Biosemiotics, a worthy theme to speculate on

Higher-level organisms are comprised of cells as the materials but the higher-level organisms are not just a pile of cells such as the buildings' being more than piles of stones. Yet, this doesn't mean that the material is unimportant or secondary and merely the organization, the form that you give to the material is vital. So, material is critical, which means that the cells and everything about them, the molecules that they are comprised of, how those molecules are spatially distributed, the signaling events, the nature of molecular interactions, etc. are all central to the life as well. Therefore, those are principally important for all the associated biosemiotic processes.

Exploring those processes even in a superficial level could make us see the core. Natural or synthetic logical operations at cellular level as examples are of course not immediate proofs of the cells' capability of performing semiosis but are definitely proofs of the great capacities and complexities of the cells, which should not be underestimated due to the fact that those appear to us as processes that are similar to the execution of computer programs. As higher-level organisms and as beings that tremendously involve in semiosis, considering ourselves and our acts that involve decisions is maybe the easiest route to talk about (bio)semiotics. By relating the observations on the self to semiosis, one makes the deduction that there are more than programmed actions in semiotic processes. Here, our 'unpredictable' acts are worth to be questioned. Regarding those, rather than assuming the presence of a parameter of randomness in our decisions that works like tossing a coin for every decision that we take, the internal molecular mechanisms that we cannot recognize are to be pointed at. That knowledge is not accessible to us due to the scaling differences. We are multicellular high-level organisms and at first sight, multicellularity looks like a good candidate feature that could be lurking behind the semiotic processes. Yet, this bears the assumption that the essence of the randomness in decisions is actually the inaccessibility of the knowledge of the molecular events that take place at the background. However, this approach seems problematic due to the unspoken deduction that comes along, which is that the unicellular organisms cannot perform semiosis because their sizes (sort of) match with the scales of the molecular events that take place within them and govern their life-related processes.

Actually, one cannot tell this instantly for sure. Obviously, we are far from disassembling the parts of the semiotic processes. Besides, under these circumstances, unicellular organisms can also retain the satisfactory conditions of being capable of semiosis, considering the fact that they are prone to the sub-atomic level and macroscopic level influences since scaling differences are actually present at every level of the material world. Beyond all these discussions, semiosis is the meaning-making process that includes biosemiotics, which is the generation and interpretation of signs in the broad sense. Therefore, by definition, meaning-making resides on the side of the human kind as long as we discriminate it from interpretation, which is actually not necessarily a must. Further, what seems more important is to ask the reason of generating and interpreting signs. One may say that it is for communication but it needs at least two to communicate. Actually, translation might be a better term for naming the apparent reason for the biological realm to involve

in the biosemiotic processes since every organism needs to translate the features of the external world into the internal world and thus treat every one of that feature that is being experienced as a sign, which could deserve an action.

Yekbun Adiguzel
Department of Biophysics, School of Medicine, Istanbul Kemerburgaz University, Istanbul, Turkey

Publication

Biophysical and biological perspective in biosemiotics.
Adiguzel Y
Prog Biophys Mol Biol. 2016 Sep