Looks at food needs in the United States for 2000 A.D. and suggests changes in the Extension Service to meet these needs.

This paper concentrates on adult education work with the food industry in 2000 A.D. Society has for some time endorsed the concept of continuing education as being worthy of the expenditure of considerable public monies. This paper will present one man's view of how a portion of these public educational monies should be spent to serve one of the many future needs of our society — food for our people in 2000 A.D.

Many questions spring forth immediately. Who will be Extension's clientele? What role will it play in 2000 A.D.? What will be Extension's goals? What methods will be used? How will we evaluate Extension's work? Even more important, will there be an Extension Service in 2000 A.D.? There are but a few of the questions that can be asked but they bring into focus two major points.

First, with the blur of technological change and hopefully the rapid social change to accompany it, the major thrust of adult education work with the food industry of 2000 A.D. must be one of education for change. This means not merely a reactive position of adapting to change as it comes at an ever faster rate; but also it means developing a futuristic outlook which will enable the anticipation of change. Gone will be the protective, "foot dragging", "tell them what they want to hear" routine. If change is to be the mode of the future society, then even more change must be the mode of "Extension — 2000 A.D."

Secondly, those operating in adult education capacities with the food industry of 2000 A.D. will have to work with clear statements of goals and finely honed evaluative tools. In addition, methods will be quite different — more on that later. Extension will have to drop the "something for everyone" approach and concentrate on certain areas, with definite priorities. Also with competition for public monies increasing, evaluative tools must be sharpened and used objectively so as to keep relevant programs going and replace out dated ones quickly with useful programs. The snail-like pace of current adjustment in Extension programs must be accelerated to meet the "beyond the space age needs" of the food industry 2000 A.D. Other aspects of the two major thrusts of change and sharpening of tools will become evident as the paper unfolds.

One might pause now and say, "There is nothing new in these two major thrusts!!!" The author would be the first to agree that this statement is true. The point is that Extension has not done the job! With all due respect, Extension's perspective is inward and backward. The bureaucracy has calcified to the point where major personnel interests are tenure and retirement, and organizational interests revolve around perpetuation of the "status quo". Lack of effective direction at all levels has made forward thinking industry work more and more difficult with passing years. Extension is rapidly becoming isolated from the industry and consumers that it should be serving. A dramatic reversal in posture is needed to allow this organization to effectively serve the society of 2000 A.D.

Enough from the "soap box". In order to present the ideas concerning "Extension — 2000 A.D.", the author will discuss the following areas:

1. Food consumption and life style changes — 2000 A.D.
2. The food industry — 2000 A.D.
3. Extension organization — 2000 A.D.
4. The extension worker — 2000 A.D.
5. How to bring about needed changes.

A paragraph on the perspective implicit in this ordering of events is pertinent. First, the starting point for discussion will be the anticipated food needs of consumers in 2000 A.D. This is a dramatic shift from present farm oriented policy with a rather "left handed" effort toward distribution problems. Second, a further difference should be emphasized in that the author will speak several times of "nutrient delivery systems". This concept looks at nutrient needs of consumers, regardless of form or source — quite different from today's commodity oriented programs. Third, the focus of this paper will be on institutional structures designed to serve the consumer of 2000 A.D.'s food needs.

The assumption is that the rate of technological change will far outstrip that of institutional change thus creating serious impediments to effective utilization of that technology in better meeting consumer food needs. The effort then will be on ways to remove these impediments to institutional change.

The institutional structure is of such importance that it warrants separate consideration. The institutions that serve today's food industry-business, education and governmental — were designed at the turn of the century. The basic farming composition of the population then and the urban composition of the population today has been described many times and need not be repeated. The pertinent issue then is that these institutions were designed for one purpose then and are being asked to serve quite different purposes today. Even worse, no one knows what demands will be made of these institutions, or their replacements by 2000 A.D. The issue is critical for Extension. The basic structure has been altered little since its beginning and, in terms of the food industry, is almost to the point of completely losing its effectiveness.

Food Consumption and Life Style Changes — 2000 A.D.

