

development, that among the populated planets those younger than the sun would be peopled by beings very much behind us technologically, while those on older planets would be extraordinarily advanced (remember our progress of 500 years and note that some planets could be as much as a few billion years older). Indeed, we would be surprised to find someone else at just our stage of technical development. For the purposes of this paper, we can ignore both the multitude younger than ourselves and those at our point of development. Even so, we are left with the possibility of 100,000,000 planets in the galaxy having life forms very much advanced from us. (This number would be reduced significantly if life forms destroyed themselves soon after reaching our stage of development. This is a philosophical point on which I am optimistic -- I believe the majority of races will learn to survive.) If these stars are uniformly distributed in the galactic disk, the average separation will be about 10 light years.

The usual scientist's reaction at this point is, well, even if the assumptions are correct and this number of advanced civilizations does exist, contact is still impossible because of the speed of light limitation of the theory of relativity. An excellent example of this kind of reasoning can be found in Ref. 14. My reply is that such a statement would appear to be shortsighted. For the moment, let us ignore the possibilities of overcoming the long time of travel by suspended animation and the like. Recall that our own physical theory has been developed in only 500 years. What can we expect in the next 500? Or 1000 or million or even billion years? I suggest that if a way to circumvent the speed of light restriction is possible, it has already been found by someone in our galaxy. (I haven't the faintest idea how this might be done and I fully agree that our own experimental data appear to accurately confirm the existence of this limitation.) If it has been discovered by one, we certainly would expect it to be used; if no other planet's inhabitants independently discovered the means, it makes little difference for such a thing could be taught by the discoverer. Thus we may conclude that it is very likely that at least one, and probably many of the 100 million advanced planetary populations is capable of interstellar travel.