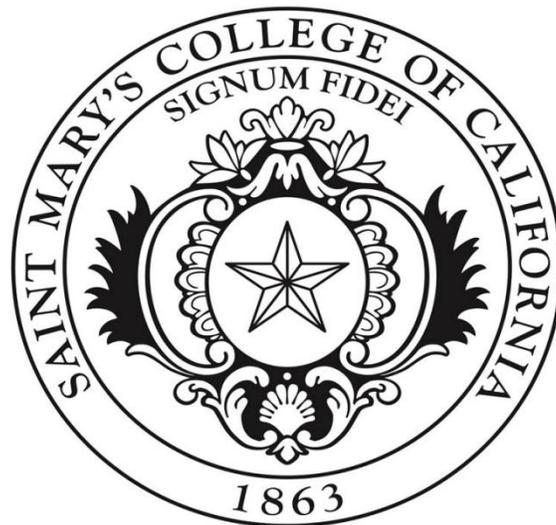


“Pens, Pies, Part to Wholes”

By Rachel Choate



A Senior Essay submitted in partial fulfillment of the requirements for the degree
of Bachelor of Arts in the Integral Curriculum of Liberal Arts.

Brother Kenneth Cardwell, Advisor

Saint Mary's College of California

May 7th, 2019

There exists a branch of logic that states that a whole can be known by and broken down into its parts. Similarly, it also states that a collection of parts will compose a whole. These two common notions describe the qualities of what has come to be known as mereology, or more basically, the ‘part to whole relationship’.

The phrase ‘part to whole relationship’ is used loosely to illuminate concepts. Understandably, because it rolls off the tongue and supposedly represents a deeper level of comprehension of the content it is describing. It is thrown into conversations like a teenager who, in passionately bringing home his first paycheck, walks into the house and slaps it on the kitchen table, as if it will buy him that Ferrari. He stands back, proudly admiring his contribution. The glamour wears off, however, when he tears it open only to find out what social security is, and how those long hours he worked yielded not what he had so carefully calculated and relied upon. Tossing in a ‘well that’s a part to whole relationship’ in a similarly optimistic manner is convenient, but if explored further, may be dissatisfying to the user. It may not bring understanding to the listener in the way the speaker wished because it has ambiguous applications.

We use such a phrase with the intention of providing helpful information to the reader about the thing being represented. If you have found that the ambiguous use of the words ‘part to whole relationships’ provides stable understanding for those who seek it, by all means: use it ambiguously. And you should probably not read on. If you find yourself asking more questions than reaching conclusions when someone claims that there is a part to whole relationship present somewhere, you and I are in the same boat.

I do not wish to defame the concept behind ‘part to whole relationships’. It has undeniable value. I wish only to open the door to questioning how distinguished philosophers

use such relationships. Thinkers such as Euclid, Plato, and Tolstoy present in their arguments as versions of acclaimed part to whole relationships. Therefore, it may be worth examining just how these relationships work when applied, and how completely they bring forth an understanding for those attempting to conceptualize the philosophies they are describing. For the sake of our exploration, it may also be beneficial to view an alternative approach to understanding from Lao Tzu: one that does away with the nuances of part to whole relationships.

I will crack open that first paycheck, and take a peek at the (potentially dissatisfying) implementation of part to whole relationships.

I

Euclid applies this part to whole relationship in his construction of *The Elements*. He is trying to solve Plato's problem in visualizing the solids. He goes about proving their substance in the fact that he can geometrically create them. Timaeus claims that the Platonic forms exist. Euclid takes this claim and sprints away into geometry land with it. His finding is actually an elucidation of what is already there, and his ability to construct the forms operates as his proof of their existence.

Parts of geometric wholes can be classified in three different ways. This is because the word 'part' has many functions. One interpretation leads us astray by encouraging us to assume a physical relationship between both physical and theoretical parts and wholes, yet this interpretation does not allow wholes to be understood by their parts; call this piece and whole. A second interpretation is far less Euclidean and acknowledges the structure of his propositions in a part-to-whole way, and in this a whole can be constructed and understood by its parts; call this parts building the whole. A third connotation is that which Euclid uses in his propositions, where

a whole may be understood by its 'part' as opposed to its 'parts', but is limited to one dimension; call this part and parts relationships.

The piece and whole viewpoint is a simplistic one. An underdeveloped interpretation of a part and whole relationship requires pulling apart a whole and looking at the resulting pieces. To some, the pieces here represent the part, and that which was dissected is the whole. A reader can make this mistake when looking at the solids. Euclid states that "1. A solid is that which has length, breadth, and depth. 2. An extremity of a solid is a surface," and "25. A cube is a solid figure contained by six equal squares,"(Euclid Book 11 Definitions Elements). We could easily break down a cube into six squares and call those squares component parts of the cube. However, this is actually a form of looking at the parts of a whole as Aristotelian accidents. Aristotelian accidents are easily understood if explained by a pen. You have a pen, and its purpose is to write, yet to be a pen it needs more than just ink. It must have something which contains the ink. It must have a tip where the ink can exit. It must have an exterior shell that houses all of these pieces, and by nature of existing, this shell must have color. The color does not matter, and is thereby treated as an Aristotelian accident.

