

Human Service Systems: A Theoretical Perspective

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Abstract

In virtually every industrialized nation, the human services constitute the largest economic sector. Exploding costs of these services have driven many national budgets to unimaginable deficits. At the same time, there is an ever-increasing demand for health, education, corrections and other social services. Despite the proportions of this industry, there is little or no theoretical foundation for design and management of service delivery systems. Nor is there a sound conceptual basis on which public policy can be raised.

This paper grows out of the increasing similarity among human services in the industrialized countries. All such services are driven by population growth and the dynamics of problem "incidence" and "prevalence". They are designed to deal with particular "case mixes" of clients through "arrays of service". The terms in quotations in the previous sentences provide examples of the language the authors use to formulate a general theoretical model of human service systems.

The model design is implemented in ITHINK and is identified to human service systems in the United States. Model behavior is analyzed to illustrate general principles of delivery system design and management. Specific studies are also carried out to show how population dynamics and policy objectives interact over time. In this way, the model points to important insights which policy makers and human service administrators might consider in their search for solutions to social problems.

Although the model in this paper is based on the peculiarities of human services in the United States, the authors make the case for wider applicability. Using health care and education examples from other countries, the authors show how major propositions in the general theory are viable in widely differing contexts. The result is a powerful schema which can guide research, policy making and human service administration.

Model Structure:

The genesis of the model described in this paper is the theoretical structure proposed by Levin and Roberts nearly two decades ago. (1978) Their identification of a feedback relationship between service delivery and demand has been proven by numerous studies in the ensuing years. In fact, their ideas were at the center of the human service research efforts at the University of Minnesota and have been well supported by the results of these inquiries. As a direct result of this work, the authors have concluded that it is possible to formulate the outlines of a general theory of the human services.

The theory outlined in this paper is one which integrates the key concepts taken from the lexicon of a wide range of human services. These are terms which point to structures and functions which are remarkably similar across services and national boundaries. Although detailed explication of such a theory is beyond the scope of this short paper, we believe that we can sketch its outlines and some of the more significant dynamics of systems based on its propositions.

Ours is a theory of sectors which define how resources are brought to bear on human needs. As a result, it is primarily concerned with the characteristic behavior of each sector and the nature of the interactions among them. Taken as a whole, these sectors are linked by the set of relationships shown in Figure 1.

