

Production

At its inception in the winter of 1975, Our Daily Bread (ODB) was seen by its originators as the St. Paul Co-op bakery. True to the beliefs of the original co-ops, they totally rejected all manifestations of American mass culture, i.e. baked goods with any white flour or white sugar. The original hippies also rejected the knowledge and experience of the old bakers from whom they bought the bakery. During the hippie phase of the bakery retail sales plummeted to almost nothing; the bakery's only customers were the St. Paul co-ops.

At some point during late 1975 or early 1976, the progressive forces within the co-op movement became the dominant force at ODB and it was at this point that our collective learning process in production began. This process was to last for nearly ten years.

The most immediate requirement during the initial period was to learn how to be "regular" or traditional craft bakers. There were several reasons for this. First, the People's Co-op Stores in the Twin Cities desired regular bakery foods. Second, this was what the people in the neighborhood wanted. Third, although we were producing the typical whole grain breads, we really weren't that good at it. Frequently we would have entire batches of "brick" bread for reasons that we did not understand. Thus, learning craft skills was a political, economic, and technical step.

During this stage, two or three key people learned to be bakers.

In this endeavor we had the assistance and expertise of the old bakers who sold the bakery to the original collective. This was an important alliance during this stage. We began to respect their experience and knowledge and learned how to make fairly decent donuts, danish, cookies, breads, and cakes in the process.

As we developed these craft skills, initial steps in production organization were taken: development of recipe cards, basic shift schedules, pastry and bread sheets, etc. However, there was still little investment in constant capital to reduce the intensity of the work. Bread shifts easily ran 12-14 hours per day (per person!) of hard, hot work; night shifts usually ran 10-12 hours per shift. People rarely got breaks because we didn't know how to schedule for them on the shift!

In the summer of 1976 we made our first equipment purchase- a bread molder. This one purchase literally eliminated a whole person from the production shift. We moved from a turn-of-of-the-century shop to a 1930's-era shop in our level of production!

This was the first stage of NB's growth in production, the development of craft skills. We learned how to be bakers. In addition many of us learned a certain amount of work discipline and endurance during this period. However, things began to turn inot their opposite. Development of personalized craft skills made us dependent on one or two individuals to get production out the door. This inevitably led to mistakes. Cadre's craft skills

became a source of value. Individuals failed to recognize the objective limits of their physical endurance and knowledge. Instead of putting time into managing the business or summarizing their production experience, people would instead do large quantities of production work. This became a common cycle during our history: people felt too busy to summarize, yet the only way to break out of the need to work such long hours was to sit down and summarize, pose the problem, and develop some methods and steps to resolve the problem.

The next conscious stage was initiated in the summer of 1977. The goal was to "depersonalize production". This was a way to summarize our craft skills, systematize this knowledge, and thus take our understanding to a higher level of production skills. A key catalyst in this process was vocational training obtained by several cadre. Thus, depersonalizing production went hand in hand with our first real application of bakery science to the production process. We learned to temper doughs (regulate their temperature by an exact formula), schedule when doughs would be punched and taken to the bench, make templates for knowing when doughs were to be placed in the oven, and determine exact times for how long breads should be baked. Systems and procedures now began to replace the personalized knowledge of the previous period.

At the time the experienced bakers resisted these steps. We insisted that some of these things just couldn't be known precisely and could not be systematized. We thought that we

needed more skilled bakers, not production systems. In essence we were hanging on to the value invested in our own skills and knowledge of the production process. Many of these systems were developed by accumulating large quantities of actual production data. By summarizing this data we were able to come up with very good ideas of what the objective requirements of the process were. It was during this period that many of us came to learn a very important lesson: systems are people's summarized experience, not some impersonal set of procedures.

Another lesson learned during this period (and struggled through again at other stages in NB's development) was this: to advance to a new stage in the production process always involved a concrete struggle between those people who had value tied to the old stage vs. those who did not. New people were in a better position to conceptualize what was rising. Often in moving from one stage of a process to another it was necessary to remove those people who insisted upon maintaining the old (both in management and production). As our knowledge developed, these problems could be anticipated and steps taken to minimize the antagonisms that developed when moving from one stage to another.

During this period we also moved to a new location. In the process we obtained some key pieces of equipment that significantly reduced the intensity of work (a rotary oven, an automatic rounder, a full rack proof box). We began to learn the importance of organization of workspace to decrease the intensity of labor and increase efficiency. As this period developed fewer

cadre were required to do actual production work. Instead, we took on more managerial functions, directing the production process without having to actually do all the work ourselves.

In summary, this stage can be characterized as: depersonalization of production; a shift from craft skills to production skills; cadre moving from production to managerial functions; and a continual application of the cycle of knowledge to move the production process forward.

The next stage of production, which began around 1980-81, can be classified as the "technicalization of production". The necessity/ability to technicalize production arose both from external factors (large institutional accounts) and internal factors (the computer). The key in this stage was that we began to invest capital into the production process. The most important capital investment of this stage was the computer. As it was applied to production, it totally eliminated a huge quantity of administrative work (taking orders, transforming the orders into the amounts of products needed, calculating sizes of formulas to mix- these tasks required 3-4 hours of highly skilled labor each day!). As it was further integrated into production, the computer began to direct the process step-by-step. The precursor to computerization was systematization of production. For example, "exceptions" to our normal production procedures had to be either systematized or eliminated. We had to look at exactly what we did and question if it was really necessary: did one minute

difference in mixing time make a real difference? did allowing all of the doughs to ferment the same amount of time really effect the final quality?

In conjunction with the computer, significant investments were made in production equipment. A hopper system was built to eliminate heavy lifting of flour sacks during production. A digital scale was purchased to simplify the scaling process. A conveyor was purchased to eliminate some aspects of pan handling. An automatic bun machine and individual slice-packager were purchased to allow for expanded product lines. At the close of this period NB was one of the most computerized bakeries in the the Twin Cities (however, most of our production equipment was still much less advanced than most bakeries).

In addition to capital investment, and in conjunction with computerization, job skills and functions became more clearly defined. Systematic training plans were developed for each work station. We no longer used any trained bakers in production at all. Even production management could be performed by people who were trained entirely on our internal production systems.

In summary, this stage can be characterized as: "technicalization of production"; investment of capital into the production process; and the application of the computer to the production process (which was the key condition of "technicalization").

In its final stages, 1981-85, the focus in production was to

maximize productivity and to increase production standards. Basically, we had sound production systems in place. What we needed now were improvements and refinements to our functioning systems. At this stage we were dominantly an institutional bakery, providing products for hospitals, nursing homes, schools, etc. The service and quality standards for such accounts were extremely high. Procedures for handling doughs were streamlined to increase throughput, quantifiable quality control standards were established, and quality control training was initiated. Many of these refinements and improvements were made by production workers; all of them were made by people who had no formal bakery training. By this stage we had developed a production process that could be managed by a single trained cadre as production manager, using the systems that had been established over the previous five years of struggle.

In sum, through correct leadership, by travelling through many cycles of knowledge, we had developed a rational, efficient bread production plant relative to our level of automation. In the later stages we were also able to provide some real skill development for workers.

A final note: although most cadre had practice in many different areas of NB, practice in production had a special value. Production practice allowed us to see the effects of our outlook, very concretely and usually very quickly. Socializing during production almost always lead to mistakes (an ingredient left

out, a product overproofed or overbaked) or to a longer production shift. Not communicating with other workers also had negative effects- a change made but not passed on often lead to problems later in production; not paying attention to how other stations were doing would cause jam-ups in production. Production practice allowed us to struggle on a day-to-day, hour-to-hour basis with our outlooks.