Irreducible Complexity

The concept of Irreducible Complexity (IC) was introduced by biochemist Michael Behe in his book "Darwin's Black Box". Behe defines IC as "a single system which is composed of several well-matched, interacting parts that contribute to the basic function, and where the removal of any one of the parts causes the system to effectively cease functioning".

Behe presents the classic mousetrap as an example of IC. In such a mousetrap, there are several essential parts, such that the removal of any one causes the trap to stop working. Such a system could not be created by a Darwinian process of single incremental steps that are selected because they provide a benefit to the system as a whole. At every stage of the mousetrap's construction, it doesn't work until all of the parts are assembled correctly into a final system.

Behe has identified several biological machines and systems that are irreducibly complex, including the bacterial flagellum, the blood clotting system, the vertebrate immune system, and gene regulatory networks. None of these processes could have evolved via incremental steps being favored by natural selection.

Many Darwinists have attempted to refute IC by misunderstanding or misrepresenting it. For example, biologist Kenneth Miller tried to refute the IC of a mousetrap by removing two parts from a functioning trap, and using the remaining three parts as a tie clip. But Miller misunderstands (or ignores) the part of Behe's IC argument that the interacting parts contribute to the basic function of the system in question, in this case of the mousetrap. It's true that most any part of any system could function as something else, e.g. a paperweight or a doorstop. But random parts that are functioning as simple paperweights or doorstops cannot incrementally and randomly coalesce into complex systems like mousetraps, as explained by Behe here.

Miller's demonstration actually falsifies Darwinism in another way. In the real world, Miller's contraption would never survive as an actual tie clip. It would quickly become deselected and removed from the population. So even if it had the capability of developing further into a mousetrap, it would never get the chance without some form of additional design and engineering.

Behe's concept of IC can be further extended into an even greater level of Integrated Complexity. IC systems like the bacterial flagellum and the vertebrate immune systems must themselves be integrated into the overall biological systems of the living organism. This requires design and complexity orders of

magnitude higher than the already irreducible complexity of the systems themselves. The integrated complexity of the DNA replication/transcription/ translation machinery is another example. The analogy would be to a complicated automobile factory building. Each machine inside the building is irreducibly complex, but the configuration, integration and control of the machinery within the building requires an even greater level of complexity and design.