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Dear Luca:

Norman Kretchmer mentioned having seen you just a couple of days ago, and I have to envy him for this. Stanford, or Madison, were always the jollier places when you and Alba were here.

I have been teaching medical genetics this quarter, in fact just gave the final lecture this morning. In spite of myself, the course veered very much towards human, and population genetics. Perhaps this came about from using Stern as a textbook and sticking fairly closely to it. I don't think I would have attempted it without your own lectures last summer.

Have you thought at all about writing up these lectures to form a text for medical students at an elementary level? Stern is not systematic with his mathematics, LI is a little too formidable for medical students. It is of course the closest source to what we need, but it also has a fair bit of material, e.g., systems of inbreeding, that can only be a distraction. None of the books make a point of bringing out the functional meaning of the equations, to make them more useful and intelligible. As you did, I have been doing this by pointing out simplifying approximations. I would be just delighted to see a book of perhaps 60-80 pages devoted to the elementary theory, and giving some of the more complex derivations only in the appendixes. If I could be of any additional service in smoothing the interpretation for our medical students, I would be very happy to. But this could only be a small increment to your own writing.

I have been telling my students that among western white populations today, $F < .0005$ and might just as well be ignored in relation to "reasonable" values of q, $q > .001$. Then in connection with consanguinity it hardly seems worthwhile to attempt a closer approximation than $K = \frac{c}{16} \cdot \frac{1}{F+q} \quad \frac{c}{16q}$.

For the difficulty of selection against homozygous recessives, I derived $n = \frac{q_o - q_n}{q_o q_n}$ from Li's 19.2. But even more demonstrative, $n = \frac{K-1}{K\, q_n} \quad \frac{1}{q_n}$

(K defined as factor of improvement q_o/q_n).

I am sure these devices are very familiar to you, but they may help illustrate what I feel should be stressed in the small book.

One small problem that we have discussed and I am sure you could treat confidently. In a pedigree of hemophilia

Given that 1 is normal, what is expectation for 2, i.e., what is the likelihood that 3 is heterozygous?

What is the most expeditious way to expound this? It is an elementary but frequent essay in counseling. (I would say $P_2 = \frac{1}{6}$ since the nephewships for 4 would be 5 : 1 : etc.
I prefer this to a general deduction from continent probability but you may be able to criticize this constructively. I hesitate to argue that $P_3 = \frac{1}{3}$ but suppose it is inconsistent not to.

I just sent Giovanni a routine semi-annual statement on the Interist account. Any further developments, especially on the randomized penicillins?

I have no comment but approbation for Ciferri's manuscript. It will be fascinating (and perhaps surprising if an S-RNA is implicated for DPA). I would rather think that the activated DPA is transferred to a UDP-polypeptide derivative au Strominger.

Would you be interested to test the disulfonic analogue of DPA as a possible substrate or inhibitor? (cf. the negative results in my paper with St. Clair in J. Bact. 75: 153).

Are you still deeply interested in medical applications of computers? You should see the Transactionsoof the Institute of Radio Engineers, Section on Medical Electronics, Vol. ME-7, October, 1960 for a symposium on this. In fact, the Proceedings of the IRE and several other sections of Transactions should be interesting to you (see April, 1961 issue of the IRE for index to all the transactions). These journals should be readily accessible to you, but if not give me your instructions. We are getting fairly deeply involved in electronics and special purpose computer work in connection with exobiology. Did Elliott Levinthal call on you? Did you enjoy that masterpiece of Italian literature, the translation I recently sent you?

As Ever,

Joshua Lederberg