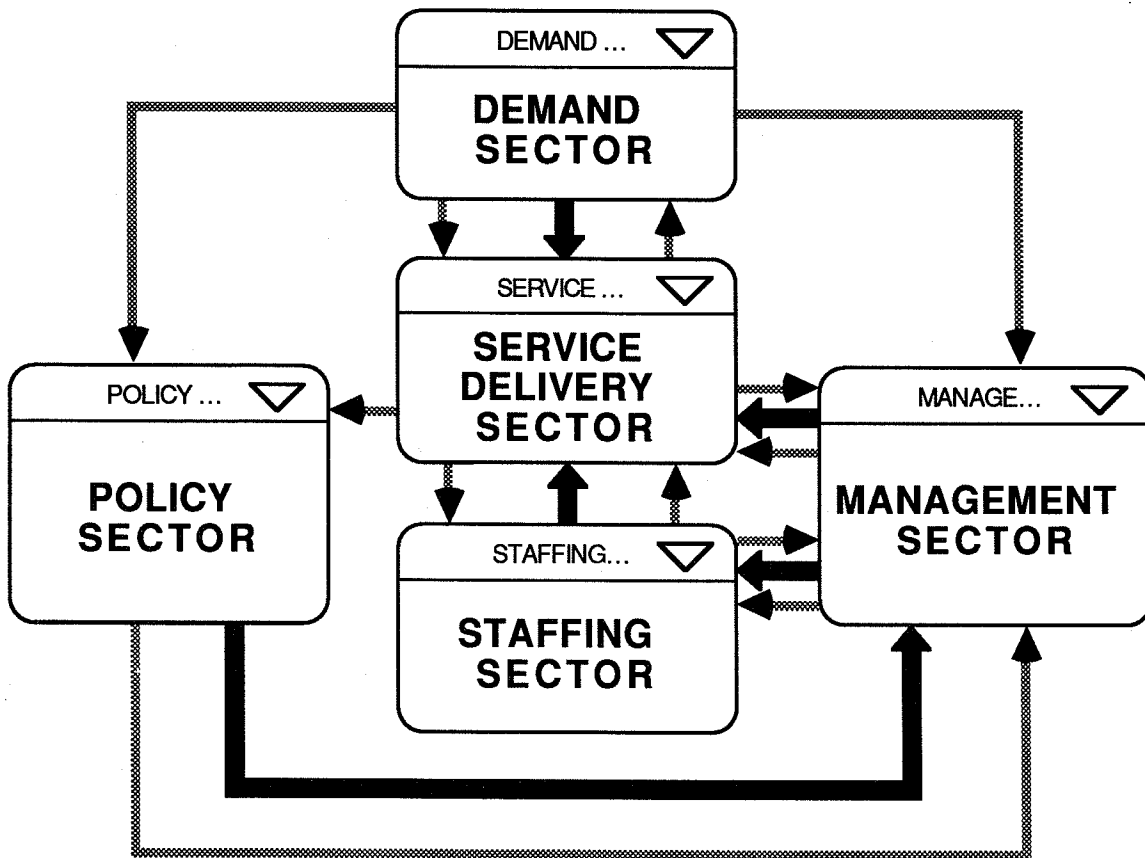


Figure 1: Sector Model of the Human Services

As the connections among sectors become firmly established, they constitute a body of theory which facilitates the design and management of the human services. This is especially critical given the accelerating scope of demands on public agencies - where the state has taken over many of the responsibilities formerly carried out by family and community. (Polsky, 1991) It is also essential for delivering services in remote or impoverished areas - to design new organizations and infrastructures that can replace decaying community agencies. (Adams, et.al., 1991)

The Demand Sector:

The Demand Sector includes the dynamics of *population* demography and uses prevailing *functional norms* to determine the *prevalence* of a particular human service condition. This defines those who are *needy* and likely to *demand* services.

