11th. January 1946.

Dear Dr. Lewis,

Thank you for writing to me with regard to the terms
homogenic and heterogenic, which I think can reasonably be applied both
to zygotes and gametes in tetrasomic organisms.

In writing up the subject, on which I gave a short note to the
Genetical Society, in a longer paper which I shall send in to the Royal,
I have also sub-divided the heterogenic class for zygotes into digonic,
trigenic, etc. according to the number of different genes at any
particular locus. The existing nomenclature, namely Blakeslee's
simplex, duplex, triplex, being quite inadequate for the variety of sorts
of genotypes which polysomic inheritance involves.

As I see it the disomic terms homozygous and heterozygous are
adequate in diploid zygotes to distinguish the two possible partitions
of two, namely (2) and (1^2), but there are five partitions of four,
(4), $(3,1)$, (2^2), $(2,1^2)$, (1^4), so that the two-fold classification of

homozygous and heterozygous essential in disomic genetics corresponds with a five-fold classification in tetrasomic genetics and with eleven-fold classification for hexasomics.   As these probably will never have, or need to have, separate names, since one can always specify the partition concerned, it seemed useful in the heterogamic cases to be able to specify by a prefix the number of parts in the partition concerned, e.g. digenic (3,1) and digenic (2^2) for the two digenic cases in tetrasomic inheritance, the latter being Blakeslee's duplex but the former either simplex or triplex, since these terms refer to the numbers of dominant genes involved.

Of course, I shall be most happy if you choose to use any of these terms, the need for which I imagine you have felt as much as I have.

Yours sincerely,