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SCHOOL OF DENTISTRY
PITTSBURGH 13, PENNSYLVANIA

DEPARTMENT OF RESEARCH

August 19, 1956

Mr. Don McNeil
2124 Regent Street
Madison, Wisconsin

Dear Don:

Re: THE BOOK

I see that in my letter of June 30, 1956 to Mr. Lee E. Grove of Oxford University Press, that I did not state the background of the letter of Raynor Churchill. It was written for me to support a reply to the criticisms of Exner that appeared in three issues of Northwest Medicine about this time last year. I was one of 22 who contributed to this reply. I have seen only the first draft in mimeographed form so far and do not know when it will appear or in what medium.

At the time of the discovery that fluorine was the cause of the mottled enamel at Bauxite, I was the ~~MEMPHIS~~ Senior Fellow in charge of the multiple fellowship on aluminum utensils. I met H.V. Churchill the week of my arrival in Pittsburgh on July 15, 1929 and dealt with him at fairly frequent intervals until the end of the fellowship December 15, 1930. Of course I saw him at American Chemical Society meetings at monthly intervals thereafter as we were both regulars.

Now I never heard of connection between aluminum and fluorine in the Bauxite matter. In fact I never knew anything about fluorine in any relation to teeth until after the start of my studies on dental caries in November 1933. The first time I ever gave fluorine a thought was in answer to a question of Dr. Francis C. Frary, who was at that time and until about three or four years ago, Director of Research for ALCOA. He asked if our finding, -- I was the speaker in the September 1935 meeting of the Pittsburgh Section of the American Chemical Society--of less caries in rats from mothers on XXX liquor could be due to fluorine. I answered that fluorine was bad for the teeth and as we had added to the diet it could be only that we had increased the F content. I thought I had given a good answer to that very unexpected question. I enclose a reprint of a paper given at Dallas during Christmas week of 1941 and published in 1942. It lists some of the details of what followed.

The letter of Raynor Churchill came late and was not used in the reply to Exner. I have carefully checked page 74 of the first draft of the reply to Exner in which my comments are recorded. There is nothing there about what Churchill had in mind.

Therefore:

OK

I believe that you should report what you know was written by H. V. Churchill in 1931 ~~from~~ rather than what Raynor Churchill wrote in 1956. I do not know the wording of your text now but I should like to see it so drafted to include the citation from the November 13, 1931 letter just as you have done in your letter to me.

(At this point I should tell you that I am typing at 8:20 Sunday morning as the only time I have been able to get away from my people, family and research associates, for enough time to do this job. At some time this afternoon My wife and I leave for Pennsylvania State University to attend for four days the annual meeting of the Pa. Pub. Health Assoc., as I do annually. I go to meet people and just visit. The change from here is a real vacation and will total 7 days absence for this summer. Just when I will get the other 21 remains a mystery. But excuse the errors. I have an eraser and can use it but can't you figure out the strike overs etc.? This IBM machine is quicker than I am at times.)

Now as to the matter of page 53 of your manuscript.

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The day I finished review of your manuscript was hectic just as is every day of my present life. I had ~~matter~~s to consider at Mellon Institute and was fortunate in seeing Dr. Hamor. He wrote the criticism on the photocopy of page 53 without reading any other part of it. As this does not deal with the real discovery of the fluorine-caries relationship it may be best to let it stand. However Reference 25, which I was in Mellon Institute to check, does not refer to my paper but to that of Dean.

As I said in my letter to Grove, I did not check the bibliography. I did photocopy your page 276, fortunately, and now see the difficulty.

I believe Reference 25 should be: Gerald J. Cox, "New Knowledge of Fluorine in Relation to Dental Caries" J. Am. Water Works Assoc. 31: 1926-1930. I say this because now I see that you have given the Dean reference at No. 21. As the page numbers are correct there - this was one of my corrections in the letter to Grove --

I believe that there has been a mistake made that resulted in omitting the reference to my paper. I enclose the reprint.

As to priority in proposals for fluoridation there are several ones that could be cited but they are vague.

Note on page 373 of "Survey of the Literature of Dental Caries" where I have cited Klein and Palmer (1937). They don't say "Fluoridate" but they could be so interpreted by a reader of this day. McKay on page 174 of Dental Caries, the ADA summary book 1941 edition, says, with a May 19, 1938 date "There seems to be some justification for a recent hypothesis that use of waters containing fluoride, which is now recognized as the causative factor in mottled enamel, may exert inhibitory effect on the active causes of caries." But both Klein and McKay refer to what I would call direct action of the F in the manner of topical application and not the formative action.

Dean in the 1938 paper you cite ~~may~~ says on page 1452: Inasmuch as it appears that the mineral composition of the drinking water may have an important bearing on the incidence of dental caries in a community, the possibility of partially controlling dental caries through the domestic water supply warrants thorough epidemiological-chemical study" His paper with Arnold, ~~in~~ Jay and ~~in~~ Knutson in the July 1956 Public Health Reports, indicates that Dean has yet to learn that ~~in~~ fluorine is a preventative of caries in certain tooth areas and not a control agent. (Their claim without any evidence that there is a benefit to erupted teeth is more the influence of Jay, who is a never-die oral environmentalist. And Arnold astonished me in Washington on May 6, 1956 ~~in~~ by casually saying to me that he ~~never~~ could see my idea about seasonal variation of dosage of the water to compensate for seasonal variation of water consumption. Still believes in the oral environment effect or control rather than prevention in the smooth surfaces.

As to the original observation in the modern era of caries preventive action of fluorine, I say that the expression of Mary L. Dodds in Room 417 of the Old Mellon Building, where I now sit, in the summer of 1936: "May be fluorine is good for the teeth" constitutes the beginning of fluoridation. I enclose a reprint of a paper giving a summary of what I presented on June 7, 1937, and was published in the now defunct Dental Rays, I believe in the November 1937 issue. I have marked what I had to say for the summary about. Certainly I was talking about formative fluorine. Jay was the principal speaker that day and picked on me for my ideas as he continues to do every time we meet.

So about the page 53 of your manuscript. Give citation ~~in~~ 21 to Dean in that paragraph. Keep 25 for citation to me but cite my ~~in~~ JAWWA paper there. I don't know what the Van Kirk to Alex Wallace has to do with it but I leave that to you. Change "offered" to ~~in~~ "offers" as that

is the way it is in the original. If J. Am. Water Works is available to you, note the editorial comment that follows on the last page. In it is for the first time "mass medication". And now I note that I have used XM "mass prevention"! In my letter to Grove I expressed an aversion to "mass" as an adjective in any aspect of fluoridation!

I meant to write to you another letter about the Bard letters. That must now go over. I have had two calls from the men in the rat room and I have to write a letter to the City Health Department to complain that we are finding never over 0.75 ppm F in Pittsburgh water and what are you going to do about it? And as you see my hunt and peck is getting worse.

I regret that I have been so apparently negligent in our relations. It is that I have so much to communicate to you that I never find the time to do it. In the numbered list of things I have to do, totalling 68 items as of today, the No. 1 is "McNeil". And I still cannot scratch it off!

Yours,


Gerald J. Cox
Professor of Dental Research