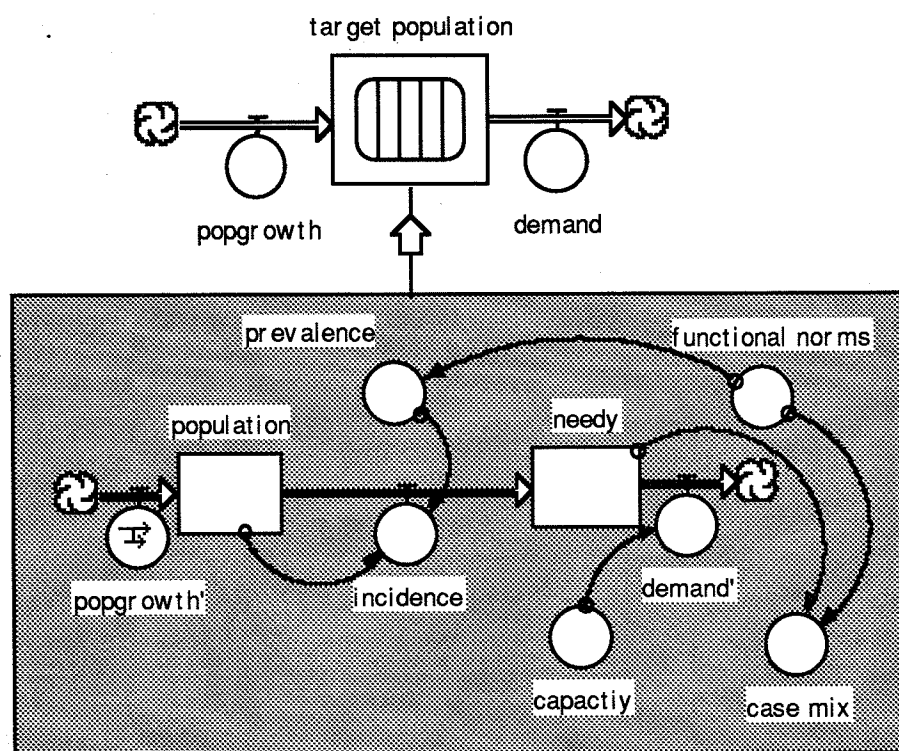


Figure 2: The Demand Sector Model

Not all the *needy* are directly translated into *demand*. Depending upon the *capacity* of the Service Delivery Sector, those in need may - or may not - be able to move into organizations where their concerns and conditions can be addressed. When they do so, they bring particular levels of complexity of problems measured by the distribution of needs across clients - the *case mix*. (Altman, 1990)

The Service Delivery Sector:

Following the Demand Sector, Service Delivery is based on the functionality of clients. Individual coming into an agency are functionally deficient (according to the prevailing *functional norms*). They are advanced to higher levels of functioning through care given by staff members. Functional gains are organized by service models which vary across (and within) professional specialties. For example, consider orthopedic surgery which is an outpatient service in the United States, but may involve hospital stays of several months in Japan.

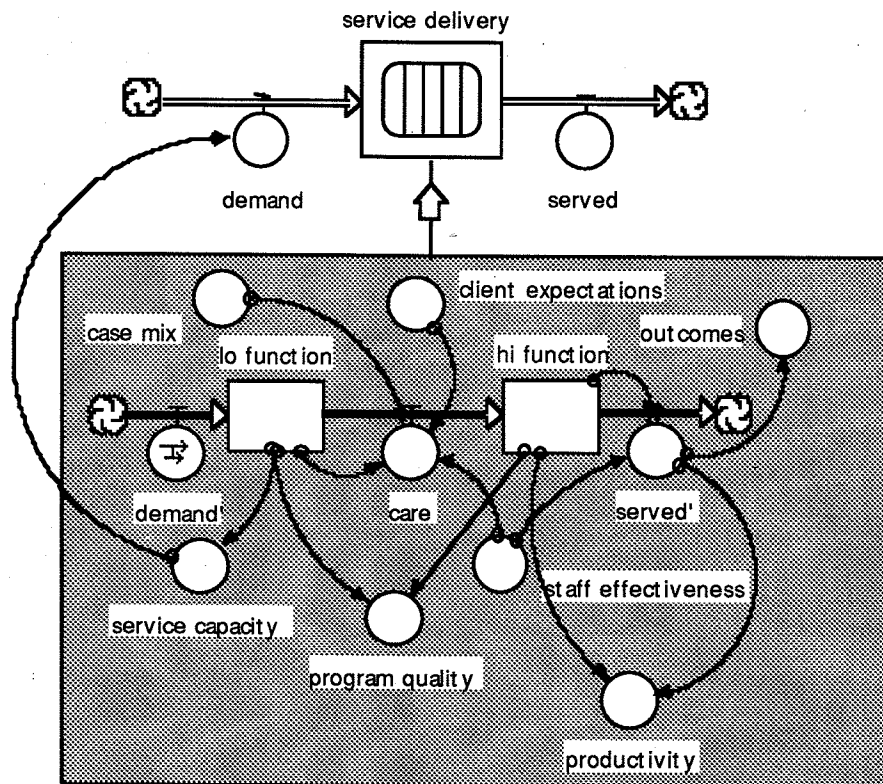


Figure 3: The Service Delivery Sector Model

The care-giving process is shaped by the *case mix* and *expectations* of clients on the one hand and *staff effectiveness* on the other. The balance of *hi* and *lo functioning* clients defines *program quality*. And, the extent to which clients are *served* determines both service *outcomes* as well as the *productivity* of the organizations. This Sector feeds back to the *Target Population* through the *service capacity* variable where space for new clients becomes available as *care* is given.