In the sense of geometry, treating something as an Aristotelian accident involves the arbitrary placement of a component of a shape. The placement of said component is determined by nature of the shape, not the component itself. This can be illustrated if we look at a solid such as a cube. Theoretically, a cube will exist independent of the way we understand it. Yet our conception of a cube requires the six faces which bound it. To every person who does not live in the theoretical world, these six sides are integral to understanding a cube. Each of these faces with certain qualities placed in certain ways represent *for us* a cube. Now let us try to imagine the same cube with only five faces. Does the collection of faces still accurately represent the

theoretical cube which they bound? No. Without one face, it is no longer a depiction of the cube we wish to focus on, let alone a cube at all. The sides and their placements are treated as accidental, by Aristotle's terms. We will not have the conception of the same cube without one of these faces. This face, or part, of the cube, is necessary, yet its existence does not simply hand the reader a cube. That part of the whole cube, is therefore not substantial, as it is only there by (Aristotelian) accident.

In the case of accidents, the parts are as necessary for the wholes as the wholes are for the parts. However, these must be considered pieces, not parts. For parts to compose a whole, they must be able to exist independent of wholes but still maintain the sense or dimension they represented previously, similar to bricks and mortar in a house. Without being a face *of a cube*, the faces cannot function as faces, and in fact lose their solidity in being removed. Therefore, these parts can be referred to as pieces, something removed from parts. For pieces to exist where they can be compared to wholes, they must exist independently of the whole, while retaining their individual wholeness. Therefore, this preemptive view of part and whole relationships fails.

This is different from how the propositions operate in the creation of Euclid's Elements, the parts building the whole view and the second version of what the word 'part' could mean. The propositions act as building blocks to reach one or all of the Platonic solids that Euclid is reaching for. Each block is part of a wall in the way that each proposition is a part of a theorem. Lines help us understand planes, planes help us understand solids, and solids form the Platonic solids. Propositions give us the means with which to do that. Every construction is a brick and every demonstration is the mortar in building his Platonic house. This operation of parts and wholes is useful when looking at how we can construct an argument. The parts allow us to understand the wholes, and the wholes can be broken back down into the parts. By definition, a

seamless part to whole relationships. However, it is not how Euclid applies the idea of part and whole.

The last way we can take the word part—named as part and parts—is the way Euclid actively uses the language of part and whole in *Elements*. Although the first mention of whole and part is in the Common Notions, his word choice becomes more specific at the beginning of Book 7. Here he makes a differentiation between ‘part’ and ‘parts’, stating “3. A number is a *part* of a number, the less of the greater, when it measures the greater; 4. but *parts* when it does not measure it,” (Book 7 Definitions *Elements*). If we stop Euclid’s description of wholes and ‘part’s here, we can say they are recognizable through one another, and the whole is understandable by a measurement of its ‘part’s. However, that is just a reiteration of the definition given. If he designates the role of the word ‘part’ purely by of its measurable relationship to a whole, then by nature of being a ‘part’, it must allow us to commensurably understand the whole.

Moving forward from that, though, it is easy to then err in saying that a part will allow us to compare between kinds¹. His common notions state that “the whole is greater than the part”. This implies a certain kind of quantifiable relationship. How could a line be any greater or smaller than a plane? How could a plane be any greater or smaller than a solid? Hint: it can’t. This kind of understanding cannot be translated to his use of ‘part’s, let alone building blocks of a whole Form. In order to speak of part to whole relationships in Euclidean terms, wholes and ‘part’s must be of the same kind. A ‘part’ is that which can be measured in comparable and units to a whole, and can provide an understanding of it, but does not provide any information about

¹ I am using the word kind in the way that Euclid uses it to describe what can only be synonymous to dimension, e.g. “3. A *ratio* is a sort of relation in respect of size between two magnitudes of the same kind,” (Book 5 Definitions *Elements*)

the wholes that he is ultimately constructing. You know, the forms Forms: the original whole and ultimate goal of Euclid's Elements². We therefore must take care in articulating the whole in question when claiming that Euclid's redefinition of 'part' provides an understanding of the whole.

