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Towards a Unified Perspective on Human Service Delivery Systems: Application of the Teaching-Family Model

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"Strange how much you've got to know,
Before you know how little you know."

Anonymous

"What isn't worth doing, isn't worth doing well;
what needs doing is worth doing, even though not very well."

Abraham Maslow (1966, p. 14)

The field of behavioral science has been marked by the development of a plethora of empirically derived client-specific technologies for treating a wide range of human problems. In contrast, there has been a relative paucity of conceptual models regarding the application of these techniques to the more complex arena of human services. Thus, behavioral approaches, in an attempt to distance themselves from more traditional models, have avoided developing more complete and yet functional and empirical models to help us understand human service systems. This could represent a case of "throwing the baby out with the bath water." The perseveration by behaviorists in applying a succession of univariate techniques to solve complex human problems brings to mind the comment by Maslow (1966, pp. 16-17) that, "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail."

What is the net result of the current situation in which method precedes theory? Reviews of the clinical behavioral literature repeatedly demonstrate concerns about the lack of generalization across time, settings, or people. What Stokes and Baer noted in 1977 regarding the need to attend to issues of generalization still holds true today. While many imaginative technologies have been developed, only some of these have been shown to be effective and fewer still to be generalizable. Even rarer are those that have been applied on a large scale to address broad social problems. In addition, those in the academic community continue to be concerned about the impact of their research on clinical practice and conversely, clinicians still question the applicability of most psychological research to their practices (Conway, 1984).

This chapter is designed to point the way toward a "broader and deeper" perspective on the delivery of human services, using examples drawn from research and practice with behavior-disordered

adolescents and families. First, it will be proposed that a behavioral systems analysis offers us a starting point for examining the broad context of our meticulously crafted technologies. Next, examples that highlight the multilevel nature of this model will be presented. The model's implications for understanding clients, programs, and organizations, as well as the socio-political context of these subsystems, will be discussed.

We will then focus on some of the issues surrounding the development of the Teaching-Family Model as a means of treating adolescent behavior disorders. Finally, we will examine the implications of the Teaching-Family Model for understanding human service programs, organizations, and service delivery systems. Our ultimate aim is to suggest that only a broader and deeper systems perspective can help us narrow the gap between what we *de-sire* from our human services and what we actually can *deliver*.

SYSTEMS PERSPECTIVE

> *"The field worker and the laboratory [researcher]...tend to adopt different but compatible methods of achieving perspective. The methods are analogous to zooming in and zooming out with a lens. To the extent that they are reproduced objectively, wide-angle, telephoto, and microscopic views must be simultaneously valid, and zooming from different directions merely focuses attention on different facets of the same phenomenon."* W. Menzel, Primate Anthropologist (cited in Hunter, 1987, p. 58.)

The above quotation is reproduced here to underscore the importance of *perspective* when applying a behavioral technology that has been validated at the microscopic or single-client level to the macroscopic service-delivery level. As Bernstein (1982) has noted, the impact of a particular intervention can have a multilevel impact. Introducing changes in one system has implications for the subordinate or superordinate systems. For example, an adolescent boy may be given social skills training at school to help him deal with peer problems. However, should his reduction in school problems challenge his role as the family's "problem child," this could undermine the generalization of these skills to the home. In addition, social skills training implemented by one teacher is unlikely to have robust effects in other classrooms. These "other-level" variables ultimately decrease the likelihood that the program will succeed. In essence, the rationale for adopting a systems perspective is that competing variables in multilevel systems often account for program failure. Identification and manipulation of these implementation variables from a systems perspective is therefore a prerequisite for program success.

