Dr. Carr. Not that I know of, but this has not been looked at.

This survey that I saw was specifically directed toward Down's syndrome. There is the impression—I know there are two conflicting impressions existing in the United States about the instance of Down's syndrome, one is it is going up and the other is that it is going down.

[Laughter.]

My impression from published figures on birth surveys that have been carried out, one at Yale by Dr. Love, who is in Ontario, and one in London, Ontario by Dr. Sergeivish, the incidence of Down's syndrome was much lower than was expected from the figure I gave you, just one in 600; it ran one in a thousand or less in these two surveys, so it may well be declining for one reason or another.

Senator McIntyre. Thank you, Doctor. Thank you, Mr. Chairman. Senator Nelson. Just one question. Are your findings related to those of Goh in respect to chromosomal breaks as recited in page 80

of the FDA report?

Dr. Carr. No, sir; they are not. Dr. Goh's findings were related to chromosome breakage. This material has not been published in the general medical literature. I know of its work. It is said it was carried out—I heard of it first at least 2 years ago. We now have a study

underway to check on this.

There are two comments I would like to make: One is a study made in Cleveland in which he put oral contraceptives right into the culture medium; in other words, it was a vitro test, not carried out on women who were on the pill. He found no evidence of chromosome breakage. This is surprising because almost anything you put into a culture, that would break anything, water, anything will break chromosomes if you put it right in the growth medium.

He found no evidence of a direct effect. This may simply mean the

test system was not good for this particular thing.

The other comment I would make, and this is a very general kind of comment, Dr. Goh's work has been widely known, although it has not been physically published in medical literature, and I know lots of people who know about it. Nobody has published anything that confirms it. That does not mean that it may not be confirmed. But what it always suggests up here to me that somebody is finding negative results and is not writing it up in literature. There is a grave defect in medical literature in ignoring negative results. Editors, for one, do not like to publish it. They like something exciting. So you do not have negative findings in the medical literature as opposed to the positive findings.

Senator Nelson. In your presentation you referred to the quantity

of chromosomes, not quality; is that correct?

Dr. Carr. Yes, sir.

Senator Nelson. Do you have any observation about the quality of chromosomes?

Dr. Carr. No. We found, the only way you can judge in this particular technique, is by direct examination. You look at the chromosomes under the microscope. The only thing that can be wrong with them is if they are broken or if there are rearrangements due to breaking of chromosomes. I never observed this on women who have been on oral contraceptives.

Mr. Gordon. Does the triploidy found in post-pill abortuses indi-

cate the women had defective ova?