1. communication is comprised of information. That either the sender or receiver finds useful. I n the signal intelligence world   a sender is trying to convey information to a receiver. In todays world there is a massive amount of data. Every day the amount grows larger. Data differs from information however. Information is useful data. Information implies a sender and receiver. . information umplies a code that both understand. Semantics, grammar. Experince, symbols, all are a part. The everydat experience of verbal communiation is well studied.   There is an agreement of language (within bounds. Ie ebonics). For this discussion it is immaterial wheterh the language ability is inate or learned. (inate arguinbly , could be considerd learned and now fixed in the hardware . The difference between mathematics and biology , is that mathematics is built on the concept of truth while I would argue that bilogy by definiciotn is builit on the scaffold of deception.   In Darwin survival of the fittest, it can be , but is rarely a passive game. Each stratey BATTLES its way to survival. Battles off enenies , both livng and dead. (non bilogifcal environetal changes.).   In essecen a predator prey realationsip exists. The predator , in mathatemenatl terms , needs to capture the free energy of the prey, , for a cost benefit analyisk that enables it to take in mor than it expends in capturing it. Ie, if I have to burn 300 callories in running each time to catch a 200 calaire prey, eventually I run out of energy in that strategy,   I have to find (may randomly as eveolution would suggest .) a benefit greater tha n the cost. If as predator I can read the intention , protection , defense of the prey simply by mental calculaton, without much calorice expentirue, I have increased my odds of winning.   IF by depccetion the prey can fool me and have me either expend a greater amound of energy try9nig to catch it, or mislead me in to thinking so. The prey gets to live abother day.

   The battle to survive then, should rely on a well experienced methods of attack and decetion , as a darwinina. Excerecise.

Evolution , does not as many people thin k have a direction or motivation,   it is the randon genertation of ideas. Many many idea,s and the ones that don't work , eventually fall away.   To digress , and use a well honed example, if someone were trying to find the best way to make a road from bostton to bew york. Without a map, evolution would draw every coneceintble path, evemtulaly the one that few people traveled on would be grown, oever and in such disrepair that it would eveutlly disappear. The brain does this with neuronal growth.. many paths are created and the ones that do not get used get culled from disuse. Many brain disorders arise from the fundamental process that goes awry. Either not enough paths are initially made, not enough die, some that are made break, , some that are made whiter with age. Etc.