What are the implications of this broader systems perspective for the integration of traditional behavior analysis and systems analysis approaches? As discussed in detail by Krapfl and Gasparotto (1982), a systems model deals with the overall functioning of a collection of individuals, while the behavior analysis model focuses on the individuals within each component of the systems model. In contrast, a behavioral systems perspective holds that both levels of analysis are necessary and, in fact, complementary. A second notable feature of this model is that it is open to information on how to correct errors or improve efficiency. As such, it can operate on itself in a self-corrective manner through

feedback. Thus, the behavioral systems perspective examines both phenomena at the micro and macro levels and features a dynamic rather than a static systems model.

Applications

There are numerous examples in the psychological literature where treatment technologies have been applied without a systems perspective, with unfortunate results. One example is Follow Through, which was introduced as an extension of Head Start for primary-aged children. This program featured 22 different models of compensatory education tested in 158 school districts with 70,000 children throughout the United States. Data analysis showed that there was greater variation within models than between them. Thus, the 22 models did not show any systematic treatment effects. The most pervasive and consistent finding was that, "The effectiveness of each Follow Through model depended more on local circumstances than on the nature of the model" (Anderson, 1977, p. 13).

It is interesting to note that working in the "real world" at the service delivery level requires effective quality control systems for even the simplest, nonclinical tasks. As noted by Fixsen and Blase (1985):

> Ronald McDonald has a 700-page manual on how to set up a kitchen and put the pickles on the bun. It says nothing about what to do when the pickles run away or the buns refuse to be pickled that day. The problem just has not come up yet. (p. 2)

Figure 1 presents a graphic that illustrates four levels of analysis one can utilize to examine the delivery of human services. These include: client, program, organization, and societal. However, given the behavioral systems perspective discussed previously, any two-dimensional image would be incomplete. Thus, please imagine this graphic as four dimensional, in that each level is evolving over time and that there are reciprocal influences operating between and within each level.

It is our contention that the "broader and deeper" perspective suggested by the previous discussion is essential in the development of a more mature and realistic science of behavioral psychology. Hopefully, unlike the currently dominant paradigm, the next one will develop within the context of such a systems perspective. The present state of behavioral psychology may be reflected in the words of H.S. Jennings (cited in Muller, 1943, p. 72): "It is the Nemesis of the struggle for exactitude by the man of science, that it leads him to present a mutilated, merely fractional account of the world as a true and complete picture."

Levels of Analysis

This section provides examples from the literature that underscore the need for a multi-level systems perspective in treating behavioral disorders of adolescents and their families.

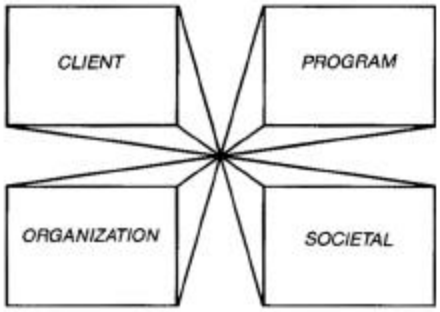

Figure 1. A multilevel systems perspective on service delivery.

The levels of analysis to be highlighted include client, program, organization, and societal.

Client. Psychologists (e.g., Cantrell & Cantrell, 1985) often have commented that treatment too often follows fads, emphasizing either child characteristics, techniques, materials used, or effects obtained without relating each of these to the others. Psychologists in general and behaviorists in particular seem to continually search for mythical "magic bullets." For example, witness the explosion in the use of social-cognitive skills training with behaviorally disordered children (see Bernstein, 1982, and Meyers & Craighead, 1984, for reviews). However, Bernfeld (1982) has suggested that such skills may be necessary but not sufficient for adequate social behavior. As he noted, clinical child researchers have begun to stress more complex production (e.g., motivation) and control (e.g., impulsivity) deficits as major contributors to adolescent behavior disorders.

A recent study by Bernfeld and Peters (1986) found that low motivation and impulsive functioning rather than inadequate social reasoning were implicated in the inadequate social behavior of impulsive boys. Findings like these do not suggest that we abandon the current emphasis in the field on training social-cognitive skills. However, they do imply that we should go beyond a purely skill-based model of maladaptive behavior for understanding and treating these problems.

