probably introduced an element of confusion by doing so, is that in some cases there are slight physical differences as well as this psychological difference created in the mind of the consumer; whereas, in ethical drugs most frequently the products are physically and chemically identical.

Senator Nelson. Go ahead.

Dr. Mueller. Perhaps the most pervasive factor blocking effective price competition in drugs is the presence of substantial product differentiation of branded drug items. A recent econometric study demonstrates that advertising and promotion-created barriers to entry are the single most important explanation for differences in profit rates in American industry. The drug industry was among the industries included in that study.

Professor Seymour Harris of Harvard University pretty well summarizes the conclusions of academic scholars concerning the organiza-

tion and performance of the drug industry:

Many are concerned that at industry which comes close to being a public utility achieves the highest profits in relation to sales and investment of any industry; is highly concentrated in its control of the market; reveals serious monopolistic trends; increases the cost to consumers by differentiating the product at a dizzy pace, with the differentiated product usually similar to or identical with existing products; and greatly inflates the cost through record expenditures on selling. The competition among companies to overwhelm the doctors by repetitious and often misleading advertising, and a failure to give as much publicity to the bad side effects as to the immediate beneficial effects, are unfortunate. Thus competition forces even highly moral firms to become less ethical in their behavior. In the drug industry the relation of labor to total costs is minimal; and like the soap and tobacco industries, using similar selling techniques, their relation of labor to value added is a minimum—selling expenditures and profits are the large items in gross receipts.

The cost of drugs is too high. I say this, though I am aware that the research contributions of the industry are important and that the lives saved, the suffering averated, and the acceleration of recoveries are worth more than the \$4 billion spent on drugs. But the cost could be substantially less.

Does this mean that risk plays no role in high drug profits? Not necessarily. Although these high profits can be explained by the structural characteristics of the industry—namely, high concentration, high entry barriers, and a high degree of product differentiation—it is conceivable that risk also played some part. Conrad, Plotkin, Markham and Cootner testified that they believed high drug prices and profits were due primarily to uniquely high risks assumed by large drug manufacturers, and that the Conrad-Plotkin study measured the magnitude of this risk. The relevant question, of course, is how much of total profits can be attributed to the risk factor. Let us therefore turn to the empirical evidence on this subject.

Mr. Grossman. Dr. Mueller, before you do that, I wonder if I could

take you back to Professor Harris' quote?

In the first line he says:

"Many are concerned that an industry which comes close to being a public utility," et cetera.

How do you feel about that?

Do you think the drug industry should be treated as a public utility? Is it close to being so?

Should it be?

Dr. Mueller. I think what he is referring to is that one characteristic of a public utility is that it is providing a service to the consumer