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Response to a disruptive selection for phototactism.

The present experiments use D. melanogaster populations as a model to measure the influence of the selection intensity on the response to selection. Flies of a wild strain, called "Waterloo" because it derives from adults captured on the historic battlefield of this name, have been submitted to a disruptive selection for positive and for negative phototactism using the Benzer method (1967), as modified by Tompkins et al. (1978). In both the negative and the positive directions, three selection intensity levels were used: 5%, 15%, or 25%, respectively, of the flies of each generation were selected. They become the parents of the following generation. The tests were done at 25°C and 60-80% R.H. The flies were 5 days old.

Figure 1. Countercurrent distribution test: initial population "Waterloo".

Figure 2. Countercurrent distribution test: final distribution of the flies. Selection for positive phototactism: 5th generation.
### References:


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**Figure 3.** Countercurrent distribution test: final distribution of the flies. Selection for negative phototaxis: 5th generation.

**Figure 4.** Data grouping before the chi-square test.