

community, so far as I can see, it will be an unmixed blessing, and I am perfectly satisfied that if once tried it will never be reversed. I may say that I have thought about this scheme ever since fourteen years ago I published my paper on seasonal time, and have been very enthusiastic about it, so I have naturally felt somewhat excited in giving my evidence, seeing that there is a possibility of its now coming into operation.

1. *Mr. Sidey.*] In what capacity do you speak on this Bill?—I am an amateur astronomer, and it was my astronomical studies that suggested this adjustment of time to me in the first instance.

2. You made a proposal of the kind in a paper which you read before the Wellington Philosophical Institute?—Yes. In 1895, and again in 1898.

3. What was your scheme?—The same as the Bill, except that the clock was to be put on two hours. I think one hour is better, because two hours would make the daylight short in the mornings at the beginning and the end of summer. My proposal, too, was to make the alteration for five months. The two-hour adjustment could only be made for five months, because there would not be enough daylight in the mornings.

4. *The Chairman.*] What is the difference in the amount of daylight between, say, Auckland and Invercargill?—I could not say precisely, but I should think it would not be more than an hour at the very most.

5. *Mr. Sidey.*] Is that with the twilight?—There is a longer twilight in the south, because the sun goes down at a different angle.

6. So that really this Bill is required more in the north than in the south in the summer-time?—Yes.

7. So far as the north is concerned, a greater extension than the hour would be advantageous, would it not?—No, I do not think so, because the daylight would be too short in the morning towards the beginning and the end of summer.

8. You think there is nothing unscientific in connection with the proposal?—No scientific difficulty whatever, so far as I can see. And that was the opinion of Sir Robert Ball before the Committee of the English House of Commons. He is a very great astronomer, and he did not see any difficulty at all from the scientific point of view.

9. Could there be any difficulty at all with regard to navigation and nautical purposes?—They would use the original time. As a matter of fact on shipboard the chronometers are all set to Greenwich mean time.

10. Then you see no difficulty whatever?—I cannot see any.

11. You have spoken of the difficulty of altering the people's habits. Is it not the most satisfactory arrangement to have recreation after work?—Very much more satisfactory, I should say, especially from the employer's point of view. A man who gets up at 4 in the morning and spends all his morning in recreation is not fit for his work.

12. Have you considered the question at all from the point of view of the agricultural industry?—Yes, I have thought of it, but I do not think it would have much effect, because those engaged in that industry do not observe the time very much. They really go by the daylight. An hour's difference in the time would not, I think, affect the average settler engaged in agricultural pursuits.

13. In regard to what Mr. Atack said as to how the newspapers would be affected, you consider that any delay that might take place in the publishing of news by them would not be sufficient disadvantage to counterbalance the benefits that would accrue to the whole community: is that your opinion?—Yes. It seems to me that it is a very small portion of the community that is affected in that way.

14. *The Chairman.*] Are newspaper-readers a small portion of the community?—The news they miss in the morning they will get in the evening. It will mean that a certain quantity of news that is published in the morning will appear in the evening, and *vice versa*.

15. *Mr. Sidey.*] You will admit, of course, that newspaper-readers form the bulk of the population?—Yes; but the cricketers, the tennis people, the bowlers, &c., would, I think, prefer to have the extra hour's daylight and have their games every night than to read in the paper what had been going on in Australia.

16. *Hon. Mr. Buddo.*] You have already stated that Greenwich mean time is used by nautical men. Is there any likelihood, do you think, of nautical men making any mistake if we were for half the year to put forward the clock one hour?—As far as my knowledge of the science of navigation goes, I think the hour would be such a long period of time that there would not be much risk. If we were going to alter the clock only a few minutes there would be risk of mistakes being made in an observation, but it seems to me that a man would never make a mistake of an hour in taking the position of a ship. It would be so obvious an error.

17. The two points of calculation would not coincide?—No.

18. *The Chairman.*] The time of the rise of the tides would require to be altered too—the whole thing would have to be recalculated, would it not?—Yes, if that time were used for nautical purposes, but I believe the idea was—in the original Bill, at all events—that New Zealand mean time was to be used for astronomical purposes, just the same as at present.

19. Then, in the paper which published an advertisement about the tides and sunrise and sunset, what hour would be stated—that under mean time?—I should say the mean time for those purposes, unless otherwise specified.

20. *Hon. Mr. Buddo.*] You think there would not be any danger of local navigators—ordinary masters—making any mistake with regard to coastal navigation in consequence of the alteration?—I should think the hour would be such a large amount of time that the alteration could not lead to a mistake of that kind. But, of course, I cannot claim to be an expert in the matter of navigation, so what I say on this point is not of much consequence.