

Sample Paragraph from Dobzhansky's  
"Nothing in Biology Makes Sense except in the Light of Evolution"

Some organisms live in a great variety of environments.

The first example (in bold) is an organism that can live in a wide range of environments.

**Man is at the top of the scale in this respect. He is not only a truly cosmopolitan species but, owing to his technologic achievements, can survive for at least a limited time on the surface of the moon and in cosmic spaces.** BY CONTRAST, some organisms are amazingly specialized.

The transition phrase "By contrast" (in caps) cues the reader that the writer is pivoting from the idea explicitly stated in the topic sentence to the idea implicitly stated.

Perhaps the narrowest ecologic niche of all is that of a species of the fungus family *Laboulbeniaceae*, which grows exclusively on the rear portion of the elytra of the beetle *Aphenops cronei*, which is found only in some limestone caves in southern France. Larvae of the fly *Psilopa petrolei* develop in seepages of crude oil in California oil fields; as far as is known they occur nowhere else. This is the only insect able to live and feed in oil, and its adult can walk on the surface of the oil only as long as no body part other than the tarsi are in contact with the oil. Larvae of the fly *Drosophila carcinophila* develop only in the nephric grooves beneath the flaps of the third maxilliped of the land crab *Geocarcinus ruricola*, which is restricted to certain islands in the Caribbean.

The topic sentence (underlined) tells the reader that this paragraph will be about where organisms live. The statement says explicitly that "Some organisms live in a great variety of environments." However, the nature of this statement also implicitly states that some, or perhaps many, organisms *cannot* live in a great variety of environments. After all, if "some organisms" can survive a range of environments, that automatically means *all* organisms cannot.

The topic sentence for the paragraph that follows builds on the ideas of the previous paragraph by referencing the "colossal diversity of living beings."

Is there an explanation to make intelligible to reason this colossal diversity of living beings?

All of the other examples provided (the fungus family *Laboulbeniaceae*, the beetle *Aphenops cronei*, the specific types of fly larvae, the land crab *Geocarcinus ruricola*) support the implicit statement in the topic sentence--all of these organisms can survive only in very specific places.

### Questions to Extend Your Understanding

1. As the annotations show, the topic sentence for the first paragraph contains both an explicit idea (“Some organisms live in a great variety of environments”) and an implicit idea (If only “some organisms” live that way, that means some do not). In the sentence below, try to fill in the blank to create a topic sentence that explicitly forecasts BOTH ideas.

*While some organisms live in a great variety of environments,* \_\_\_\_\_  
\_\_\_\_\_

2. Based on the topic sentence you created in #1, what sentence-level changes would you have to make to the rest of the paragraph? For instance, does the second sentence about man still make sense? Do the transition words and phrases still work? Would you have to reorder the other sentences?

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3. Consider the topic sentence for the second paragraph, which reads “Is there an explanation to make intelligible to reason this colossal diversity of living beings?” Based on that topic sentence, what will that paragraph be about?

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