Another example of the complexity at the client level of analysis can be found in McFall's (1982) review of the concept of social skills. He criticizes the fact that previous behavioral research on social skills has emphasized motor skills to the exclusion of physiological and cognitive factors. His model of social skills emphasizes all three systems and inter-relates them within a dynamic, human-information processing framework. For example, the organism is hypothesized to utilize 10 skills subsumed under the three stages of decoding, decision making, and encoding. What is unique about his model is that it provides a dynamic, multilevel systems perspective on a single, widely-studied construct.

A final example of the importance of a systems perspective at the client level of analysis is provided by the work of Cantrell and Cantrell (1985). They review the basic assumptions of the eco-behavioral model of deviant behavior. This model investigates the interaction between the characteristics and behaviors of clients and natural agents (e.g., parents, teachers) across settings (e.g., home, school). The aim of interventions using this model is to change the transactions between and within each of the various systems. Problems (and/or solutions) are rarely seen to exist solely in one member of an ecological unit,

but are interactional in nature.

The above examples underscore the need to consider the multiple systems operating both within an individual and between an individual and his or her environment when treating maladaptive behavior. As Skinner (1953) noted, "Although it is necessary that science confine itself to selected segments in a continuous series of events, it is to the whole series that interpretation must eventually apply" (p. 151).

Program. The practical value of our treatment interventions ultimately depends not only upon technological effectiveness, but also upon our ability to implement the technology and cope with the socio-politics of institutional change.

> In residential settings, where paraprofessionals play a primary role in the delivery of treatment, factors such as organizational structure, job description, training and supervision, attitude and morale, reward systems and so forth are major process or implementation variables which greatly influence the outcome of treatment. It is critical that psychologists be sensitive to these variables as they may not
> only predict the outcome of treatment, but may account for as much if not more of the clinical outcome, than the treatment technology itself. (Bernfeld and Jung 1985, p. 4)

Increasingly, a variety of researchers have taken the stand that the clinical skills of the therapist and the organizational skills of the manager need to be researched more fully. These individuals have bemoaned our passion for researching "hard" behavioral technology at the expense of the "soft" clinical data needed to decide how and when it is best to implement treatment. For example, Peters (1983) reviewed the use of behavioral contracting procedures by paraprofessionals with delinquent youths. He concluded that the single most important contributing factor to the success or failure of programs using this technique was the quality and quantity of supervision provided to those who implemented the technology. In addition, books by Christian, Hannah, and Glahn (1984) and Paine, Bellamy, and Wilcox (1984) look at implementation issues across a wide variety of clinical populations and applied settings.

As recently reviewed by Jung and Bernfeld (1987), the field of Organizational Behavioral Management (OBM) has emerged to provide psychologists and managers with a theoretical and procedural base for understanding and influencing process or implementation variables. Books by Frederiksen (1982) and by Christian and Hannah (1983) as well as the *Journal of Organizational Behavior Management* have documented the growth of research in the field. While OBM has provided a variety of organizational change strategies and an evaluative framework, we still have much to learn with regard to the side effects of OBM interventions.

Moreover, we need to assess the implicit and explicit social and political norms within organizations that could potentially hinder our change strategies. "Once again, technology alone cannot be a panacea–it's how we learn to implement it in the real world that counts!" (Bernfeld & Jung, 1985, p. 9). However, OBM does challenge us to broaden our scope from a client to an organizational level of analysis. A broader perspective offers us not only the hope of improving the effectiveness of our behavioral technologies, but also impacting the quality of services delivered within particular programs or across

entire agencies.

