

The Interdependence of Production Engineering and Merchandising¹

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FROM the experiences and observations many of you have had you probably think it would be more appropriate if my subject were "The Interdependence of the Production Engineer and the Sales Manager." The aims of the two often seem to be so divergent that it is difficult to appreciate that both are working for the same company. Nevertheless, it is clear that the success of either is dependent upon the success of the other.

The production department sets up as its ideal manufacturing methods completely simplified, from the purchasing and storing of raw materials, through production to the stocking of finished goods and shipping. They want a simplified line with few items, each manufactured on a mass production basis. To them the benefits of such a program seem so obvious as to leave no ground for argument. Look at Henry Ford.

On the other hand, the sales department says, "You must give the buyer what he wants. We have been in business a long time and are not yet at the position where, like Henry Ford, we can hold the whip hand over our distributors. We do not even have much business on our own brand and therefore must manufacture what may be ordered. Our competitor will give the customer just what he wants if we don't, so the only effect of our stubbornness would be the loss of business."

The manufacturing department replies that the sales department is letting everybody run their business but themselves, and urges that they decide what can be made most effectively, stick to it and put it up to the sales department to go sell it. They probably add that a salesman always wants to have the best goods, the lowest price, quickest delivery and longest terms.

To this the sales department replies that they know the market—they can sense it somewhat in advance with its whims and changes. "Therefore we must

make what we can sell and make it at a price to meet competition." They probably add "Why can't you manufacture as cheaply as our competitor and make anything he can? Why can't we have as satisfactory a stock on hand to meet demands? You don't give us support to enable us to get business."

And so the matter goes up to the general manager. Since he sees the need of having sales to keep money flowing into the till, he probably concludes that the manufacturing department needs strengthening. So he calls in an engineering concern to effect the economies in manufacturing that will enable the sales department to get business.

The outside engineer soon finds the cause of the trouble: a multitude of items, brands without end or meaning probably chiefly owned by distributors, equipment constantly shifted and replaced to meet changes in the style of the product or fluctuating demands, orders on the feast and famine basis. Along with this naturally have come all the attendant inefficiencies in labor, dead or slow moving stocks, poorly adapted machinery, and the rest of the category of waste so common in this type of manufacture.

The engineer can tell quickly what ought to be done. After a survey of plant possibilities, he submits his plan for simplification. He wants a limited number of products, one brand, few items, and mass production on each. He shows how a comparatively small investment in machinery changes will greatly increase production. He demonstrates that a 10 per cent increase in output on a machine running 75 per cent capacity will double the net profit from the machine. By his studies of particular processes he shows how the efficiency of the labor can be improved.

But every one of these recommendations involves and depends upon the marketing problem. Can orders be concentrated on the limited number of items of this simplified line? Can business be increased to take up the additional output? Unless it can be, machinery improvements are only added overhead. Efficiency of

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labor and profitable returns can never be gotten from equipment idle for orders. Can the demand be brought to the manufacturer's own brand? Unless it can, the production of whatever the customer orders whenever he orders it must go on despite its waste.

In brief, in very many cases unless the marketing problem can be solved there is no opportunity to realize on the work of the engineer. That these problems often never are solved explains why so many excellent engineering surveys and efficiency plans lie unused in the company files. To one on the outside, it seems perfectly clear that the engineer, whether he will or no, must become interested in the marketing problems of his client. The first question is, Is the sales manager right in his statement that you must give the buyer what he wants? Since you are all buyers, you can answer it for yourselves. Do you want the clerk to give you what you want or something else? Obviously the sales manager is correct, and any attempt to sell what is not wanted will meet with such resistance as to be unsuccessful.

However, the truth of the sales managers' creed of filling the wants of the buyer in reality offers us our opportunity. What does the buyer want, and how does he come to want it? Again shifting our position on the stage so we think of ourselves not as engineer's but as buyers, we can answer that question. We want what we know about. In cases where we are not informed concerning the goods we have to buy we are anxious to have them explained to us so that we can buy intelligently. In other words, the manufacturer who has goods that are worthy can create a desire and demand for those goods by telling the consumers about them. When this is done he has created a market that is peculiarly his and is subject to his control. His goods are then bought on knowledge and not chance. For example, in the large field of silk goods manufacture, subject to all the whims of style, William Skinner and Sons have isolated a part of the market as theirs and have held it over a long period of years on a staple article called Skinner's Safin.

How, then, can a manufacturer go about it to secure the control over such a market? If the number of consumers of his goods is small, obviously he can put on a competent sales force to tell the story of his goods. The manufacturer, however, must not confuse consumer with buyer and think that just because he has a small number of customers on his books they constitute his market. His market is the actual consumers of his product.

If, however, the number of consumers is large, as in the case of any article of general consumption, the manufacturer will see at once that the cost of attempting to tell his message by word of mouth to each of the people to whom his sales story should go would be prohibitive. Having reached this conclusion, the manufacturer often does a very strange thing. Since he decides that he cannot afford to hire men to go tell the people directly, he hits upon the plan that he will tell his salesmen, have his salesmen tell the jobber, who shall tell his salesmen, who shall tell the retailer, who shall tell his clerks, they in turn informing the consumer about the merits of the manufacturer's goods. It would be a very analogous case if a shoe manufacturer found that he was not equipped with machinery to put heels on the shoes, did not want to equip with such machinery and felt that it would be too expensive to hire the labor to tack the heels on. This shoe manufacturer might conceive the idea of having his distributors put these heels on for him. Of course, the plan would be a failure for two reasons. First, that it would cost just as much or more for the retailer to hire these heels put on by hand as it would for the manufacturer, and the prohibitive cost would have to be passed on to the consumer just the same. Second, the job would not be so well done as though the manufacturer did it himself, since it is not primarily the work or the responsibility of the retailer. This is exactly the case where the manufacturer passes on to the distributor the duty of explaining his goods by word of mouth. Little or nothing is saved from the cost that must be met if the manufacturer tries to tell the story himself to each consumer, and the job will not be well done. Imagine leaving it to the clerk to put the proper sales promotion behind each of the hundreds or even thousands of articles handled by any one of the ordinary retail outlets. How often do we have a drug, a grocery, or a department store clerk attempt to explain to us goods concerning which we did not ask?

Obviously, then, the marketing solution lies in mass selling just as production calls for mass manufacturing. Fortunately the manufacturer can call to his aid in selling his goods the same skill the engineer gives him in production. The advertising agent of today—the name is really an anachronism and might better be marketing engineer—operates very like the engineering concern. He brings to the manufacturer the benefit of a broad experience in various lines of marketing, together with a technical knowledge of

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