What is Science and why do We Do It?

Every once in a while I try to step back from the ongoing little emergencies and exigencies of lab research and think about the meaning of it all. Why is it at all important to learn exactly how a biological phenomenon occurs and has evolved, how molecules interact, what are the rules that govern the behavior of matter at all levels, how our universe evolved and even how mathematical truths exist? Any why does Society pay us and (sometimes even respect us) to try to learn these things? The second question is easier to answer, especially for biomedical research. Clearly human beings desire long healthy, happy lives and human societies want to perpetrate themselves and this knowledge may aid in achieving these desires. The first question however is difficult and has no easy answers or perhaps any answers at all. I myself feel that knowledge and understanding of the world around us has an inherent worth beyond that of the welfare and happiness of individual humans and groups of humans, although it indeed may prove incredibly important for the very survival of our species, without which knowledge in any sense is meaningless. Knowledge is also self-gratifying and pragmatically useful for future behavior but that is hardly the real reason to do research. But what is this “inherent worth” of knowledge? I equate it with the sense of wonder and beauty that one feels when one finally understands how recalcitrant facts fit into conceptual frameworks and new facts are then predicted. This sense of wonder must be tempered by the realization that the theories almost certainly will change and the “facts” reinterpreted, but for that small period of one’s life the wonder and beauty of it all glistens and all striving and daily routines are subsumed. It may sound presumptuous, but that is why I do Science.

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