Organization. Hoge and Andrews (1986) propose a model of intervention in social service agencies that takes into account some of the critical social-cultural and political-economic variables that impact on human service organizations. They postulate that the ultimate outcomes of human service agencies are functions of the main effects and interactions among six sets of intervening factors including: setting, client, worker, program, and process factors, as well as intermediate outcomes (see Figure 2). While the authors acknowledge that there are serious methodological barriers to implementing this complex model, they report how some of these have been overcome. They contend that the existence of those barriers must not be used as a basis for rejecting the model. Hawkins, Fremouw, and Reitz (1982) propose a similar model that provides explicit guidance to the program evaluator or administrator in deciding what and how to evaluate. The existence of these two models underscores the importance of examining the organizational context of our client-specific behavioral interventions.

Societal. Kouzes and Mico (1979) postulate that there are three distinct domains that impact on human service organizations: the Policy Domain (the external political context), the Management Domain (the internal bureaucracy), and the Service Domain (those professionals in an organization who serve clients). The authors "maintain that each domain operates by different and contrasting principles, success measures, structural arrangements and work modes, and that the interaction between these creates natural conditions of disjunction and discordance" (p. 449). The remainder of the article offers suggestions on how to intervene at all levels or domains to foster organizational development.

Stolz (1981) reviewed the literature on knowledge diffusion and discussed a variety of case studies regarding the adoption of behavioral technology. For example, the classic study by Paul and Lentz (1977) was discussed, in which rigorous and elegant research demonstrated that a social learning program was superior to a milieu program in a state hospital. Yet a change of administration led to a sudden dismantling of the social learning program. In the end, "the soundness of Paul's design and the clarity of his data were not sufficient to ensure even the continuation of his program, much less convince the state policymakers to disseminate it to the other state hospitals" (Stolz, 1981, p. 493). However, Stolz identified a variety of manipulable variables that could increase the rate of adoption of behavioral technologies. One major conclusion was that the development of an effective model was not sufficient for utilization to occur.

Stolz (1981) also noted that the strongest single variable influencing the diffusion of behavioral innovations is personal interaction or the influence of the colleagues of the policymaker. However, it was noted that the literature identifies numerous weak variables and no general theory and instead is replete with lists of the lists. Stolz concluded that if we want policymakers to use our techniques, we must take up the challenge to develop a behavioral technology of knowledge utilization. She ended with the following question: "Do we care enough about the adoption of behavioral innovations to develop the behavioral technology necessary to shape those adoptions?" (p. 503).