The Staffing Sector:

We would argue that the most unique feature of this model lies in the perspective it takes on staff resources. In most human service systems, staff resources are treated from a "unit of service" starting point where it is the hourly cost of a variety of staffing inputs that occupies the attention of managers and policy makers. For example, acute and long term care policies in most American states focus on the number of staff hours needed to care for clients in each of several need groups. This is the foundation for the well-known Diagnosis Related Groups (DRG) in acute care and

Resource Utilization Groups (RUG) in long term care. (Cretin and Worthman, 1986; Cooney, L. and Fries, B.,1985)

In this model, we take quite a different approach; one which emphasizes the extent to which care providers share an up-to-date paradigm. For it is the currency of the professional paradigm which makes it possible for the human service system to address the emerging needs of clients. If professionals operate from an older, failed paradigm, they will be unable to identify client needs and will not have the capacity to draw on an appropriate knowledge base. They will choose the "wrong" problems in order to utilize outdated but familiar practices. On the other hand, professionals who work from within a timely paradigm will be able to interact with clients to mutual benefit. A case in point is the growth of a holistic paradigm among nurses where we find that persons involved in direct care are increasingly turning to a more comprehensive view of the client - because they perceive that the older medical model is less effective. (Weick, 1983)

The result of this approach is a staffing model that is essentially one of paradigm change. In this model, we see that staff members move between "new" and "old" paradigm conditions.

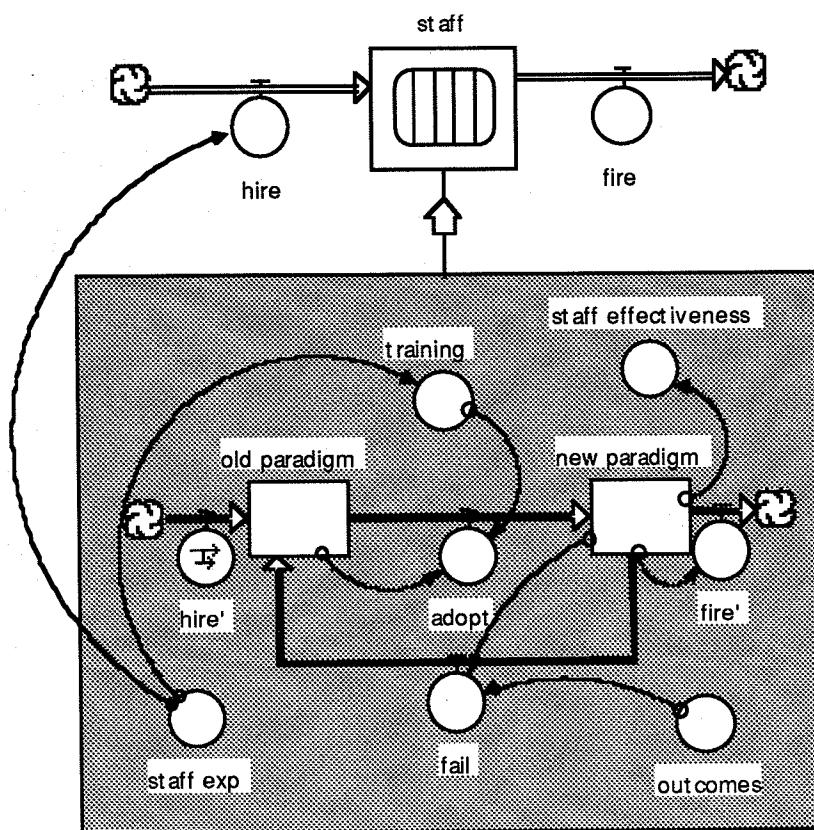


Figure 4: The Staffing Sector Model

In the absence of external effects, this model will produce the familiar "S" curve of innovation adoption. It conforms to general understandings of the process of introduction of new paradigms in professional fields. (Simsek and Ammentorp, 1993) However, it is also influenced the *outcomes* of care attained in the Service Delivery sector of our larger model. That is, to the extent that *outcomes* are positive, users of the new paradigm do not "fail" and they continue to increase in number so that they eventually dominate the profession.