The basic posture here is that consumers will think of food consumption mostly in terms of complete meals as opposed to the individual commodities of today. The details of this argument have been previously documented and will not be repeated. One point relative to the "nutrient delivery system" concept needs to be made. The complete meals consumed in 2000 A.D. will most probably be made up of food items in essentially the same form as today, e.g., meats, vegetables, fruits, dairy products, etc. Man will be more conscious of the nutrient content of each item he consumes. Also, it is possible that a fairly high proportion of these meals may be of "synthetic" origin or at least synthetically augmented. However, man will most probably not be ready in the short span of 28 years to accept a completely synthetic diet. As for the people who will consume these meals, they will be present in ever greater numbers, richer, more urban, more involved away from the home in work or play, with less desire to have direct involvement in meal preparation. Emphasis on the entire feeding process will be on speed and convenience.

Man's fast moving, change oriented life style will allow him greater flexibility with greater leisure to explore and develop his mental capabilities. Desire for more information on and control of his nutritional intake will increase, thus presenting a golden opportunity for a major role that "Extension — 2000 A.D." might play.

The Food Industry — 2000 A.D.

Based on the complete meal concept which has been previously discussed and documented, the food industry of 2000 A.D. will be much more concentrated than it is today — vertically, horizontally and conglomerately. This situation will raise many issues, some of which will be discussed in the following paragraphs.

Not the least of these issues will be the basic conflict between this attitude of concentration and the existing anti-trust statutes. If "bigness is badness" as existing statutes imply, then the statutes must be either not enforced or they must be rewritten to better fit the needs of society and the food industry. These laws, as with most food industry institutions, were developed during an entirely different era when different needs were perceived. The par-
allels may begin to get monotonous, but they are undeniable.

This trend toward increased integration does not mean that the logical end point of one organization controlling the entire food industry will be reached. Diseconomies of size, physical and especially managerial, will prevent this if the Justice Department does not. There will still be a place for a limited number of small to medium sized entrepreneurs to exercise initiative and imagination to provide a service for consumers — exacting a profit for so doing. One must emphasize that the opportunities will be fewer and farther between and only those with a maximum of flexibility, plus a little luck, will succeed.

In addition, a comment should be made about portion control and quality standards. These two items will be of increasing importance in the future. We have had quality standards for a long time. However, the point here is that the specifications will become imposed from the consumers' end of the distribution chain and not from the farm end. Also, portion control is a newer concept and the emphasis on this item will also be from the consumers' point of view. Thus, the farmer will have to think in terms of consumer units in the future.

Two more points need to be made relative to geography and loyalty. First on geography, Extension is used to dealing with the individual farmer or small business man who could make decisions regarding a practice or recommendation on the spot. With concentration, the points of decision making have moved to the commercial centers of the state, half way around the country, or half way around the world for that matter. It can require a major search operation just to find the right person to contact in the large conglomerate operations. Who contacts the company then. Is it the county, state, multi-state, national or international Extension representatives? The author is not sure. However, he is sure of one thing. The present system cannot do the job and a dramatic change in perspective is necessary to handle this problem. But, let's allow the story to unfold for a while.

Extension has always relied heavily upon loyalty in its educational work. Be it county, state, commodity group, functional group, religious, governmental, or whatever; group loyalty has been used to assist with the educational effort. The author is in no way trying to knock this. Loyalty can be extremely helpful in carrying on an educational program. The point is it is difficult, if not impossible, to use loyalty on a decision maker who may be 3000 miles away with little or no training or interest in agriculture. Again, change rears its ugly head to modify old loyalties and to require the formation of new ones. This point also applies to the relationship between the individual Extension worker and the land grant institution. However, this will be discussed in a later section of the paper.

One final issue is relevant. Man, by his nature, tends to be reactive to change and not anticipatory. The agricultural community, even taken in its broadest sense, has been almost exclusively reactive to change and not anticipatory. A problem arises when the rate of change becomes so fast that there is not time to react sufficiently before another change is upon us. Given the increasing speed of technological change and the relatively fixed nature of investment in agriculture, that time is not far hence. Reactive man must shift gears to become anticipatory man. Most individuals cannot make the shift and those who can will do so only with a great expenditure of effort. The parallel with Extension hopefully is obvious.

