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Dear Professor Hederberg,

Thank you for your interesting letter. I enclose reprints of two cytological papers, and will send you others as they become available.

I have not seen anything exactly as you describe it, but have observed a scheme of chromosome rearrangement of which I enclose a diagram:— 3, 4, 5 are a normal division (I am now of the opinion that bacterial chromosomes are always paired. 6 is a tri-nucleate cell which may arise by a reductive division.

7 is a fusion nucleus. 8 is the same after a single chromosome doubling. 9, 10 are reassortment and chromosome doubling again, followed by 11, fragmentation and return to the bacillary state. This certainly occurs in Rough and smooth types of *Escherichia*, in *Streptococcus* and in *Mycobacterium*.

It has nothing to do with sporing.

One paper on this phenomenon should be appearing in the next number of the *J. Gen. Microbiol.*, and one in the *J. Hyg. Camb.* the latter rather later and fuller.

This scheme leaves room, of course, for a lot of details, conjugation, reduction etc. which I cannot claim more definitely so far.

Yours sincerely,

K. A. Bisset