This is clearly seen when understanding lines. Lines are not made up of points, or widthless breadthless lengths, but are that which is enclosed by points. The boundaries, however, are not the parts of the wholes, as stated before, but pieces: simply accidental results of the existence of that which it bounds. So lines must be understood in comparison to other lines to create what Euclid would term a part to whole relationship. Only if we call a whole 'that which it measures' can we definitively say that the whole can be known by the 'part's. Thereby, in Euclid's terms, a whole of the same kind is measured by a part of the same kind. However, he does not provide any part which could measure the whole that is an Element. This part to whole relationship cannot provide any elucidation of what the Forms are than by helping strengthen the propositions. Here, parts give a clear view of the whole, but conditionally: as long as the whole is of the same kind.

Euclid provides an idea of how 'part's do allow us to understand the wholes, just without his terminology. We are able to utilize this tool (part-to-whole), therefore, in the larger spectrum of building blocks to houses.

II

Amongst those who weave part and whole relationships into their logical arguments is Plato. He attempts to shoulder the task of framing the elusive Platonic Form as well. Instead of magnitudes and shapes constructing his wholes, Plato uses words to attempt to break wholes

²This is working off of Plato's description of a Form. If Euclid intends to construct a Form, it must have all qualities of a whole.

down into their parts. He chooses the rhetorical tools of both metaphor, such as in the Republic, and dialectic, such as in the Parmenides, in an effort to reach a Form. Socrates believes he has fooled us into thinking parts can construct the whole Form of Justice through metaphor, and also acknowledges that language fails to capture the whole unity of a Form.

A Form is the highest version of being. It encompasses the potentiality of becoming while remaining itself. Socrates constructs the Republic in an attempt to create a theoretical world that provides a forum for establishing what exactly the Form 'Justice' is. In doing so, he takes a Form and attempts to bring it from the universal abstract and into the theoretical for the sake of understanding.

Socrates' words operate like stepping stones, forming the path he wishes the reader to walk down. So if Socrates says that "I think our city, if indeed it has been correctly founded, is completely good," (Republic IV 427 e), then you better believe that Socrates thinks he will convince the reader that city will be completely good. As in we can perceive of the Platonic Form of Good through an understanding of the good city. "Clearly, then, it is wise, courageous, moderate, and just. –Clearly. –Then if we find any of these in it, what's left over will be the ones we haven't found? –Of course," (Republic IV 427 e).

An entire city, or representation of the Form Good, is presumably understood and created because of these four cardinal virtues: wisdom, courage, moderation, and Justice. These four virtues are parts of the theoretical whole. We follow this dialectic with the intention in mind of comfortably compartmentalizing these virtues into their respective places and watching them operate together in harmony to understand the entirety of the Good. Think of a pie, and the slices within it. In order to cast these virtues as virtues, they will exist similarly within the city.

Wisdom is found in the guardians of the city. There are different kinds of knowledge in the city, however only that which applies to the city and utilizes good judgment can be considered wisdom. The knowledge found elsewhere is inconsequential for the well being of the city. Wisdom exists exclusively with the leaders of the Republic, and it is contained within this niche. Proportionally, few inhabitants of the city possess wisdom. As one of the virtues which construct the good city, these inhabitants play an integral role. They act as representations of the slice, albeit a small one, of the Republic pie.

Courage is the second of the virtues constructing the city. The courage of the city does not reside in the courage of each individual. Instead, courage is exclusively exercised by the city's soldiers. Socrates redefines courage—calling it civic courage—as preservation in the face of difficulty. This manifests as a sort of steadfastness: “And by preserving this belief ‘through everything,’ I mean preserving it and not abandoning it because of pains, pleasures, desires, or fears,” (Republic IV 429c-d). In a way, they are the ones capable of infallibly embodying the laws provided by the guardians. If saturated in proper education, he believes that only the soldiers will personify the virtue of courage and allow it to play its role in the city. This class works as a second, slightly larger slice of the whole pie.

Moderation is the next virtue he addresses. Contemporarily, moderation is understood as a type of self discipline. Socrates' take is slightly different, as there is an expectation of moderation within the entirety of the city. If we look at a city altogether, the classes' different levels of power are those forces which exercise moderation on one another. Within a city harboring a variance of people there exists this restless thing called freedom. Freedom seems the bane of the existence of those who crave order, but in actuality, it operates as a part of moderation. Socrates asks “Then, don't you see that in your city, too, the desires of the inferior

many are controlled by the wisdom and desires of the superior few?" (Republic IV 431c-d).

Moderation is found in each individual of the city, as it involves forfeiting their freedom due to their class for the benefit of the city. Moderation exists within, and because of, the entirety of the population. Its niche is all of the classes. In our Platonic pie, we can call moderation the filling: existing throughout every part and slice.

These three virtues exist in the city because of their operation within their respective classes. The virtues work to illustrate the city because of their physical placement in the city. The individuals and their classifications provide them with an assigned virtue which constructs our Republic pie. They all construct the Republic to help the city be, well, good.