Extension Organization — 2000 A.D.

In order to set the "Extension Organization — 2000 A.D." into proper perspective, one must back off and look at the situation from the point of view of the future of higher education in general. The author realizes that this is an entire subject in itself. However, a few thoughts in the area will do the job here.

Higher education has progressed from the "one-shot" college routine to college plus continuing education (sporadic-retraining at various levels and locations). The author firmly believes that the future will bring a concept of continuous education where the society can be in almost constant contact with its institutions of higher learning (I hesitate to use the words). In fact,
under this plan, the "Ivy Covered Walls" of academia would be broken down and the so-called "open university" or "university without walls" will be the vogue of the day. This means that one would be speaking in the broadest possible relationship between the society and higher education; working in a loosely structural manner; providing "formal" education as required, and providing "continuous informal education" to the community at large as needs dictate.

It is within this rather loose structure that the "Food Section" (one of many sections) of the continuous education division of the public supported institution of higher learning would be housed. The guiding concept would be the "nutrient delivery system" with no differentiation between land and sea as a source for nutrients.

Much more will be said about the personnel in the organization, but one point is pertinent here. The specialist may be asked to serve in any one section of the division at a given time or to spend part of his time in several sections. The point being the individual will be hired for his or her command of a specialty to be applied to problem solving as needed on a temporary basis.

A number of comments are necessary here before further exploring the structure of "Extension — 2000 A.D.". First, Extension's basic orientation has been toward technological problems in agriculture. In order to meet the needs of 2000 A.D. a definite re-orientation toward "people problems" in the food industry is a must. Certainly, there will be a need for some technological expertise. However, in order to solve the institutional problems which could forestall technological progress, the vast majority of emphasis must be on people problems. This has definite staffing implications. In Extension 2000 A.D., training in the social sciences, arts and humanities will be essential.

Secondly, in order to act in an anticipatory fashion, Extension — 2000 A.D. must work out on the fringe of change. This requires a futures orientation for both administration and specialist, as well as the courage of conviction to point the way under pressures that resist change. Both conditions have been notable in their absence in Extension during the last couple of decades.

Third, Extension should be run like a business. The product — public service, education for change. The assets of the business are its trained professionals, on the fringe of change with clearly defined objectives, the most modern methods, and the sharpest evaluation tools available, and the courage to carry through the job under adverse conditions. The liabilities would be the people and policies that resist change, while the net worth could be the loyalty of the institution to the food needs of the public at large and not of invested interests. The profit centers could be the major thrust areas of priority work being performed. Incremental profits could be benefits gained by society as a result of Extension — 2000 A.D. programs.

Fourth, all this can be accomplished with a minimum of administration. By administration, the author means professionally trained administrators and not made over educators. Educators have made notoriously poor administrators in the past, a la witness, the bureaucratic mess in the land grant institutions of today. The author fully supports R. Townsend's concept of having a Vice President in charge of "antibureaucratization" with his "characteristic cry" at the slightest sign of institutionalization. Application of the principles discussed previously will aid greatly in fighting the dreaded bureaucracy.

Extension — 2000 A.D. units working with the food industry can be thought of as "centers of talent for problem solving" for the future. Those centers will probably, although not necessarily, have some relationship with the land grant institution and the USDA; however, they may also have relationships with community colleges, private institutions and all manner of other organizations of an educational nature. There will be a few in number — larger in scope and geography. Such centers could be organized on a world-wide, multi-national, national, regional, state or local basis depending on the need. The author is not suggesting additional layers to make the bureaucracy even more unwieldy. The suggestion is that certain of these structural elements may be pre-
sent at any or all levels based on need for a limited time. For example, there might only be one public supported institution controlling overall work with the food industry in the Northeast. However, on certain consumer related subjects, there may be local elements working in all the major cities from Boston to Washington, D.C. The main point here is to escape from the provincialism of the county and state. A bold adventure such as this will require dramatic revisions in funding procedures and organizational arrangements.