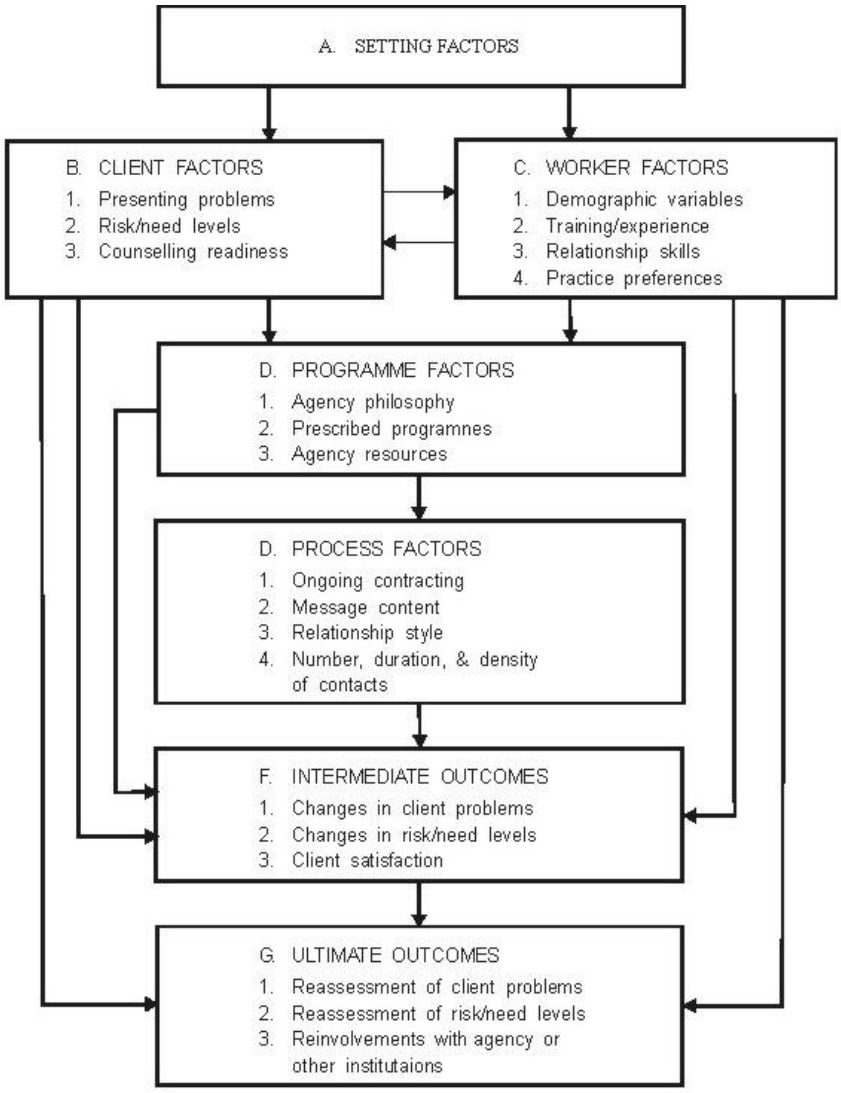

Figure 2. A model of the direct intervention process as it operates in human service agencies. From "A Model for Conceptualizing Interventions in Social Service Agencies" by D.R. Hoge and D.A. Andrews, 1986, *Canadian Psychology, 27,* 332-341. Copyright 1986 by the Canadian Psychological Association. Reprinted by permission.

Summary

> *"There are more things in Heaven and Earth, Horatio, Than are dreamt of in your philosophy."*
>
> **Hamlet-Act I, Scene 5**

The purpose of this portion of our chapter is to capture a more dynamic, multilevel, and unified perspective on human service delivery systems and to provide a context for what is to follow. It is our contention that the "broader and deeper" systems viewpoint provided here can lead to the emergence of effective large-scale approaches to difficult human problems. It is only through such a unified perspective that we can narrow the gap between what we desire from our human services and what we actually deliver.

TEACHING-FAMILY MODEL

To illustrate the behavioral systems perspective, we would like to share the steps we have taken over the past 23 years to create and disseminate a treatment program for adolescent behavior disorders. We will describe what we have learned as we have progressed from research on treatment procedures (the client level) and the development of the original Achievement Place group home (the program level), to the creation of the Teaching-Family Model (the organization level), and to the national dissemination of the program (the societal level). We will focus on three aspects of a human service system: Teaching-Family Homes for the treatment of troubled children, Regional Sites for developing and maintaining networks of these homes, and Site Development for creating and maintaining Sites. Together these form a Service Delivery System that provides group home treatment for children with behavior disorders (e.g., predelinquent, delinquent, emotionally-disturbed) while remaining sensitive to the broader social context. Today, there are 13 Certified Regional Sites and 250 Teaching-Family group homes that serve over 2,000 children a year in the United States and Canada.

By discussing the evolution and characteristics of the Teaching-Family Model, we hope to convey some of what we have learned about the value of a behavioral systems approach.

Client and Program Levels

Historically, the development of the Teaching-Family Model began 23 years ago when research on the first demonstration program began at Achievement Place for Boys in Lawrence, Kansas. Prototype development took place as Lonnie and Elaine Phillips, Mont Wolf, Dean Fixsen, Gary Timbers, Kathi Ramp, Curt Braukmann, and their colleagues researched and standardized program components. This procedural research resulted in such program components as the token economy system (Phillips, Phillips, Fixsen, & Wolf, 1971), self-government procedures (Fixsen, Phillips, & Wolf, 1973), and procedures for working with teachers and parents (Bailey, Wolf, & Phillips, 1970; Kifer, Lewis, Green, & Phillips, 1974).

