



Loss and Redemption

By JOHN BICKART, Ph.D. | **Science Education and Spiritual Transformation** | Chapter 12: Naming, Categorizing, and Labeling

Loss and Redemption

When I am studying science or technology or engineering or mathematics, I meet up with a plethora of terms in the form of names, categories, and labels. They are necessary. In order to communicate about STEM, a myriad of detailed parts need to be delineated. But there is a problem here. Say that I am studying the chemistry of bread. Bread is a bunch of chemicals that come together to produce a food. In taking the process of bread making apart, parts of me that are usually can become robot-like. This challenges a need to which I normally adhere - a need to stay in touch with my respect and heart-felt gratitude for this food that pervades almost every culture and every period of human history. Otherwise, I can get lost in the details, mastering bread with cold objectivity. I can forget to maintain and build my character while I learn to name and categorize and label.

Three ways to get lost, three ways to redeem yourself

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1. See everything as if for the first time - including yourself.

Do you remember when you first met that special someone or fell in love with music or art or nature? Do you remember where you were - how you felt? Did your experience increase your self-belief, self-worth, or self-confidence?

Now, ask yourself if you feel that way every time you re-engage with a similar experience. Of course not. Most of us do not walk around in a rarified state of ecstasy throughout life - at least I don't. But, if you wish to dip back into that wonderful state of truly being with yourself, stop every once in a while, to remember the first time. Wasn't there a time that the world was good in your view? Didn't you ever think that you, yourself were gifted, able, and rather remarkable? The word re-member originally meant to put back members that were whole, so get back your whole self - the one that originally experienced that which might be in danger of being taken for granted.

An objection to this is that I sometimes am studying something boring, like algebra or the many chemical formulas of organic substances. I never did fall in love with this, in the first place. Here - I try to relate this part of chemistry to something personal that does get me excited. For instance, the formula for honey or fructose (fruit sugar) is $C_6H_{12}O_6$. If the formula keeps its relative proportions - approximately twice as much hydrogen as carbon and oxygen. Now, add a slight variation and you get $C_{12}H_{22}O_{11}$. This is the formula for the sugar in milk, lactose. This gets me excited, because it makes shows how small changes can create a wholly new substance. How does that relate to my inner life? It reminds me to act just a slight bit nicer to my friend who annoys me and try actually enjoying his company. Mapping scientific facts to personal, psychological situations that seem parallel involves heart thought in parallel to head thought. Studying this way allows me to keep my attention to factual information without a loss to my humanity.

II. Back out to see the forest so you don't get lost in the trees.

When I teach, I constantly move out to see the whole, then move back into the parts. For instance, in studying the chemical details of oxidation in the burning of a leaf or a piece of wood, I back out to the whole forest itself and say, "The Woods are on Fire!," showing how all of last season's leaves have been slowly oxidizing all year. Or, when showing how the process of making bread is the same as making alcohol, I say, "The whole forest is a kitchen, making wild bread and wild alcohol with wild yeast. Just take a walk in the woods in the fall and smell the fresh odors of your kitchen when making a loaf of bread!"

Another way I do this is to make charts that group the parts of whole so that students get a big picture. There is just such a chart in this chapter that shows many types of bread. This causes the student to see relationships of chemicals or relationships with other cultures or other periods of human history. This is very powerful. It puts things back together instead of letting our science take things apart in order to understand them.

III. Resist the temptation to think you know something because you can name it.

Most teachers, parents, and children over the age of two start to think they know things. They do. But ... do we ever know everything about that which we know? I play a fun game with students where I drop a ball and ask, "Does anyone know why the ball fell?" I have never been anywhere where students do not answer, "Gravity!" If I push the point farther and the class has physics prowess, I hear, "A force," or perhaps the Universal Law of Gravitation, or

Newton's formula itself for the law, or even Henry Cavendish's experimental evidence that any physical mass exerts a force of attraction for every other. Then I push farther, and say, "Thank you so much for naming this mystery; but, I repeat, does anyone know WHY the ball fell? I personally think that we do not know why. So, how is it that we have named It? It is to label this phenomenon. It is to put it into the category of forces. And thus, we give it a name, GRAVITY. In other words, we name it precisely because we do not know what it really is.

I go on to Einstein's Relativity at this point to show multiple interpretations of gravity. My point here is that I try to avoid the risk of substituting a name for continued observation. The danger in naming is to think that I already know enough and stop looking for more. And the danger to my character is to become a robot-like STEM nerd. People, relationships, the beauty of nature, and so much more deserve my attention. And the more I give, the more I get.



#25 The First Name



A Cherokee grandmother was teaching her two granddaughters their names. She turned to her first granddaughter and explained, “You are ‘Adahy’. It means ‘lives in the woods’.” Turning to the second granddaughter, she went on, “And you are ‘Ahyoka’, which means ‘she brought happiness’.” “Names can be beautiful, just like you” she continued, “but always know this. A name can also do harm. There was a time before names. The little girl who received the very first name came into a village. The people were so intent to learn her name that they soon forgot to see HER!” Suddenly, she faced Adahy, while turning her back on Ahyoka. “How would it be if I said the name ‘Ahyoka,’ or even said, ‘she brought happiness’ - but forgot to see YOU? Would this not hurt? Would the name be enough?” Turning back to Ahyoka, she emphasized, “A name is never enough. You must always turn back and look again to the one you have named.”

LEARN THE NAME, BUT KEEP LOOKING

References

Bickart, J. (2020). *Bickart’s Just-in-Time Fables* (Vol. 1). Asheville, NC: Red Shirt Interactive Group.