

## **Biological Evolution**

### **The Design Arguments**

An Argument from Complexity:

- (1) Living things are highly complex.
- (2) Greater complexity goes with lower probability.
- (3) Therefore: complex things are not likely to arise by chance.
- (4) The only alternative to chance is intelligence.
- (5) Therefore: complex things are likely to arise through intelligence.

An Argument from Technology:

- (1) Living things are highly complex.
- (2) Machines are highly complex.
- (3) Similar things have similar causes.
- (4) Just as machines are caused by minds, so living things are caused by minds.
- (5) Since living things are more complex than machines, the minds that cause them are more complex than human minds.
- (6) Therefore: there are some super-human minds.
- (7) But these are the minds of gods or goddesses.

### **Evolution is a Third Alternative**

- (1) Intelligent Design; (2) Chance; (3) Evolution

### **Evolutionary Landscapes and Searches**

#### **Biological Complexity**

- *The Biological Arrow*: The complexities of the most complex organisms tend to increase with time.
- *The Biological Roller Coaster*. If any species is biologically complex, then it has been generated by some process that started out simple and climbed up through all lower levels of biological complexity.

### **Evolution as a Computation**

#### **Does Evolution Strive?**