute force. Again, this is the often-needed compensation for the absence of the female sex as a guide in the family. All that remains in such a “family” is a woman as a reproductive machine, her sex transferred to what is only a homologue of the male sex in her. The Qualitative garb, the pretension to “fatherhood” in the form of brute authority is the “sheep’s clothing” under which the power of the quantitative tendency, the “wolf,” hides in order to rule over the Qualitative tendency in women and in the rational being. All this does not mean that men are bad and women are good. Women also have a quantitative tendency. They can ignore their Qualitative feelings, and follow quantitative feelings. They can and do mistreat their children and exploit a man’s labor without contributing.

Misinformation Supports Power of Quantity

Religions artfully portray the quantitative tendency as Quality. The great religions are “great,” perhaps, because they have refined the Qualitative dressing of the male sex (quantitative tendency). They use genuine Qualitative garb, such as some teachings of Christ. However, this is only used as very effective bait to attract Qualitatively-oriented men, but particularly women. The devious nature of religion would explain many inconsistencies within Christianity, for example. They kill others, and even kill their own fellow Christians (Catholics vs. Protestants) though Christ’s position is to turn the other cheek, love one’s enemy and forgive. The most important, what He considered important, is ignored. Instead, Christ as a person has been

transformed into just another idol, one of a refined type. What is not ignored of His teachings is used to cover up the promotion of the quantity. Nietzsche wisely notes that Christianity is not related to Christ. He writes that “the word ‘Christianity’ is already a misunderstanding - in reality there has been only one Christian, and he died on the Cross.”¹¹⁰

Organized religion was thought to be the cause of women’s servile position, but the atheist society of the communist regime in Russia, for example, did not solve women’s problems either. This is because both religion and communism are two of the same kind. Both are **collectivist idolatries**. One worships invented idols and the other worships real human idols. Even when women became “free” to sweep the streets and lay brick in construction sites, they were still expected to serve the male sex at home. They still wash dishes and clothes in icy water or in water heated in cooking pots, and serve the male whom “culture” has given the “birthright,” simply by dint of being of male sex, of having women as his servants. This exemplifies the persistent contempt toward the female sex that comes from “culture.” The atheist male feels justified in relaxing, drinking and smoking while he is waiting to be served. The inability of communism to solve women’s problems is due to the fact that both religion and politics are promoters of the power of quantity.

¹¹⁰Friedrich Nietzsche, *A Nietzsche Reader*, selected and trans. R. J. Hollingdale (Harmondsworth, Eng.: Penguin, 1987), 191.

Scientific front to promote ignorance

The persistence in finding justifications for female sex inferiority: Thomas Laqueur,¹¹¹ in *Making Sex*, compiles a list of reasons that males have used to demonstrate that the female sex must be subservient to the a male. The male always had a reason, and these reasons happened to be of Qualitative nature, such as divine reason, rational reason, scientific reason, and cultural reason. These “reasons,” in the opinion of some, were produced by a drive toward establishing the male sex as reference, as a standard. Thus, until only the last century, female sex reproductive organs did not have their own names. They were always studied only as anatomically comparative with the male sex. For this reason, regardless of the reasons why women should stay subservient to the male, the analysis of the female sex centered on sexual pleasure, the erotic aspect of sex. Even feminists (with the probable exception of the very early French feminists), fell for the scheme that the erotic aspect of women defines the female sex. However, the erotic part of woman, as individual, belongs to her quantitative aspect. One can say that the external sex organs in women are the male sex organs in her. In the absence of the Y chromosome, this quantitative aspect fails to develop into a male sex organ (penis) and instead remains in embryonic form as clitoris. Had this organ been necessary for reproduction, it would have been a solid confirmation that women are inferior to men, who exemplify the perfect sex. However, the erotic aspect belongs to a woman as an

¹¹¹ Thomas Laqueur, *Making Sex: Body and Gender from Greeks to Freud* (Cambridge: Harvard Univ. Press, 1990).

individual, but it is not of female sex. French feminists, such as Olympe de Gouges saw the female sex “as superior in beauty as it is in courage during the suffering of maternity.”¹¹² Though early French feminists came closer to the truth by distancing themselves from sensuality, they erred by repeating the fallacy that a sex is synonymous with an individual. A sex is only a tendency within an individual based on specific anatomy and physiology. Thus, as they noticed the Qualitative aspect of the female sex , they claimed for women saint-like attributes. However, each woman is an individual and as individuals women also possess the quantitative tendency or, what is the base of male sex. What makes an individual a “male” is an specialized system with which the individual can promote quantity, and which in women fails to develop fully. The equivalent of this male system (in rudimentary form) is the origin of “promiscuity” in women. Women through history were into categories classified according to how the males were using them. Those of “ill repute” were the “promiscuous” ones and very much despised. Some were, and still are, in other countries, severely punished.

Also, among the Ancient Greeks, Aristotle offered a metaphysical reason for male sex superiority. Men are equated with Form and women with Matter. Form is superior to Matter at the most fundamental level. Therefore, men are superior to women. The capacity to think was another justification for men’s right to rule over women.

