aforementioned concentration report of the subcommittee of the Senate Judiciary Committee, pp. 87-89.)

According to one of the most respected authorities on the economics of the industry, Prof. Alfred E. Kahn, a major reason for this degree of concentration is that "size breeds size." Historically, the fewness of sellers "has produced communities of interest among them," that has been "conducive to a kind of peaceful coexistence, with market relations friendly, if not collusive."

This collaboration among the few has followed several lines—the formation of joint ventures, marketing of products through established firms in the field, patent pooling, buying and selling raw materials at preferential discounts to one another, and active participation in a network of international cartel agreements. Very recently, the Chairman of the Federal Trade Commission disclosed also an important maze of joint ventures in various chemical and chemicalrelated industries which is very sobering indeed. The hoped-for rivalrous action in the petrochemical field is seriously weakened by these modern versions of the old trusts.

The basic questions raised by joint ventures are: What is the probable effect of joint ownership by competitors on the vigor of competition generally, and on pricing and production policies in particular? Is it reasonable to expect that partners in an industrial marriage at certain stages of the productive process will vie for business like strangers when they reach the marketplace?

It is little wonder that the chemical industry has come into conflict with the antitrust laws more frequently than any other industry. While overt cartels for dividing markets, limiting production, and agreements on prices have been dissolved, so far as the record goes, the habit of collaboration persists.

To illustrate, the committee's report on ostensible competitive, i.e., sealed bids, discloses that out of a total of 73 transactions, identical bids cropped up in all except 5 cases.

In the 65 transactions where identical sealed bids were turned in, in most cases most of the bidders tendered identical bids, including identical discounts and other terms of sales.

Close examination of the frequency of identical bids for particular companies discloses that certain firms made identical bids with one or more other bidders in a very high percentage of the time. For example, New Jersey Zinc, American Zinc, and Eagle-Pilcher, made 42, 38, and 34 identical bids, respectively, in as many bid attempts.

Also it is noteworthy that, with the curious exception of 21 identical bids on sodium fluoride, the larger the number of bidders, the greater the probability

of differentials in bids.

Usually, when identical bid prices, even under sealed-bid procedures, are questioned, the defense offered is that "under competitive conditions, with fully informed buyers, the price of a standardized commodity will be a uniform price, since no well-informed buyer would pay more than another." This might be a valid explanation in a truly open, competitive market, at a given moment of time, with a given state of demand and supply, and given identical knowledge of the market by all sellers and buyers.

Take the situation of the chemical industries where concentration of production remains in the hands of a relatively few large firms. It is, of course, conceivable that under these circumstances each of the few large sellers might regard the present prices (or book prices) as his "best guess" or "safest guess" of what rivals would bid on future calls for bids. This is at least theoretically possible, especially if each of the bidders is content with his share of the market

at last-bid prices. How can we tell, then, if identical bid prices are due to competition or to collusion (tacit or overt)? A complete answer requires an examination of the history of the industry, including types of products, number of sellers, past conspiratorial behavior, importance of patents, nature of demand, supply, costs,

and related factors.

An examination of the chemical industry on those counts discloses repeated efforts by leading companies to nullify competition through flagrant instances of monopoly pricing, collusion, and illegal use of patents. Given the persistent high degree of concentration, in chemicals and others with jointly acting firms, plus the increasing use of joint ventures (through which more subtle forms of cooperation are possible), is it reasonable to ask: How did past bid prices and book prices become identical in the first place? Were they driven to identity by the pressure of each firm attempting to gain a larger share of the market, to reach for new accounts, and greater profits?