There is another link which binds this sector to Service Delivery. This is the *effectiveness* resulting from the numbers of adherents to the new paradigm. Staff-client interactions are effective

when they are driven by the assumptions and practices of the new paradigm. And, over time, there is a feedback of effect through the *outcomes* of care which tends to ensure that the gains of paradigm change are maintained.

The Management Sector:

The resources needed to provide services are channeled through the Management Sector. This Sector contains the decision systems which determine how service goals are to be pursued. By paying attention to *staff effectiveness* and *productivity*, the Management Sector allocates resources so that service *outcomes* are attained effectively and efficiently.

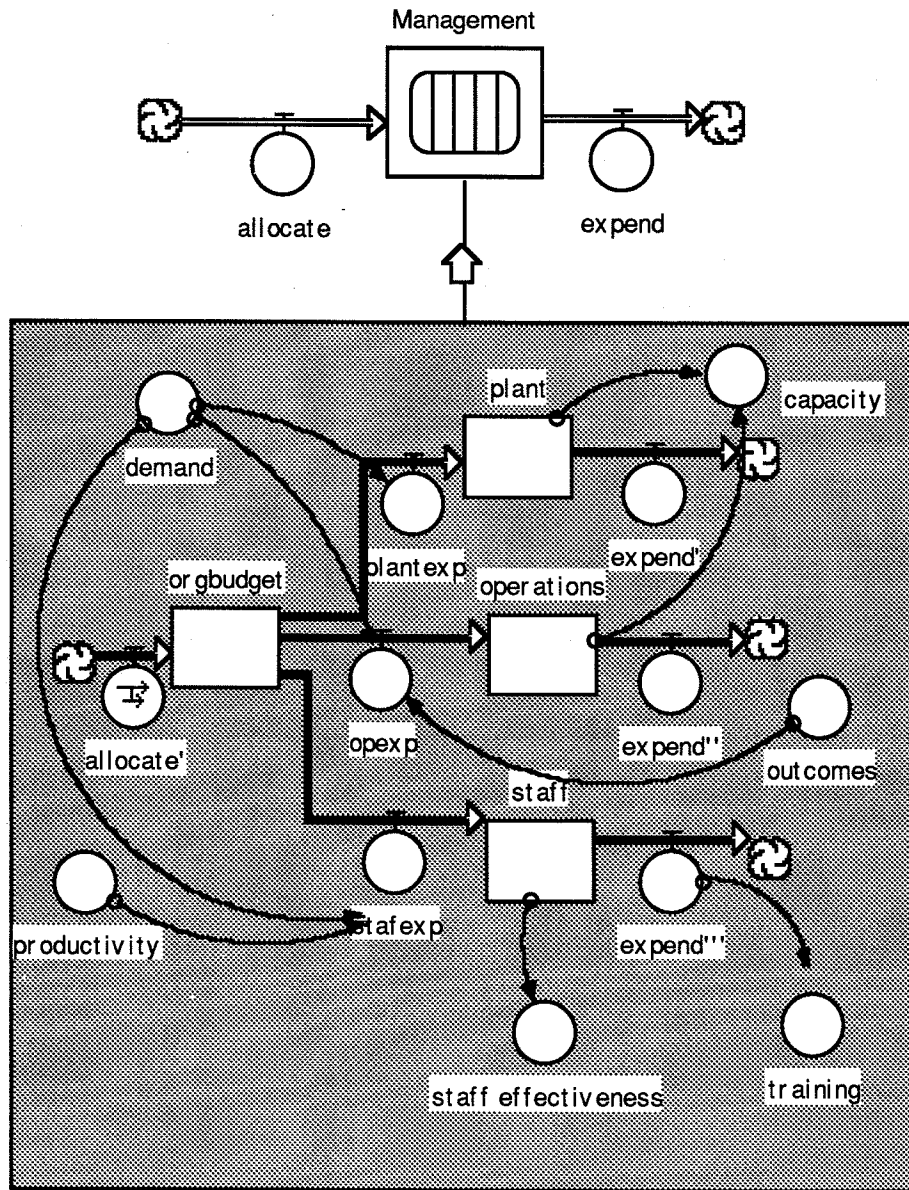


Figure 5: The Management Sector Model

In effect, these concerns stand between the Staff and Service Delivery Sectors to make the system more responsive to the *outcomes* of care.

