



The One-Armed Man

Paul Stiles

(zaharaone@gmail.com)

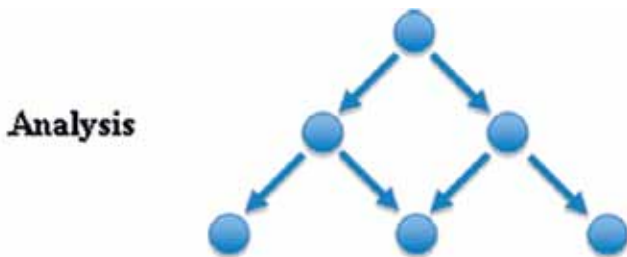
Consider the following linguistic oddity: the term analytic is the adjective form of analysis. Likewise, the term synthetic is the adjective form of synthesis. So by all rights, arithmetic should be the adjective form of arithmesis. And yet it isn't.

In the ancient world, "arithmeses" was a bookkeeping term applied to tax collection, but has no modern usage. Instead, we use the term "arithmetic" as *both* an adjective and a noun. It is simply a matter of emphasis: "arithmetic" is the adjective form of "arithmeses." In the process, we have deleted the so-called "noun of action," as indicated by "-sis," from our minds.

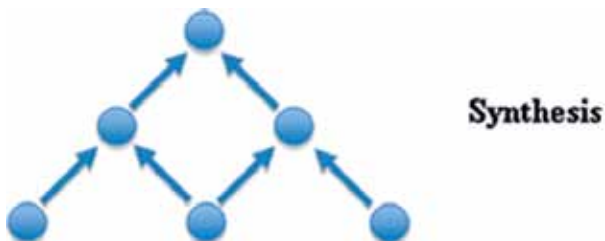
Now when it comes to the nature of reality, the noun is the central concept, which is why metaphysics is often referred to as "the nature of things." In contrast, adjectives play a subordinate role. They describe the noun, but the noun does not describe them. So when our minds begin to undermine the noun, and favour the adjective, it tells us something. For some reason, we are jerking the centre pole out of the metaphysical tent. Why are we distancing ourselves from reality in this way? And what have we done to the nature of things?

The Processes of Thought

The answer is found by examining our basic processes of thought. When we analyse a concept, we break it down into subordinate concepts. In the classic example, "bachelor" is reduced to "unmarried" and "male." The process then repeats itself. We can model this as follows:



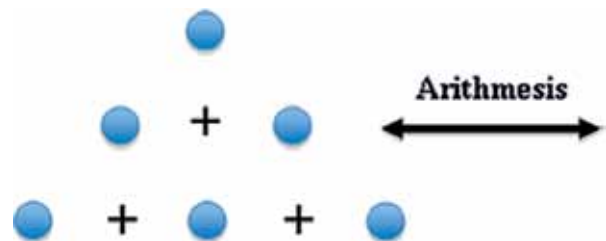
Now when we synthesise a concept, we do precisely the opposite: "unmarried" and "male" are integrated into "bachelor." And once again, we can repeat the process, producing this model:



In sum, synthesis and analysis are two opposite processes of thought, which we indicate by giving them direction. Analysis is breaking *down*, whereas synthesis is summing *up*. The directionality arises from the hierarchy of concepts each process creates, as the diagrams reveal. "Up" means ascending the levels of the hierarchy, whereas "down" means descending them. Collectively, they describe a *vertical* dimension:



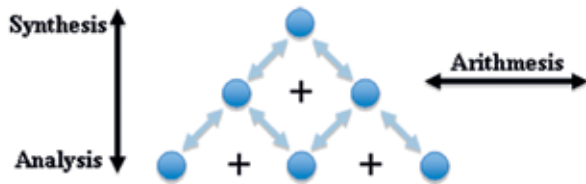
Now the question arises: what does "arithmetic" mean? Once we redefine the term as arithmeses, a noun of action, the answer jumps out at us. Arithmeses is another mental operation, just like synthesis and analysis! Furthermore, this operation does not proceed vertically, but the only directional option left: *horizontally*. On every level, we can add one concept to another, just as we do when forming a phrase:



Here you can see that addition (and hence subtraction) is perpendicular to *both* synthesis and analysis.

In this way we can describe the process of thought as follows: first we add two words together, like unmarried and male. At this point, there is no higher meaning to the phrase. Indeed, we don't even know the meaning of the words. They are just two separate words, like two objects placed side by side. Next, we synthesise the two words into a higher concept: "bachelor." Alternatively, we can analyse the term "bachelor," and reduce it to its component parts. This same process applies to sentences, paragraphs, chapters, books. We are constantly adding words together, creating higher meanings, or taking individual concepts and analysing their nature.