Using the concept of minimum administration, professionals — guided by a strong leadership with well thought out priorities — would be divided into generalists and specialists. The generalists would be those who kept abreast of the general movements of society, framed the problems and developed the team of specialists for problem solving. The specialists would provide technological expertise in the various disciplines necessary to solve problems. Effort would progress on an individual basis if the situation demanded it. Or, given an appropriate problem, a mobile, temporary team of specialists would be formed to solve the problem and then be disbanded to go on with other work. Evaluation of individual effort would be made on the basis of contribution to problem solutions, recognition and compensation would flow accordingly.

The Extension Worker — 2000 A.D.

In order to be able to assist in bringing about change, the professional educator of 2000 A.D. must be completely open to change as an individual. The teacher must be continuously challenging goals, methods, and evaluative tools as well as subject matter and industry development. It's a lonely place out on the fringe of change, attempting to anticipate future developments and their impact on man. However, if the Extension worker is to effectively prepare his or her clientele for change; then he or she must have gone through the change, at least mentally, and be ready to help others through the experience.

If projections regarding the "open university" concept are true; then, hopefully, many of the constraints on individual behavior, discipline, department, college and division will be a thing of the past in 2000 A.D. Thus, for the individual, problems of tenure and rank will be relegated to a minor role. Emphasis in the entire organization will be on flexibility with problem orientation as the key element. The organization exists because it can serve current and future needs. Not because it existed in the past or because of bureaucratic inertia.

Given the author's assumption that institutional change will be the prime area of need for Extension 2000 A.D., then the technologically trained staff of today will not be properly trained to deal with 2000 A.D. problems. Regardless of attitude toward change or perspective on the future, if an individual does not possess the skills and knowledge necessary to solve a problem; then he can be of little or no assistance in problem solving. The parallel for the institution (Extension) is the same. More about how to get tooled up for the job in the next section.

Some comments are now appropriate regarding the professional status of the adult educator in Extension 2000 A.D. First, the individual will be just that — a professional adult educator possessing a package of training, experience, and talent — a la Toffler. This individual will be a complete entity with loyalty only unto himself. He or she will be mobile and flexible and will hire out to the university or educational group for a given period on a given job. But this will be done only as long as the job interests the individual. When interest goes, so does the individual. This puts an end to the "40-year man" in a hurry. The entire concept, as well as most of its parts, draws a sharp contrast with present Extension personnel.

Some comments on goals and evaluation will end this section of the paper. As the Extension 2000 A.D. worker operates in a world of clearly defined parameters with thoughtfully derived priorities, the linking of institutional goals and individual goals becomes easier and thus, more readily attainable. There is also a benefit here for society as well. With the greater emphasis on proper goal selection and refinement, by both institution and individual, society will gain by having appropriate educational ef-
forts anticipating and hopefully solving problems of today and especially of tomorrow.

As the goals become more clearly defined, evaluation may still be difficult, but it will be easier in the sense that most, if not all, of the extraneous clutter will be removed from the situation. Even though the complexity of the situation will not be reduced and speed of change will increase, the decision parameter on program value will be narrowed sufficiently as to allow increasingly more effective decision making as to program impact.

Individually as well as collectively it is imperative that evaluation be established on a regular basis; and that criteria for evaluation be clearly defined and results be made public knowledge. Most important of all, administration must have the courage to make changes, and even anticipate changes, as the situation warrants.

How to Bring About Needed Changes?

Now it is time to stop with the criticism and to develop some sort of a constructive framework to get from here to there with Extension 2000 A.D. The author will be the first to admit that, due to enormity of the task, solutions will be neither simple nor easy to implement. Rather than attempt to forecast the precise path that such a change might take, which would be utter folly, the author will suggest a series of conditions which must be present in order for such a change to take place. These may provide some keys to a more evolutionary set of circumstances in the food industry world. However, should such attitudes or conditions not be forthcoming; events may, unfortunately, take on a more revolutionary character.

First, the food industry establishment, especially the land grant—USDA complex, must perceive that a dramatic change is necessary. For anyone who is acquainted with the system this first condition is enough to stop the entire process dead in its tracks. There may be those who privately are aware of the need to change. However, they are not willing to make any meaningful public utterance to this affect.

