YALE UNIVERSITY
OSBORN ZOOLOGICAL LABORATORY
NEW HAVEN, CONNECTICUT

June 13, 1951

Dear Josh:

Unfortunately for me, I was not able to stay for the discussion of your paper tonight, but had to head back to New Haven. I enjoyed it immensely in its own right, and also in relation to what Delaporte showed us this morning.

It occurred to me that the following may be worth considering in this connection. Practically all of present genetic knowledge pertains to organisms with localized kinetochores (= centromeres, Darlington) while cytologists have provided a good deal of information about organisms with the

generalized type of kinetochore — Acteroptera, Coccido, probably Lepidoptera — our knowledge of genetics of these is truly scanty. In looking at Delaunay's lantern slides I got the distinct impression that bacterial chromosomes probably have generalized kinetochores, since these usually show extreme condensation at metaphase and move to the poles in a fashion not unlike what appeared in D's preparations. Also the relative independence of the half-spindles seems to go along with this.

However that may be, the possibility exists that disjunction in such systems may be rather different than in those with

YALE UNIVERSITY
OSBORN ZOOLOGICAL LABORATORY
NEW HAVEN, CONNECTICUT

the localized kinetochores. This might very well result in preferential segregations either with or without rearrangements being present. In the case of heterozygous translocations this might very well be somewhat exaggerated. In any case I offer the suggestion for what it is worth, since for a number of years I have been hoping to see this kind of system studied genetically in the sort of detail that we have in the series of Drosophila & corn. Perhaps you are well on the way to such an analysis in the bacteria!

It was good to see you again & learn how your work has been progressing. With very best wishes etc.

Sincerely,

D. F. Parlan

N.B. If you think the suggestion worth including in the discussion I will be glad to have it there & will try to put it through a typewriter.