With that in mind, we move on to the good stuff: what Socrates really came here for. Justice is the remaining of the cardinal virtues. And how does Socrates propose we find it? By looking at what is left over of course. What remains to Socrates is what he considers the final portion of the puzzle that is 'a good city'. He states that "It seems, then, that the power that consists in everyone's doing his own work rivals wisdom, moderation, and courage in its contribution to the virtue of the city," (Republic IV 433d). Justice, he says, is a power. It is an operative force. It does not have a classified place in this theoretical city. Justice is the correct relation between the social classes and the virtues that happen within those classes. It is not a part of the city in the way that the other virtues are. So where does that fit into our pie?

If we take our old friend Euclid and his idea of 'part' and 'parts' we can see a little more clearly how this pie works. 'Part' by definition measures the greater, 'parts' by definition does not. Therefore, if a slice of pie is 'part' of the entirety, it will multiply evenly into the whole. 'Parts' will, instead, not multiply evenly to the whole. This can be seen in some unevenly distributed Platonic pie. Because knowing a magnitude is 'parts' of a greater still provides

information on the relationship between the two, though, we are still able to analyze them in comparison to one another. If a slice of our Platonic pie is ‘part’ of the whole pie, we know it is of the same kind, and will measure the greater. If a slice of our platonic pie does not measure the greater, we are still able to stand on the fact that, to be measured at all, they must be of the same kind. Their dissimilarities illuminate similarities, such as a greatest common measure or lesser to greater. Even moderation, which will not look like other sections of the pie, will still be of the same kind, and therefore comparable and even measurable if given a unit. However, neither Euclid’s ‘parts’ nor ‘part’ provide a forum for the relationship of Justice in this pie.

Pie is still pie if you take it out of the pie tin. Pie is still pie if its filling is surrounded by crust or if its filling is crustless. Pie does not require a relation between its parts for it to be pie. Have you ever taken a slice of pie out and it has started falling apart? It is still pie. Setting aside the food metaphor, we can look at this geometrically. The components of a triangle are the three lines of the triangle. One does not need to specify the relation between these lines because it would not affect the triangleness of the triangle. Three different lines taken from one point of view would construct a whole triangle without a specified relation to one another. In this way, because Justice cannot be assigned to one or all of the classes, it does not have a place in the city in the way that Socrates claims. Instead, it is a virtue concerning relations. Although this may benefit his metaphor, the insufficiency here lays in the inconsistency of the operating components which Plato is trying to elucidate on. The cardinal virtues being parts of the whole being Good do not add up because Justice does not function in the same way.

There is a hole in the metaphor which allows Socrates to construct a seemingly beautiful whole. By deconstructing his construction, that hole becomes apparent. Dialectic fills in the gaps of the reasoning, but it does not seamlessly create what was intended, and hand the reader a

whole Form. Instead, we get a pie that would make your great-grandmother roll over in her grave. However maybe knowingly, Plato does leave us with crumbs of a solution to his problem within his problem. Although the result resting on his part to whole thinking does not hold, he requires the reader to consider relations, and what answers they may provide.

Plato also uses dialectic to create a forum in which we may reach an understanding of a whole. The *Parmenides* is an application of dialogue in the search of a Form through its characteristics, but operates to instead show the qualities' inability to explain what they are being used to represent. In this case, the part would be the traits of the Form he uses for definitive purposes, as the goal is to illuminate this Form through increasing the individual's understanding of said aspects. The whole would be a full knowledge of the Form. If we can know a Form because of its characteristics, then the parts of it will supply the whole. The result is an example of the incomplete understanding that these qualities provide and Plato's acknowledgment of the issues we may run into when embracing a whole that is made up of parts.

Parmenides attempts to expand young Socrates' conception of the Forms through his dialogue. The issue he has run into is the fact that the Forms exist in perfection and are therefore independent of us. The Forms are the original whole, and the objective of this dialectic. Their essence is evasive to the reader by definition. Only knowledge³ of the Forms provides any kind of bridge between the theoretical and physical world. However, a dialectical process does not allow us to cross said bridge. *Parmenides* is aware of this, and creates a distinction between what is accessible and not to us in these two worlds early on in his exploration: "those forms do not have their power in relation to things in our world, and things in our world do not have theirs in

³ In the Platonic sense: knowledge as the essential lens with which we can fully observe and 'know' truth, independent of the veil of perception.

relation to forms, but that things in each group have their power in relation to themselves,”
(Parmenides 134d).

This acts as not only an explanation of where the Forms exist and why it is difficult to talk about them, but also provides the first example of the problems we run into when we attempt to use language to reach something in another ‘world’. If the tools of this world cannot illuminate truth about the theoretical—Parmenides uses ‘divine’—world, then the incommensurability must be inversely applicable. Then, the divine would be so removed from the physical that it could not provide explanation in our world. Because of this, the gods would have no knowledge of the human world, which is absurd, as it is their role to know of the world.