Second, "hand in glove" with awareness is willingness to make a change. The entire weight of the system is to support the status quo and to resist any attempt at meaningful change. A few "weirdos" may idle their time away by talking about change; but essentially no one is willing to do any thing about it.

Third, one thing about the author, he has perseverance. After the first two road blocks, most people would have thrown up their hands and given up. But he is just getting warmed up. "Fools rush in where angels fear to tread". The next condition necessary to bring about "Extension — 2000 A.D.", as described, is a change in perspective by colleges of agriculture and the USDA to the effect that they are servants of all the public, regarding food needs, and not just the servants of farmers and maybe agribusiness. A change in scope — all citizens, not farmers; a change in method — food needs not special interest needs; a change in function — education and not protection are all part and parcel of this change in perspective. What is really suggested is a change in the criteria for measuring the worth of an institution.

Fourth, another aspect of this point relates to the nutrient delivery system concept mentioned earlier. If this is to come into being, the commodity for the sake of commodity orientation of the entire food industry must change. This particular element may prove to be one of the tougher nuts to crack.

Fifth, another of these conditions revolves around the broadening of the scope of operation for Extension 2000 A.D. Thinking in national or international terms will "boggle the minds" of most administrators and a lot of specialists. However, for the concept as presented to work, the county and state are both obsolete as operational units. Also, for some cases even the nation is too small of a unit. This does not mean that work with individual farmers and/or firms will be discontinued. It does mean that the implication of individual decisions will be much more far reaching than ever considered in the past.

Sixth, the point has been made, but will be repeated for emphasis. Reactive
man, both administrator and specialist, must be replaced by anticipatory man for Extension 2000 A.D. to become an effective reality. Hand in hand with anticipation comes flexibility. Current rigidities in the system only serve to heighten the confrontations when they come.

Seventh, a plea must be made at this point for individuality. Larger complex bureaucratic organizations are the antithesis of creative individuality. Rapid change demands creativity to deal with it in an anticipatory manner. If one is not free to express his ideas as an individual, then there is no hope of meeting the challenge of change.

Eighth, a comment concerning the impetus for these needed changes is appropriate. Given the situation in Extension and the land grant — USDA complex, there is no way that adequate pressure could be generated to bring about changes of the magnitude and direction that has been discussed from within the organization. This leaves only outside pressure as a source of impetus for change. Such pressures could conceivably come from any source and trying to forecast this source would be futile. The critical point here is that, should such pressure be generated, the control of it would be outside the present establishment. One needs only to think back a couple of years when the proposal almost passed Congress to put all Extension money under rural development work controlled by the state governors. The worth of the existing organization would be measured by persons not sympathetic to the old way and using entirely different criteria. This, of course is what needs to be done to get major changes in a bureaucracy. However, it seems such a needless waste, both in money and personal anguish, that could be avoided if the leaders of the bureaucracy had spent more time worrying about keeping relevant and less time being concerned with the perpetuation of the species.

Now that this set of "impossible conditions" has been drawn up, where does one go from here? The author is not so naive as to believe that even if all of his "way out" schemes were accepted that they would be implemented overnight. This particular exercise was designed to stretch man's mind out to look at some needs for the future. Once the fabric of ideas for change has been developed, then man must go back to reality and move step by step toward these particular goals. When the necessary decisions are made to implement changes, it is hoped that a few steps can be skipped and the time between steps can be shortened, Extension 2000 A.D. will not be forth coming with a magnificent "leap forward". It will come, rather, from the hard relentless work by many dedicated to serving man's future food needs.

One personal note at the end, if you please. Did the author write this nasty paper because he hated Extension and everyone in it? Of course not! He wrote it because he believes in the concept of Extension and believes more firmly that dramatic changes are needed to meet future needs. What will the future bring? No one knows precisely. However, for Extension to survive and prosper in 2000 A.D., most heads must rise from the furrow and focus their eyes on future food needs of the nation and the world.

Good fortune to us all!!!!

2 Ibid., page 2.
3 Ibid., page 2.