

of his removal
of speech.

I will be developing my talk around the philosophy of Sir Karl Popper who has in recent years developed the philosophy which subsumes everything that is in existence and our experience in the three worlds. World 1 is the world of physical objects and states, including even human brains. World 2 is the world of states of consciousness, including all experiences. World 3 is the world of culture, which is entirely man made. In fact, the thesis that I will develop following that is that man made himself the human being that we now know him to be through the World 3 that he was making, which in the earlier stages must have been largely his linguistic development. In this way we can plausibly explain the fantastically rapid evolutionary change in brain growth from 600 cm³ somewhat over a million years ago to the full human size of about 1500 cm³ some 100,000 years ago. A developing language with its descriptive and argumentative functions would give immense selective advantages to primitive men, first in their welding together in tribes and second in their communal grouping for hunting and fighting. Progressive cerebral development would be necessary for the progressive linguistic development. No doubt tool culture also helped because this was dependent on cerebral development for the skilled control of movements. So we have the concept that man was growing himself through culture by a kind of cross catalysis. Through the earliest hominids and into the lower Paleolithic there was initially a very slow advance in brain and culture, then gradually there came progressive acceleration until the great cultural advances of the upper Paleolithic.

Everyone in his own lifetime has to recapitulate the whole sequence of cultural development of mankind, more or less. We don't start off making stone axes, but we have to start off with primitive toys and language and work up from there. Also, we start with primitive behavior patterns, and one measure of civilization is the development of civilized behavior. The brain is fully developed by genetic instructions, even the speech areas being built in readiness for the learning of a language, but all of culture has to be learned, which we can assume is by the growth of microstructures. This is the exciting challenge of human existence -- that we are born with immense potentialities. The human brain has evolved in this amazing process of cross catalysis with cultural performance

in a way which we still do not properly understand. How did it come that mathematical geniuses evolved just to survive in a jungle? Evidently more understanding is required!

Finally, I consider the conscious self, or ego, that is central in the World 3 of conscious experience. This is the personal uniqueness that each of us knows only for himself. This uniqueness has come to each of us in our own lifetime. This personal uniqueness is dependent upon the brain, yet it is not entirely dependent on the genetic instructions that built the brain, ~~neither~~ *nor can* my postnatal experiences and education provide a satisfactory explanation of the uniqueness of self that I experience. It is a necessary but not sufficient condition. We go through life living with this mysterious existence of ourselves as experiencing beings. This life of a person is something that has come to me in a way that I am not able to explain or understand. My coming-to-be is as mysterious as my ceasing-to-be. I believe that there is meaning to be discovered in this personal life of ours. I believe that we have to live life as if it is a great adventure, and I believe that we have to recognize this for all others. Each human being is a person with this mysterious conscious self associated with his brain. He develops his brain potentialities from his lifetime of learning various aspects of World 3, and so becomes a cultured and civilized human being. It is the World 2 \rightleftharpoons World 3 interaction in all its various intensity and richness that distinguishes a human being from other animals that we can regard as "things."