Contradictions similar to this are the foundation for Parmenides’ arguments. Instead of Form, he chooses to use ‘the one’ as a replacement, as one is the most generally accepted and simple unit of reference. The one, by nature, must have unity, but also have the capacity to be divided, because the attributes of a Form partake in it in the physical world. The one, by nature, must be in motion⁴, but also remains unmoved. The one, by nature, *is*, but can simultaneously be proved to be *not*. Therein rests the issue in attempting to understand the ‘one’ness of a Form. The qualities Socrates attempts to understand it by are constantly contradictory, and a compilation of qualities will not bring the reader understanding of the one.

The discrepancies between the parts and the wholes that they intend to compose lie in dialectic. Awareness of a thing’s characteristics is integral to the individual’s understanding of a whole thing. These aspects must be communicated between individuals in the form of dialogue. Dialogue itself is unable to properly comprehend the traits that a Form has because of the tools it uses. Words here fail Socrates in that nameable qualities of a Form are different than actual

⁴ ‘Coming to be’ as a motion.

qualities of a Form. To borrow the concept from Euclid, words and their referents⁵ are of a different kind, and must be incommensurable. Parmenides knows this and uses it to lead Socrates on a wild goose chase in search of the one. Plato is aware that dialogue can provide a likeness of the qualities of a whole, but does not in fact hand us universals on a silver platter. These likenesses can only extend so far, and bring the reader farther from the actual whole the more they are employed. Likenesses fail when attempting to bring understanding of a whole given a description of its parts.

III

Leo Tolstoy provides a new age approach to understanding a whole. The study of history gives rise to information that allows mankind to learn about itself. Tolstoy believes that history has much to say philosophically. The issue is, the approach that historians have taken to unpack it leaves holes in either their arguments or in their versions of history itself. He attempts, instead, a different approach. Tolstoy calls history a science, one whose purpose is to bring knowledge of oneself to oneself. As a science, it must stand upon a solid base. Tolstoy proposes that base is mathematical, and through mathematics, we may obtain a more solid grasp on the unquantifiable events that define our past. In doing so, he outlines a plethora of part to whole relationships that look viable, but do not prove beneficial for the understanding of the reader.

Zeno's Paradox poses a problem in understanding a continuous whole by understanding its non-continuous parts. If Achilles shoots an arrow, and we are able to freeze time in each individual moment that happens, the arrow will never reach its destination. If Achilles is attempting to reach Troy on foot, his destination becomes impossibly far, as every half he conquers, the next half will always lie before him. If Achilles is in a race with the tortoise which

⁵ In Frege's terms.

moves at one tenth of the speed of the warrior, the tortoise will always manage to be some exponentially small distance ahead of him. These paradoxes can only be rectified if we allow the concept of infinitude into their understanding. Infinitude creates a forum for continuity. There is an innumerable amount of parts between known points.

Similarly, time can be understood as a whole. To Tolstoy, time is continuous; therefore the events that it encapsulates are continuous, with no beginning and no end. If we attempt to observe an individual moment in time, in actuality it will never be fully independent of any other moment. All that happens within the confines of time must retain this quality. That is why Tolstoy believes history is not understandable by its moments. If we see time as a whole due to said continuity, we operate with the conception that moments⁶ within time retain the quality of time itself. Moments are brought out of the infinitude of time and thereby are no longer in their purest form when observed. When analyzing something such as time, nominating a moment as a beginning destroys its continuity. Similar to the issues Zeno's Paradox outlines, moments, regardless of their length, cannot be analyzed if pulled away from time.

Bringing more dimension to this argument, Tolstoy believes that an event in history is not simply an event in history. There exists a complex web of phenomena which preceded and resulted from the event. Pulling one moment, decision, or action out of history, and attempting to study it, will yield as much understanding as trying to define a word without knowing the language we are dealing with. Therefore, we run into issues when attempting to look at the whole of time by removing it and calling it something as segmented as history.

One example of these issues is the attempt to look at the life of an individual by analyzing the state of a nation, or a physical part by a physical whole. If we take the whole of the

⁶ I am using 'moment's as parts of time pulled out of the continuity, independent of one another.

state of the nation and attempts to use it to zoom in on the part being the individual within that nation, it is evident that they do not accurately reflect one another's intentions. Tolstoy uses the French revolution to illustrate this. When ordinary citizens began to cross the countryside killing one another, they justified their actions as the necessary steps taken to insure liberty, equality, and the general welfare of France, as Tolstoy states "Men went from the west to the east killing their fellow men, and the event was accompanied by the phrases about the glory of France, the baseness of England, and so on," (War and Peace 1060). The blatantly contradictory nature of the aims of the two, being the nation and the individual, provide context for how the state cannot operate as a whole for Tolstoy. The actions of the individual are different than intentions of the state they claim to be a part of. Therefore, any conception of history based purely off of the individuals will provide fallacious information and not properly encompass the intentions of the whole.