Over the past 12 years, further development has taken place in the elaboration of teaching interactions, the integration of curriculum skills, and the development of support systems and a dissemination technology (Blase & Fixsen, 1987; Blase, Fixsen, & Phillips, 1984). Married couples called Teaching-Parents implement the Teaching-Family program in each group home. Teaching-Parents implement a sophisticated motivation system and engage in specific teaching of basic and advanced social skills, academic skills, independent-living skills, and community-living skills. They develop positive relationships with the youngsters. They utilize a semi-self-government system, and they attend to the generalization of treatment gains in the group home, community, schools, and natural families.

Replication: The Road to a Systems View

The development of the basic treatment program was not as smooth as the succession of articles in the *Journal of Applied Behavior Analysis* might indicate. Major opportunities to translate ideas into practice came during the difficulties of the first home replications. These home replication problems included some very clear failures to replicate the home unit, wide variability in program quality, and difficulty in transitioning program implementation from the first generation of program developers to the second and third generations.

Each failure, each variation, and each transition has helped us more effectively translate our ideas into practice. One aspect has involved what Ed Thomas and his colleagues Bastien, Stuebe, Bronson, and Yaffe (1981) have called "Procedural Adequacy." That is, how reliably does "Procedure A" produce the desired outcome, and if Procedure A does not produce the desired outcome, do you know procedures B, C, D, and so on? The more procedurally adequate, the more "robust" and resilient the program becomes.

We needed to attend to procedural adequacy because, from a systems view, each dependent variable also functions as an independent variable that reinforces or punishes implementation. For example, at the home level a Teaching-Parent applies treatment procedures (a set of independent variables) to teach Johnny to follow instructions (the dependent variable). If Johnny learns to follow instructions, the Teaching-Parents are reinforced for program implementation. Procedure A is adequate. However, if Procedure A is not effective and Johnny tears up his point card and curses at the Teaching-Parent, then procedural adequacy is critical. The Teaching-Parent needs procedures B, C, and D to effectively deal with ensuing behaviors. Without a variety of procedures that are adequate to deal with a range of responses and contingencies, the Teaching-Parents will be punished for attempting program implementation.

As treatment procedures became more reliable and more descriptive, and the program became more adequate, more successful home replications occurred. But a dissemination strategy was needed to train more Teaching-Parents in order to establish homes in larger numbers, in a variety of locations, and with diverse populations. Again, failures, variability, and transitions would be our teachers. As we attempted to create new programs, the existing realities were creating our systems view!

Over time, failure and variability have been reduced and the transfer of technology has been facilitated by building systems of more adequate procedures. Program improvements occur as these systems are revised and redesigned to more reliably produce an adequate response. In addition, since no system will be 100% reliable, a variety of backup systems and procedures are needed to routinely deal with the variability encountered when initial procedures are not adequate.

Organizational Level

Originally, we attempted a national dissemination strategy. That is, there would be one central, national Site to train and evaluate Teaching-Parents. This strategy posed several problems, not the least of which was program survival. During the first 4 years of program replication, with the University of Kansas as the national dissemination center, a total of 60 homes were opened: 34 were out-of-state

and 26 were in-state. By the end of that 4-year period, 23 (68%) of the out-of-state homes had closed or were using a different treatment program. On the other hand, only 9 (35%) of the in-state homes suffered a similar fate. Proximity of the Site to the homes seemed important.

The positive effect of Site-to-home proximity was replicated during the first 4 years of program development in North Carolina at the Bringing It All Back Home Project. Eighteen homes were opened, all in-state, and only 4 (22%) were closed or no longer using the program at the end of the 4-year period.

