

SUMMARY OF THE CHAPTER

- As a physical illustration of His invisible goodness, God created organisms in such a way that the dominant type of long-term relationship among organisms across the biological world is mutualism. Even when harmful relationships entered the world following man's Fall, God placed limitations upon them, so that mutualistic relationships still dominate.
- God created a spectrum of perfection of organism-organism relationships:
 - from organisms that do not interact, to organisms that interact briefly, to organisms that interact over the long-term (symbioses)
 - from a symbiosis that provides benefit to one organism but neither harms nor hurts the other organism (commensalism), to a symbiosis that benefits both organisms (mutualism)
 - from a facultative mutualism where the two organisms can live apart from one another, to an obligate mutualism where the two organisms cannot live apart from one another
 - from an obligate mutualism between distinct equivalent-sized organisms (*e.g.* flowering plants and pollinating insects and birds; oxygen-producing plants and carbon dioxide-producing animals; fruit-producing plants and nut-distributing animals)
 - to an obligate mutualism between a multi-cellular organism and (unseen) microscopic organisms (*e.g.* animals and gut flora; plants and mycorrhizal fungi; legumes and nitrogen-fixing bacteria; corals and dinoflagellate algae)
 - to an obligate mutualism so interwoven that the two organisms function as one organism (*e.g.* lichens)
- We can begin to understand the Trinity (three persons of the Godhead in perfect mutualistic relationship).
- The original creation was without biological evil: There was no death (of nephesh life [i.e. of animals and man]), there was no disease, and there was no suffering. When man sinned, man died spiritually and God cursed the physical creation over which man had rule. This curse was the origin of biological evil:
 - Biological evils that are negative effects of the curse (probably due to less efficient biological repair systems):
 - degenerative aging, or 'growing old' (NOT developmental aging, or 'growing up');
 - disease (or pathology), both
 - degeneration of the organism, and

- harm from a pathogen (another organism that is probably degenerated);
 - parasitism—probably a once mutualistic relationship that changes when one organism (the parasite) gets more benefit from the relationship than the other organism (the host)
- Biological evils that are evil-minimizing effects of the curse
 - introduced by God to limit the biological evil of the curse so that God’s attributes are still seen in the creation;
 - NOT good in an absolute sense (*i.e.* not good in an uncursed world), but good in a cursed world:
 - death, which mercifully puts an end to suffering and permits resurrection with perfect bodies
 - overproduction (the production of more young than there are resources to support), which results in competition and natural selection (the death of weaker and sicker organisms), thus minimizing the suffering that comes with disease and degenerative aging.
 - predation: predation designs allow predators to consume prey, especially those that are weaker and sicker, thus minimizing in prey the suffering that comes with disease and degenerative aging.
 - defenses are given to plants and animals to protect species from extinction.
- According to the naturalistic worldview, conflict (not mutualism) should dominate relationships among organisms (because organisms came to be and are continually acted upon by natural selection—a process of conflict). However, mutualism is *actually*
 - common (the dominant form of symbiosis—even after the Fall of man)
 - ubiquitous (found everywhere; probably involve every organism)
 - deep (at every level of biological organization)
 - Long-term biological relationships are better explained by God creating a physical illustration of His invisible goodness.
- According to the naturalistic worldview, biological evil has been around for billions of years (as long as organisms have been around). Organisms should have a very high mutational load (the number of harmful mutations carried by an organism) and pathogens (disease-causing organisms) and parasitism should be abundant. However,

- overall, organisms seem to be quite healthy (*i.e.* they seem to have low mutational loads)
- <0.1% of organisms are pathogenic
- parasitism accounts for much less than 0.1% of all biological relationships
- The biological world is good, as would be expected in a world that was created 'very good' and which has been degenerating under the effects of biological evil for only thousands of years.
- In our role as priests, the goodness of the creation should cause us to worship God and bring others into worship of God.
 - How awesome the goodness of the original creation must have been (and thus the goodness of its Creator) for the creation to be as good as it is after thousands of years of deterioration under the curse.
 - Even as God cursed the creation in holy response to man's sin, He displayed His mercy and compassion by setting limits on that curse.
- In our role as kings of the creation, the creation was cursed because of our sin.
 - We have a responsibility to reverse the negative effects of the curse (those things that cause physical suffering [*i.e.* prolonged physical pain])
 - correct mutations (copying mistakes in DNA)
 - restore pathogens to mutualistic relationships
 - minimize pain
- We are justified to engage in improving the health of organisms (*i.e.* human and veterinary medicine).
 - We should NOT reverse the evil-minimizing effects of the curse (death, natural selection, predation). If we eliminate a predator we have a responsibility to function as a predator for the prey populations.