Another part to whole assumption Tolstoy warns against is imagining the power a ruler has as the sum of the individuals under his influence, or a theoretical part by a theoretical whole. Does the whole, being the choices of the ruler made on the behalf of the people, allow us to understand the actual will of the people? He explicitly states that it cannot, saying "What is power? Power is the collective will of the people transferred to one person...power is power: in other words, power is a word the meaning of which we do not understand," (War and Peace 1056). So we, without the assistance of power, cannot begin to understand the will of the whole of the people reflected in the will of one leader. If we were able to define what exactly Tolstoy considers power, we may potentially apply that explanation to create a general conception of 'the whole of the people by the power given to the ruler'. Whenever it comes up, Tolstoy deftly dances around a solid meaning of the word power. He states the opinions of other historians

without settling on a conclusive definition, as he even says that it holds a meaning we cannot understand. Therefore, the whole of opinions of the individuals in a nation cannot be simply viewed as the will of those who represent the nation.

In order to gain any semblance of understanding of history, Tolstoy believes we have no choice but to embrace the calculus-like qualities of the infinite. To know the whole of time, we must accept that it cannot be broken down into measurable parts, and instead take it as a summation of the entirety. To know the whole of the wills of the people, we must accept that the collective transference of their influence only adds up if we apply the infinite.

Power is the incalculable infinite he is operating with. Not in that it is unfathomably large, just in that any attempt to break it down will result in more questions in need of more breaking down. It is only reachable insofar as we do not attempt to reach it. When we cut off one head with a definition, explanation, or example, two more grow in its place. But, mathematically, applying the infinite and its qualities will yield an interpretable result. In order for us to conceptualize history, the infinite must be applied. The issue with that lies in the fact that the quantification requires a language that the reader cannot understand in a qualitative world—that world being history and its events. Although using power as an umbrella term for the infinite movements and moments within the whole of history, it does not bring the individual any closer to having a solid conception of the parts, or the whole.

This gains clarity in his metaphor about the movement of a locomotive. Simply because we see the wheels on a train moving or the smoke leaving the stacks does not mean we have found the source of the locomotive's motion. He believes that "The only conception that can explain the movement of the locomotive is that of a force commensurate with the movement observed. The only conception that can explain the movement of the peoples is that of some

force commensurate with the whole movement of the peoples.” (War and Peace 1049). There is a combination of forces at work that is unobservable, yet yields observable results. Historians make the mistake of viewing the results as the causes of history like the spinning of the wheels or the blowing of the smoke because of their correlation to the movement of the train. However there is an underlying force that works much like the furnace of the locomotive; we as observers simply have the task of locating what that furnace is when it comes to history. Tolstoy proposes *that* we use calculus to do that. Yet, Tolstoy also does not propose *how* we use calculus to do that.

In hiding his use of infinitude in the action of power within history, Tolstoy is able to explain the inexplicable. Power is indefinable and immeasurable, and is only known by its results. It is the physical and historical application of the infinite. The proposition of the utilization of the infinite—much as we would see in calculus— in the qualitative world is a novel approach to understanding parts and wholes. Its innovativeness, though, does not clarify the whole or parts for an individual in the physical world, and therefore fails in the work of providing us with an illuminating part to whole relationship.

IV

Let’s take a step backwards in time. Eastern philosopher Lao Tzu and his teachings, which set the foundation for Taoism, encourage an entirely different outlook on life. He does not require us to think of things as made up of parts, but as complete in themselves, or consolidated. This view of things sets the stage for a roundabout way of bringing understanding to the individual. In removing the partitions between things, we open the door for fostering a more thorough understanding of them.

The aforementioned Western processes are generally not helpful in conceptualization because they have set aside the actual Consolidated Whole⁷ and named but the section of it under scrutiny ‘the whole’. This is where Lao Tzu’s philosophy provides a process which could encompass all others in its own way. This process is literally called ‘the Way’⁸.

Lao Tzu’s *Tao Te Ching* works as a self help guide for those wishing to find an informed way to live. Lao Tzu’s goal is not to help others see things *in relation* to other things. That would abandon his Consolidated Whole entirely because it immediately cuts it. Lao Tzu’s point is simply that there *exists* a relation—and we must attempt to understand that relation *without* severing one thing from another in the process. This must be done on account of the unsettled nature of the visible and knowable world. All of the prior philosophers mention versions of this concept. Euclid used something theoretically perfect to attempt to construct the rigid Form and allow it to transcend the movement of the interconnected world. Plato believed we could find Justice in finding a relation. He also believed we could not use words to confine something which is above the world of men. Tolstoy wished to refrain from the cutting of something into knowable pieces. They were not wrong to think so, as there is a version of understanding that each of these senses provide. Their approaches fall short of their destinations—their wholes—because they fail to take into account the Consolidated Whole. Lao Tzu wishes to paint a bigger picture, and suggests others try to view it through the Way.