The Policy Sector:

Policy decisions allocate resources to either *capital* or *operations* expenditures. These decisions are informed by the *outcomes* of care and the prevailing *functional norms* in the society. *Capital* expenditures build service delivery *capacity* - allowing those in need to enter service agencies. *Operations* expenditures take one of two forms; they can be directed at *training* or can be used to increase the *staffing level* of service organizations.

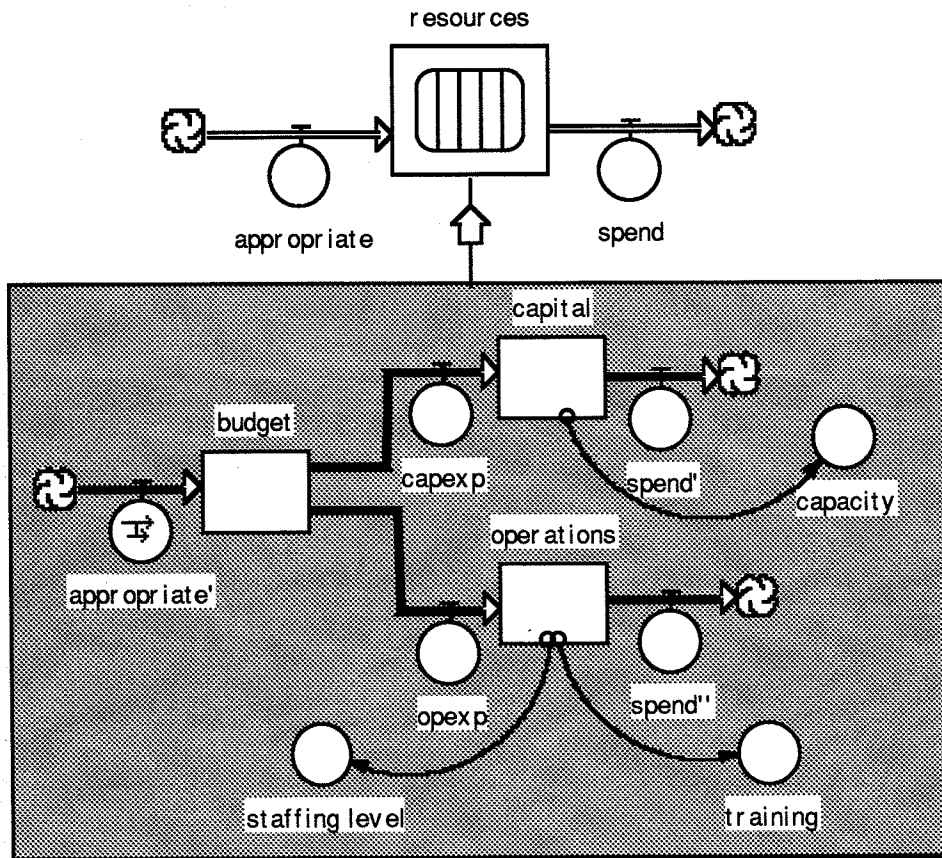


Figure 6: The Policy Sector Model

Like other sectors, there is much greater complexity here than we picture. In actuality, policy decisions generally distribute resources to either *capital* investment or to general support for services. Decisions concerning *staffing level* and *training* are, in effect, usually made at the agency level. This will, of course, make for greater responsiveness of *staff* resources to changes in client *case mix* and the over all level of service *demand*. (Ammentorp, et.al., 1992)

Discussion:

Characteristic Behaviors

When simulated, each of the five sector models discussed above exhibits certain characteristic 'behaviors'. These behaviors reflect the nature of the collective influence the model components have on the principle outcome(s) in each sector.