Based on such experiences, the dissemination process shifted from a national model to one of Regional Training Sites in close proximity to networks of Teaching-Family homes. The key staff of a Regional Site include the Site Director, Director of Training, and Director of Evaluation, along with their assistants. These Site staff successfully replicate the home units by providing information to local and regional decision makers, skill-based training to Teaching-Parents, in-service training and consultation, quality assurance through evaluation, and administrative services to facilitate implementation. They also perform the hundreds of tasks required to develop new homes and maintain any human service organization.

In addition to providing program technology, Regional Site staff also attend to program administration. Program developers frequently underestimate the effects of political, financial, and administrative variables on a treatment program. We have found that Regional Sites must account for a host of administrative variables to further improve program survival and to enhance the reinforcers for implementation. On the face of it, salary, housing, referrals, licensing, budgets, and the other factors identified in Figure 3 may seem like purely administrative issues. But every administrative issue impacts treatment. For example, Teaching-Parents' salaries and their private space in the home impact tenure of couples (Connis et al., 1979). Tenure in turn impacts the amount of time each child spends with experienced couples. For another example, an audited checking account to purchase groceries and clothing and to facilitate family activities affects the Teaching-Parents' ability to teach independent living, social, and community-living skills. In general, the checking account allows them to program for the generalization of behavior outside the group home setting without a high response cost. Recognizing that every decision is a treatment decision means that Teaching-Parents can be reinforced for program implementation.

Figure 3, Next Page

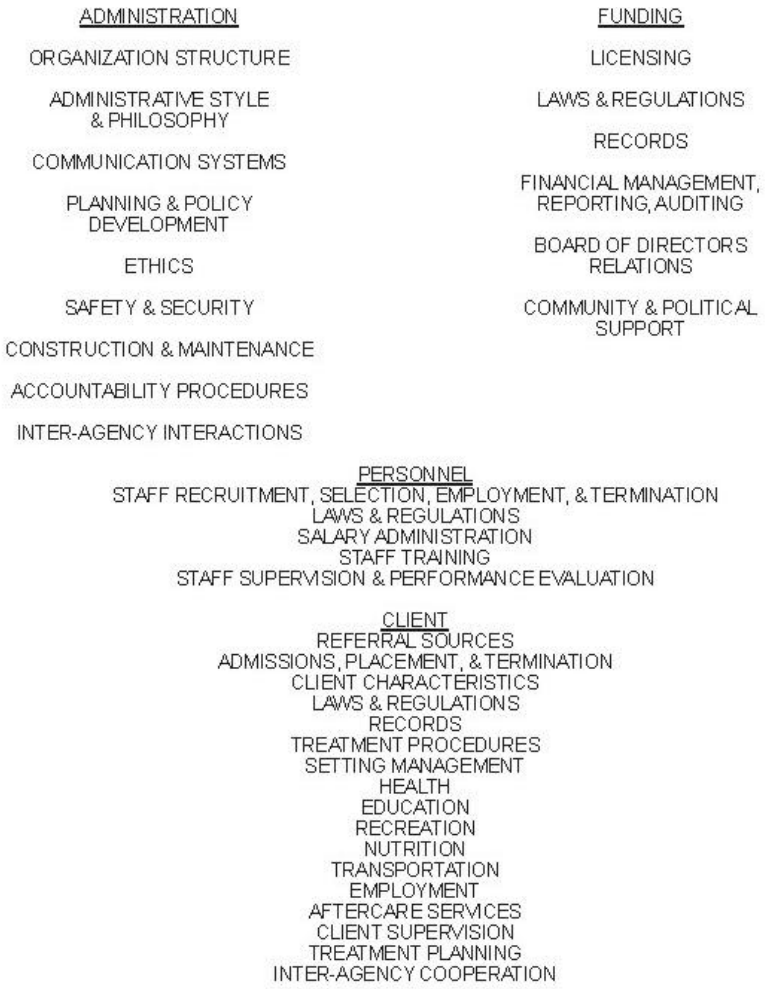

Figure 3. Administrative variables that impact program implementation and treatment.