The wonder of the Way lies in its paradoxical approach to gaining knowledge. The *Tao Te Ching* outlines the purposes of the Way and provides broad suggestions for how we may walk

⁷ Let this thorough view be referred to as a Consolidated Whole from here on out, while the incomplete view of a thing and the views prior philosophers called whole be referred to as such. A Consolidated Whole references not only one thing, but all of the interlocking ideas around it that create the fluid totality which Lao Tzu uses in the path of understanding.

⁸ Referred to from here on out as the Way.

its path. These suggestions appear ambiguous because they present in the form of seemingly contradictory statements. This is because ‘the Way’ is always in flux as the world is in flux. For “The way conceals itself in being nameless. [Yet] It is the way alone that excels in bestowing and accomplishing,” (Tao Te Ching XLI). ‘Naming’ the way, or confining it to something as something as rigid as that which can be named, removes its relevance in an ever-evolving, and very-not-rigid, world. But, you may ask, how can we attempt to follow a guide that states that the universe and that within it is always changing? How may we measure this flexibility and act accordingly? Such questions are relatable, and provide context for Lao Tzu’s circuitous manner of understanding what has previously been considered a whole: that whole consolidated with literally all that surrounds it.

That sounds pretentious and convoluted, so let me elucidate. Comparing things directly to other things will not lead us to knowledge of the whole thing. Observing things as themselves will not lead us to knowledge of the whole thing. To follow ‘the Way’, we must simultaneously view something as itself and in relation to all that surrounds it, including that which is considered in opposition to it. This requires a step back to observe the larger Consolidated Whole. This well rounded form of understanding requires no dissection of Consolidated Wholes into their parts or their properties. Instead, it warns against cutting such concepts in the event that the human intercession brings them beyond recognition of their original forms. The Consolidated Whole must have a relationship with that which it is composed of, but we cannot rely solely on one or the other for the sake of understanding because that would require separating them.

The mercurial qualities of the world require a flexible mind for us to conceive that which is constantly the same yet in motion. This flexibility allows for us to also observe the interconnectedness of phenomena. Therefore, we must take great care to understand something

by simply being aware of its work in a larger system, without considering something within as removed as the concept of part. Things within this system act as complements⁹. Can we conceptualize good if there is no bad? Can we conceptualize dark if there is no light? Lao Tzu does not believe so, and states that “the good man is the teacher the bad learns from; And the bad man is the material the good works on,” (Tao Te Ching XXVII). They rely on one another. These dichotomies exist because of the opposition within them, and we must see the antinomy to gain any knowledge of either end or the spectrum between them. Then, progress comes from the acknowledgement of the partnership of the contrasting forces.

We should not rely on one or the other of diametrically opposed ideas to paint a reliable picture of what said ideas are within themselves. This would be stepping away from ‘the Way’, as this movement requires cooperating components no longer being viewed in a cooperating sense. Lao Tzu states that “Something and Nothing produce each other; The difficult and the easy complement each other; The long and the short off-set each other; The high and the low incline towards each other; Note and sound harmonize with each other; Before and after follow each other,” (Tao Te Ching II). Any single one of these concepts taken without one another hold no meaning. Therein lies the issue that other philosophers tend to overstep. Building a thing from its parts or cutting a thing into its parts leaves out the keystone to what is being explored in the first place: said thing’s existence because of its place to everything else around it.

To help explain, Lao Tzu uses the metaphor of the uncarved block. The allegory of the block represents the perfect whole: knowledge, truth, and the individual’s effect on both in his search for them. Upon existing, we mar the surface of the uncarved block, because life breeds

⁹ In the mathematical sense: Multiple concepts working together in a similar space, their movement and balancing nature not changing the Consolidated Whole. Think Ying and Yang for a visual.

imperfection. In the human inevitability of not being able to view a Consolidated Whole in its entirety, including its opposites, we inadvertently carve the block. Because living means carving the block, we then will not reach the knowledge that was the uncarved block. The whole of knowledge is thereby not obtainable for the individual. We then ends up cutting the block even more in our exploration of what it represents. However, stonework is a delicate art, despite the durability of its medium. Lao Tzu warns that “Only when it is cut are there names. As soon as there are names, One ought to know that it is time to stop. Knowing when to stop one can be free from danger,” (Tao Te Ching XXXII). The greatest disservice we could do to the knowledge we are searching for is cut the block so much that it severs. Shattering the block, and in doing so breaking apart the Consolidated Whole, provides a polluted view of the knowledge in question. If we search too hard, we run the risk of ruining just what it is we are searching for. To cut it beyond recognition would mean to move farther away from the truth that was the uncarved block, farther away from the goal of knowledge, and farther away from the Consolidated Whole.

