

25/1/28

Dear Major Darwin.

Many thanks for your letter, and most interesting P.S. On the former question, May I ask that Mrs Hodson should not be responsible for the arrangements in connection with your interview, as I have reason to think now that even my printed note in the review was never circularised to the previous committee. To be so unbusinesslike as this will be to throw away every offer of support.

3% it was, on gross earned incomes. The effect on low incomes, below £600 say, is to give the whole advantage for the first child and leaving nothing for the others. Let us see how it works

Gross earned income	£600	
less one sixth	<u>100</u>	
	500	
allowance for ^{man} man and wife	<u>225</u>	
	275	
taxed at 2/-	225	22.10.0
taxed at 4/-	50	<u>10.0.0</u>
		<u>32.10.0</u>

Here the allowance is £18. 0. 0 on the first child, £14.10. 0 on the second, and nothing for subsequent children

whereas the present allowances would be

		Tax
1st child	£7. 4. 0	£25. 6. 0
2nd "	4. 2. 0	21. 4. 0
3rd "	2.14.0	18.10. 0
9th "	2.14. 0	2. 6. 0
10th "	2. 6. 0	-

The effect of the change would be to make the parents of 1 or 2 children better off compared with those with ~~more~~^{none}, but the parents of 3 to 9 less well off compared with 1 or 2, though still better off compared with the childless.

If the rate of tax were raised enough to give a fixed revenue from income tax, it would work a trifle better; I imagine a rise from 4/- to 5/- would be more than enough. On larger incomes the 3rd and 4th children come in for a share.

Now for the really important part of your letter; of course the cuckoo must have started parasitising mainly cuckoos, but this is certainly not my idea, and I have never heard it before. A certain amount of such communism once established would bring in some selective effects, I fancy. Consider the equilibrium which must exist between instincts making for perfect workmanship in the nest, or a warm, or a well nourished brood, and the instinct to avoid danger with which the former must occasionally come into conflict, sometimes with self ~~nutritive~~ nutrition also perhaps, certainly also, as you say, with fecundity. Start with these in equilibrium in a non-parasitic group, and introduce ~~the~~ communal habit of sharing eggs. You must at once begin to lower the standards of parental diligence, and to increase timidity.

perhaps greed, and certainly fecundity. Chick mortality increases (which tends to raise again to some extent the standard of diligence), but it is only when the average cuckoo becomes a materially worse parent than neighbouring birds that an instinctive preference for foreign nests would be an advantage. Parasitism depends in fact on the coexistence of two different standards of parental care! At first the young cuckoo in the foreign nest would do only slightly better than in his own, or some other cuckoo's, and presumably would do worse than his foster brothers; but he is in a position to profit by fratricidal powers which would be merely harmful in the host, and can go ahead. The Rhea is excellent in showing that higher fecundity came before true parasitism.

I wonder what means of protection have been evolved. Some birds are particular enough to throw out objects which are not very like their eggs, others will sit on marbles. I understand that both groups are victimised, but the former more skilfully than the latter. This suggests that the method has paid in some cases, but is not a sovereign remedy. Now for a given population of cuckoos would not the rarer hosts suffer most severely unless specially protected. Are the rarer hosts the more particular? Perhaps you have a fairly recent paper, I forget who by, who ~~xxx~~ contrasts the cuckoo's eggs foisted on these two types of host. If not I must get the reference from Huxley.

The effect on territory instinct would only work at laying

time, though it might have been developed for this time and merely extended, as still useful, earlier and later.

Polygamy would certainly require greater powers of discrimination in the male; it would also give the young a smaller share of his labour. Is the inference that this labour is unimportant in polygamous birds justified? Except as a ~~guard~~ guard, or a sentinel. I suppose Gallus is chiefly useful as a sentinel, or a lightning conductor perhaps if his conspicuousness draws the danger on himself. Are not pigeons strictly monogamous, and at the same time gregarious in nesting? I suppose the nests are always distinct, and the right squabs always fed by the right parents.

Do you know if the non-parasitic relatives of the cuckoo are gregarious, like rooks. A communal territory might easily be a first step in their degeneracy.

Yours sincerely,