Structurally, this process reveals a hierarchy. Arithmeses takes place on one level of that hierarchy, and is thus always horizontal, whereas synthesis and analysis occur *between* levels, and are thus vertical. To put this another way, synthesis and analysis are thought in *depth*, whereas arithmeses is thought in *breadth*:



The Two Forms of Sum

Armed with this simple model, we can now extend it to how we think of the natural world. For the sake of example, let us assume that a hand is composed of 1,000,000 cells. If we start with one cell then, by arithmeses, we can add it to another cell to get two cells. The arithmetic equation is $1 + 1 = 2$. This is a sum that equals the parts: there is nothing on the right hand side of the equation that is not present on the left. We can then repeat this process until we have added together 1,000,000 cells. However, we do not yet have a hand. As a concept, a hand is quite different than a cell. A hand can grasp, point, clench. A hand has fingers, nails, skin. A cell has none of these things. It has a nucleus, a cell wall, ribosomes, etc. So 1,000,000 cells is not a hand. It is 1,000,000 cells. In fact, no matter how many cells we add together, we will *never* get a hand. Arithmeses can only operate on like concepts: 1 cell + 1 cell = 2 cells. Regardless of what the concept might be, the process is forever trapped on one conceptual level. So now what? Where do hands come from?

In order to transform 1,000,000 cells into 1 hand, we must ascend to a *new* conceptual level, via the process of *synthesis*. Consequently, we can no longer use the equals sign, as if the sum merely equals the parts. It clearly does not. We must indicate that the entire concept is changing, a change that occurs as we cross from one side of the equation to the other. I propose to signify this as follows: 1,000,000 cells $\Rightarrow$ 1 hand. Analysis is simply the opposite: 1,000,000 cells $\Leftarrow$ 1 hand. In this way we put mathematics in accordance with the nature of the entire mind, as opposed to representing only part of it.

Conclusion

We are living right now with a mathematical system that is not fully in concert with the way our minds really operate. Clearly, the reduction of concepts through analysis is an essential operation in the process of thought. But just as clearly, it is only one half of all vertical thought – where is the synthesis of concepts? So to insist, as the contemporary world does in myriad ways, that reductionism is the method by which we grasp reality, is not only to deny the true nature of the mind, it is to collapse reality itself. In truth, there is absolutely no reason to prioritize analysis over synthesis. How could there be, when the two are mirror images of one another?

The magnitude of this problem is epitomised by the current state of Western philosophy. The dominant form of philosophy in the Western world is “analytic philosophy.” The very term reveals the problem: our so-called philosophers have collapsed their own minds to the analytic function. Where, the rest of us may ask, is the *synthetic* philosophy? Meanwhile, science is using a form of mathematics that fails to recognise the vertical dimension *at all*. As a result, the entire qualitative backbone of our universe, that extraordinary, spectacular depth dimension linking the hand to the cell,

and indeed, the galaxy to the particle, is lost. The universe collapses to a single level described by “arithmetic.” And we become trapped in it.

This is a profoundly unnatural place to be. It is also deeply part of us, in ways we have yet to recognise. From our first years of education, we are all taught the error of the equals sign. We unconsciously perpetuate it throughout our lives, whenever we think “1,000,000 cells = 1 hand” rather than “1,000,000 cells $\Rightarrow$ 1 hand.” Even those pushing to reform science, like those involved in systems theory, are affected by it, simply by using basic mathematics. As a result, when it comes to describing Reality, our civilisation has become like a one-armed man trying to cut his nails: the moment he grasps the tool, he can no longer do the job.

Appendix

We can now summarise the three processes of thought in equation form:

1. Arithmetic Thought: $A + A = 2A$
(addition on same level)
2. Synthetic Thought: $2A \Rightarrow B$
(integration to higher level)
3. Analytic Thought: $2A \Leftarrow B$ (reduction to lower level)

This naturally brings us to a fourth circumstance: $A + B$. In other words, how do we handle the addition of unlike categories? The answer is that unlike categories are like unlike fractions: you cannot add them directly. You must first reinterpret them in terms of a more basic category common to them both, the qualitative equivalent of finding a common denominator. For example, an apple and an orange cannot be added directly. However, on a more basic level they are both fruit. Once you convert them to this common category, you can add them. Thus 1 apple + 1 orange = 1 fruit + 1 fruit = 2 fruits. As you can see here, the process of conversion creates an arithmetic equation: $1 + 1 = 2$. So the addition of unlike categories should not be mistaken for synthesis. In a synthetic equation, the integration to a higher level is performed by the $\Rightarrow$ sign. Any conversion takes place prior to that sign being applied.

Paul Stiles, I am currently writing my PhD dissertation on the relationship between metaphysics and visual perception.

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