To step out of metaphor, we must not cut the block, the Consolidated Whole, beyond recognition. Lao Tzu believes “The more sharpened the tools the people have The more benighted the state; The more skills people have The further novelties multiply; The better known the laws and edicts The more thieves and robbers there are.” (Tao Te Ching LVII). The cutting comes from direct action, similar to the action of our Western philosophers. We must not geometrize for our conception something that was not meant to be geometrized. We must not break apart a Form with language or the qualities that it encompasses. We must not sever the whole of time into infinite yet unobservable slices to bring knowledge of it. In doing so, we imprint an impurity upon such concepts which are meant to be beyond our reach.

Instead? Act paradoxically. Recognize, but do not try and cage, the ever-evolving beast of knowledge behind the bars of the human capacity for understanding. Observe it in its natural habitat, and observe that natural habitat as well. In doing so, you will be following the Way, because “To know yet to think that one does not know is best; Not to know yet to think that one knows will lead to difficulty,” (Tao Te Ching LXXI). That way, armed with the observations of the beast and its surroundings, our understanding of the Consolidated Whole comes from the awareness of the knowledge, but also the lack of knowledge, an individual may possess about it.

This awareness is vital, but difficult to apply in an exploration of the Consolidated Whole, and any wholes it may contain. Lao Tzu recognizes the importance of applicability, as his philosophies seem to be aimed at those in positions of power. I have spent 22 pages outlining the issues we run into when using different kinds of part and whole relationships for the sake of the understanding of the individual. His teachings are different in that he proposes not only an outlook that will begin our journey towards knowledge, but also a method to create a space for it. He proposes we follow the Way with the help of passivity in lieu of an active search for answers. This sounds counterintuitive, however most of the *Tao Te Ching* hinges on such circuitous thinking. He states that “My words are very easy to understand and very easy to put into practice, yet no one in the world can understand them or put them into practice,” (Tao Te Ching LXX). In putting his words into practice, we move away from their original concepts. Active pursuit attempts to carve the uncarved block, name the unnameable knowledge, and solidify the fluid world. Passivity provides a forum for the paradoxical to take a less foreign shape.

We should not overstep bounds in attempting to reach knowledge, and have the opportunity to do so in our daily life. Embracing understanding instead of formulating it is a way to live that leaves room for change. So to be the leader of a prosperous society, “I take no action

and the people are transformed of themselves; I prefer stillness and the people are rectified of themselves; I am not meddlesome and the people prosper of themselves,” (Tao Te Ching LVII). We must be passive like water¹⁰, and conform to that which happens and our presence will bring prosperity, instead of attempting to dissect and manipulate the surrounding world for the sake of understanding. This will create a place for a purer genuine conception of the whole we seek, without affecting that which is being analyzed. No parts, pieces, or infinities necessary. Then, we have a chance of taking a look at the Consolidated Whole.

With the help of the Way, Lao Tzu provides an opportunity for an understanding of the whole through an exploration of the Consolidated Whole that surrounds it. He suggests that actively seeking a thing and attempting to discern knowledge of it and it alone will create a tarnished version of knowledge. This will then make obtaining knowledge impossible, and understanding it less reflective of its clarifying goal. Recognizing the cooperation between parts, wholes, and all of their intermediary relationships and associations provides the strongest conception of knowledge that people may access.

This approach may lead the reader to an unexpected, and possibly unsatisfactory, conclusion in the exploration of parts and wholes. However, if we knew wherein lay the answers to our questions, why ask the questions in the first place?

V

The goal of this epistemological exploration was to observe the operation of a commonly used phrase in action.

What I seek is not a solution, because there is no problem at hand to be solving. This investigation will not fix world hunger or hand you the keys to heaven. It has, however, forced

¹⁰ I have been informed that this is a Bruce Lee quote, however I mean it in more of a sense of Tao Te Ching poem VIII.

you to read the words understanding, knowledge, relationship, part, and whole an obscene number of times. I propose that imprinting these concepts on your psyche has brought you an awareness. That awareness may be that Rachel needs to learn how to use a thesaurus. That awareness also could take the form of curiosity, as this is not a study of language. We tore open that first paycheck and took a look inside, potentially believing we would already know what the dollar amount on it would be. If the results were anticipated, I applaud you, and ask you to exercise the use of the phrase 'part to whole relationship' as you see fit. If not, I beseech you take a pause from time to time to acknowledge the depth of phrases taken for granted, and how assumptions about it may hinder the path to understanding.

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