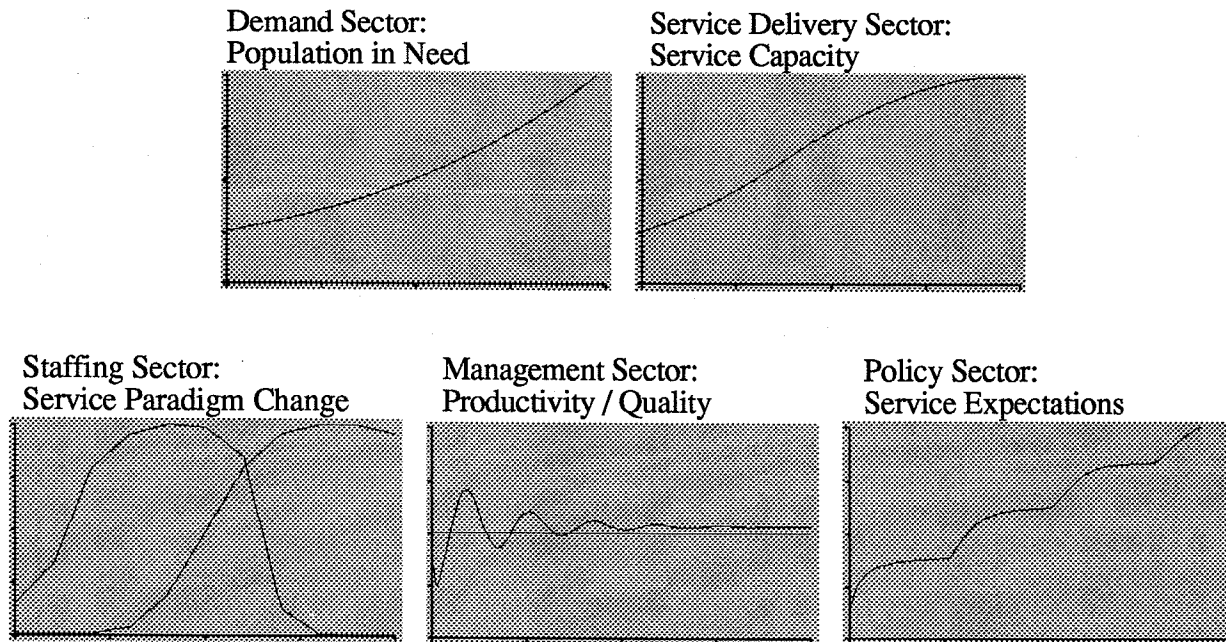


Figure 7: Characteristic Behavior Exhibited in each Sector Model

Critical Elements

The driving forces in this model are summarized in the variables that define the client and his/her wishes. Thus, *case mix* determines the level of personal need to be addressed in Service Delivery. At the same time, *client expectations* set a standard to which providers must respond if they are to continue to receive the support of clients for their work and the endorsement needed in the Policy system. Paradoxically, *expectations* are a key variable in a feedback loop that links the *outcomes* of service to client demand. As Levin and Roberts have pointed out, the more effective a human service, the higher the level of *client expectations*. (1974) The resulting management challenge is to foster positive *expectations* without permitting explosive growth in the scope of the service.

To do this, managers and policy makers must pay close attention to the *paradigms* held by care providers. By ensuring that staff members are practicing within the boundaries of an up-to-date paradigm, managers can continue to improve *staff effectiveness* without materially increasing the costs of service. What happens is that the relationship between the client and the provider causes the *staff effectiveness - outcomes* feedback loop to "turn" in a way that maximizes both client satisfaction and provider productivity. Thus, the rising expectations of clients can be met within the context of limited resources.

At the Policy level, decisions are driven by the relationship between the *outcomes* of care and the *functional norms* of the society. Discrepancies between *norms* and *outcomes* result in changes in *appropriations* for human service *budgets*.

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