¹¹² Olympe de Gouges, *Declaration of the Rights of Woman and the Female Citizen* (Paris: n.p., 1791). Online. [Http://www.pinn.net/~sunshine/book-sum/gouges.html](http://www.pinn.net/~sunshine/book-sum/gouges.html). May 1, 1999.

In addition, during the Middle Ages, the idea that already existed in Aristotle's times was that there was only one perfect sex, (the one-sex theory of sex), equated with men. Since there is only one sex, it was said, and since it is the male, the female must then be only an inferior form of the male sex, an inverted form. Some said that female sex is the male sex inverted and residing inside the bodies of women. Later, biologists reinforced the belief that the female sex was the same male sex but inside out. A woman, they assumed, was only an inferior form of the male.

Male sex the Standard. Laqueur writes “ [t]he absence of a precise anatomical nomenclature for the female genitals, and for the reproductive system generally, is the linguistic equivalent of the propensity to *see* the female body *as* a version of the male.” And “[l]anguage constrained the seeing of opposites and sustained the male body as the canonical human form.”¹¹³

The ignorance about the nature of the two sexes is perpetuated by contemporary biologists who limit themselves to only the quantitative aspect of life. It perpetuates the common belief that sex and individual are synonymous (p. 98). Also biologists' claim that the only purpose of life is reproductive success reduces the female to a reproductive machine. This is not, however, what the facts of nature show when one looks at life in terms of my definitions of Quality and quantity.

¹¹³ Laqueur, 96.

Radical Feminist

Because biologists failed to notice the Qualitative facts of nature, some radical feminists such as Shulamith Firestone, believe that nature conspires against women. This is obviously because of ignorance of the basic facts of nature. Firestone believes that nature condemns women to subservience and that the solution is to rise above nature and, with technology, liberate women from motherhood. However, when feminists reject biological facts they reject the strongest facts in their favor. They are left with cultural facts that are hostile to women. Though Eros has nothing to do with female sex, they believe it does, and that belief makes them trip and fall.

Feminists, by accepting “Eros” as representing the female sex, automatically put themselves in secondary position. If organs that are built by the female sex hormones can be said to be “female sex organs”, then, one can also say that the true female sex organ is the thinking brain. The solution is not to ignore sexual differences when there obviously are differences.

Feminists need to understand that the female sex is the Qualitative tendency. The aim of the female sex is not reproduction. An individual is “female” when equipped with its own system for the purpose of participating in reproduction. Only by participating in reproduction the Qualitative tendency can control the power of quantity and protect and foster Quality. The female sex is nature’s agent, without whom there would have not been any Qualitative evolution. Nature does not conspire against women; the deceitful power of quantity does.

Female sex unknown. The best method of keeping the Qualitative tendency silent is to totally ignore it. The male sex has been hiding Quality and treating it as if it did not exist. There is an obsessive persistence by the power of quantity to erase the female sex (Qualitative tendency) from existence. The Medieval anatomists, as Laqueur describes, were successful in negating the female sex. Also, the science of biology does not advertise the known fact that the **female sex is an agent of nature that controls quantity**. Because of the power of quantity among humans, the female sex, as Qualitative tendency, is not only not recognized as an agency of the most fundamental order in charge of the Quality of the species, it is not even recognized as existing at all. No one has ever heard of the female sex being a Qualitative tendency. The effect of this total ignorance about the female sex reflects in the power of quantity.

Man his own worst enemy. Groups in nature are the means to secure the safety and comfort of the Quality, the helpless individual. Within human groups, however, it is not the case that the helpless individual is in principle protected. So, the outstanding and most significant feature of human groups, regardless of whether they are the smallest unit (as family or clan) or the largest, (nation, tribe, etc.) is that they, unlike the groups of very intelligent animals, contradict the most fundamental order by promoting the power of quantity over Quality.

This violation transforms the human, who is born rational, into his own worst enemy. Man's inversion of values, his pursuit of quantity instead of Quality as a goal is a violation that reintroduced into human life the horrors that intelligent animals no longer suffer in nature. While among intelligent non-human species there is little mutual abuse

and killing, there exists among humans a prevalent force that does not value life, or wars would not exist. Unlike fights among intelligent male animals, the fights among humans as in wars leave fields covered with bodies. Nietzsche's writing could be interpreted as referring to this problem. He writes: "We do not regard the animals as moral beings. But do you suppose the animals regard us as moral beings? - An animal which could speak said: 'Humanity is a prejudice of which we animals at least are free.'"¹¹⁴

It can be said that Nietzsche equates "humanity" with the negativity of the quantitative tendency in humans and the prejudice against the Qualitative that it implies. Animals do not have this prejudice.

Conclusion

In light of the concept of Quality and quantity as defined here, it becomes apparent that the influence of the Qualitative tendency in human life is missing, or there would be no wars and other abuses. Plato notices this, and in his allegory of the cave he recommends to make a total turn in the basic direction of life in order to exit "the cave." The darkness of the cave is the Qualitative ignorance that affects not only women but all life. It is not a matter between men and women, however. It is a matter between Quality and quantity. Most importantly, humans are violating the most fundamental order. The choice of quantity is illogical, and this choice upsets the balance in human life. To reestablish the natural balance Quality must be recognized and cultivated. Failing to do this will lead to catastrophe.

¹¹⁴ Nietzsche, 97.

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