

Podcast Episode 2: Alchemy and the life-extension industry

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Intro: why compare the life-extension industry with alchemy

In this episode I discuss the topic of alchemy and the life-extension industry from a perspective of the humanities and social sciences.

The emerging industry of radical life-extension offers the possibility to slow down, stop, and even reverse aging. Abolishing disease is seen as a side-effect, because root causes of major diseases lie in the aging process. Assuming we don't die of accident or violence, eternal life would be possible at least in an implicit way. Most actors in the industry still shy away from promising outright immortality though, although many seem to mean it. Looking at those claims of today's life extension industry, it appears almost difficult not to feel reminded of alchemy. Both the life-extension industry and alchemists are pursuing the utopian vision of longevity, providing hope to customers in contradiction to the historical experience that all humans without exception would age and die.

Origins and practices of alchemy

Alchemy has been invented by Chinese Daoists. In the West alchemy started during Antiquity, was taken over by Arabs during early medieval times, returned to Europe and was practiced in serious, more or less until the age of enlightenment, and in certain places even into the 19th century. Alchemists were motivated by personal fantasies to become rich or immortal. At the same time, they were seeking deeper knowledge within a philosophy of nature, practicing alchemy as a key to decode the universe. Within a worldview which assumes that god is present in all details of nature and the universe, the alchemical path to understand and transmute matter was expected to lead to greater understanding of the divine. Let's put ourselves in the shoes of former alchemists during their time: couldn't alchemy appear to us as an incredibly exciting pursuit to look for wealth and eternal life, to overcome social boundaries, perhaps find truth and spiritual accomplishment, and to make our life worthwhile?

Alchemy in the West was originally based on Aristotle's theory of the four elements, according to which any material was constituted by earth, fire, water, and air, and could be transmuted into any other material by adjusting the composition of these elements. Alchemists undertook chemical experiments together with special light effects like moonlight, auspicious timing based on astrology, and magical signs. When communicating about their work alchemists often deliberately obscured their descriptions, as they were equally worried by the authorities and competitors. At the same time obscuring the process had always made magic more effective.

Magical processes and experiences are enormously useful. Evans-Pritchard in his classic on the social and political function of magic has written that within a certain belief system or worldview any fact can serve to confirm existing beliefs, and mystical fact is explained by mystical fact.

Whatever we don't understand yet in ourselves, nature, or in society can sometimes be expressed in magical terms to make our lack of understanding tangible, to turn our uncertainty into symbol. When things don't quite connect, there is always magic to provide access to a seemingly deeper knowledge. According to historian Chris Gosden, magic helps us to actively participate in the universe, when otherwise we would feel out of control. Of course, this always raises the question of truth, as effectiveness in magic is never quite obvious, neither to the performing practitioner, nor to his audience. We usually distinguish between two kind of magicians – the charlatan and the genuine. But while truth will be revealed rather quickly in the case of the charlatan, because his motivation ends with the money earned, the effects of so-called genuine magic can last much longer, sometimes thousands of years.

Alchemy is similar to science and means the same thing to contemporaries

Alchemy is surprisingly similar to modern science. Both methods share empirical experiment, chemistry, medical practice, philosophy, business interest, pure knowledge seeking, and complex relations to power. Although no alchemist has ever transmuted lead into gold or has made any human immortal, a few unintended by-products have been invented, such as black powder, or the basic laboratory equipment still in use today. Alchemist experimentation included steps which today we would still call scientific, like mixing, heating, distillation of metals and chemical substances, or the manipulation of light. At the same time we would call other steps in the alchemical process as belonging to magical beliefs. Alchemy as a partly magical method to manipulate matter was imbedded into the paradigm of former times. Similarly, science has come to determine our present lives to the largest extent. It has become the most important paradigm of our time, informing the development of all our technologies, our worldview, and our social system. The important point to note from historical perspective, is that alchemists within their worldviews were not able to predict that their efforts would remain futile.

But isn't this really the same with modern science? Scientists formulate hypothesis, publish academic papers, and teach their theories in universities without knowing for sure, how the future would judge them. In all likelihood, some of those theories will persist, while others will find themselves labelled as fantasies, in the same way as today we view astrology or the value of conducting laboratory experiments under moonlight. Who knows, people in the future might point out quite a few magical elements in our scientific thinking.

I just want to stress here that the life-extension industry has its historical precursors, and that different labels like science and alchemy may actually have meant the same thing to their respective contemporaries.

Change of worldviews during Newton's time

Only during the age of enlightenment, European worldview has changed to the effect that astrology and other forms of mysticisms were gradually taken out of the equation. Isaac Newton has revolutionized physics based on the scientific method, although he worked and thought decidedly between two worldviews. From today's point of view, he was an accomplished scientist and an excellent example of

what science can do. At the same time, he was still a dedicated alchemist. Newton lived during a time when magic and science separated into different domains. During his time an integrated world of wonder gave way to a world which carefully distinguished between body and mind, rational thought and fantasy, between science and magic. But this was a gradual process and in the light of Newton's considerable investment of his personal time and money into alchemy, he must have given value to both methods. It is therefore likely that his occupation with alchemy must have inspired his scientific findings in some ways.

Problems of the life-extension industry with present worldview

Alchemy in the past was consistent with the respective contemporary social and political order. At times alchemists were supported by the political establishment, at times they were persecuted to the point of being declared heretical by the Church. This always depended on institutions of power, if they thought the practice will benefit them or not. Alchemy and magic may sometimes even have served to resist power structures, but nevertheless have fitted well into the worldview of the period. In the same way are scientific methods used by the longevity industry consistent with the present social and political order. An obvious exception is cryonics, as freezing and reawakening the dead in physical or virtual form is currently not in line yet with the contemporary worldview. This may also provide the explanation why cryonics still has very few customers, and most players in the longevity industry structure their own activities and self-presentations along existing templates of pharmacology, genetics, and biochemistry.

As long as the life-extension industry packages its longevity products in scientific terms they will be considered by customers as respectable, and at least worth trying. Promising outright immortality is another matter though, as this claim appears to belong to a former worldview, and is not yet again supported by a future worldview. Of course, that may change, when the idea that all life is data, data which can be produced, manipulated, and stored at will, becomes distributed more widely.

The life-extension industry offers us exciting opportunities. But their claims are testing the edges of our current worldview, and in parts are already reaching out into a new era with its own worldview. As consumers this puts us into a confusing situation, comparable perhaps to the period of Isaac Newton, when the old and the new, the magical and the rational were still undistinguishable. We cannot know which of the life-extension industry's claims will ultimately be fulfilled and which ones will be judged in the future as belonging to the timeless realm of alchemy and magic. This dilemma of the consumer is also the longevity industry's most powerful marketing tool: we are told that by buying their products we risk losing some money, but without taking that limited risk, aging and dying is absolutely certain.

Bibliography

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