

## Assignment #2 Summary Notes

Here are the key ideas and concepts that you wrote about in Assignment #2. They serve as a useful set of takeaways for Week #3:

### **I. Diversification in Human Evolutionary History: Multiple Overlapping Species and Lifeways.**

- A. Lots of ancestral human species have been identified and described.
- B. It's not certain that all of these species are actually real! Size and other differences between specimens might indicate normal variation within a species.
- C. Certainly, human evolutionary history did consist of more than one species at any time...just like the evolutionary history of other life forms.
- D. What's relatively unique about human evolutionary history is the pruning down of the family tree to just one remaining species, *H. sapiens*.

### **II. Harari's Two Theories for the spread of *Homo sapiens*.**

A. **Replacement.**

B. **Interbreeding.**

→ The possibility of a **third theory** was suggested by Lucor. Based on his prompt, a third option that came to mind for me is called by several different names: the Single Species theory, Polycentric Evolution, Regional Continuity, and Multiregional Evolution. See the Third Theory slide show posted to Canvas for a fuller description of this theory! A version of this theory will re-appear when we talk about the work of Carleton Coon in Week 7.

### **III. Complexity of Skin Color—Two Kinds of Selection Produce Variation among Humans:**

A. **Natural Selection:** As analyzed by Jablonski, skin color evolved in ancestral humans as a compromise between having skin that's dark enough to protect the body against **folate** breakdown (too little **vitamin B** = birth defects) and light enough to synthesize **Vitamin D** for strong bones and immune system. Natural selection produces "gradual" change in skin color over space (mentioned in the AAA Statement; see the figure below), or what Frank Livingstone describes as clines (we will discuss this important concept in Week 7).

B. **Sexual Selection:** This refers to the tendency of males and females of a species (or, a population within a species) to value particular physical features in a mate. Darwin discusses this "agency" (his words) on page 263 of his article assigned for Week 5.