Since Regional Sites are critical to the dissemination process, the next logical step was to develop a replication process to establish more Regional Sites: to add yet another level to the system! Since 1975, agencies in various states have presented us with invitations and opportunities to put Sites and homes in place. The process for these initial replication attempts followed the time-honored "train and hope" approach elucidated by Stokes and Baer in their 1977 article on generalization. Basically, we recruited certified Teaching-Parents; provided them with some rudimentary skill-based training as trainers, consultants, evaluators, and managers; patted them on the back, talked to them on the phone, and were frequently dismayed when we showed up to evaluate one of the group homes at their Site—that is, if the homes lasted long enough to be evaluated.

In retrospect, it is truly incredible that we ever thought complex skills taught in workshop settings with limited competing responses and stimuli, precise reinforcement, and no punishers would generalize to environments with hundreds of competing responses and stimuli, very little feedback, and a lot of punishers. It seemed that we had to painfully rediscover the need to monitor and be more immediately reinforced or punished by our outcomes in the Site Development process in order to better define Site

services and a procedurally ad-equate way of disseminating them.

Thus, we have found that a systems view also is important at the Regional Site level. Outcome continues to punish or reinforce program implementation. For example, Site staff provide skill-based, preservice training for Teaching-Parents. One dependent variable is a set of specific teaching skills to be implemented by Teaching-Parents as they work with the children in a group home (Blase & Fixsen, 1987). If preservice training is effective in producing teaching skills in the home, then Site staff are reinforced for conducting preservice training. If preservice training does not reliably produce teaching skills, then program adequacy must be attended to at the Site services level. If "Procedure A" (the preservice training) does not reliably produce the desired outcome then the Site staff must be ready with procedures B, C, and D to further develop Teaching-Parent skills on the job. In addition, the Site staff must re-examine preservice training procedures and content to increase further the adequacy of the training program.

At the Site Development level, we have responded to our failures, variability, and transitions by turning our successful home replication procedures into Site replication procedures. That is, the procedures for Site replication are similar to those used for home replication but the content differs. And outcomes from all levels continue to shape our behavior.

Societal Level

Program implementation and dissemination also are shaped by a whole host of less controllable societal systems variables such as politics, regulatory policies, changing demo-graphics, legislation, and so on. While it is not likely that we will impact directly the economy, regional demographics, or national policies, at each level we can functionally impact many of the mediating "systems" such as Boards of Directors, referral and funding agencies, and Zoning Commissions. There are a variety of functional responses to such important variables:

1. Select for them: There are some prerequisite conditions that need to be in place for successful creation of the system. For example, a state may want help but if the per diem rates are so low that programs cannot be operated, then such requests need to be declined.
2. Negotiate for them: When we are considering taking on a new Site or when a Site is considering sponsoring a new home, changes are often requested prior to contracting. For example, policies may need to be changed or different facilities selected.
3. Adjust to them: Often, we simply recognize the impact of variables and try to adjust to them. For example, demographics and referral needs have changed over the years and as a result programming has had to be adjusted to meet these changing needs.
4. Be patient: We also sometimes change the important variables over time. For example, an existing zoning law may restrict group homes to less desirable areas but over time political networks can be educated and influenced to change their regulatory practices.
5. Control them: Sometimes important variables can be controlled directly by developing a political base and educating "guardians" in the systems so you can help fend off undesirable outcomes.

All such variables do need to be monitored regularly to anticipate and prepare for issues, trends, legislation, and funding. While these arenas are more difficult to monitor and impact, they cannot be overlooked in terms of contingencies, reinforcers, and punishers that impact program dissemination.

Thus, a system has been developed to disseminate a program. It is a system that relies on many feedback loops, precise contingencies, and the building of a more and more "adequate" program over time. As the client, program, organizational, and societal levels of program implementation have evolved, some common characteristics have emerged that cut across all levels. These characteristics provide some key concepts related to a systems view of program development:

1. At each level there are clearly-defined systems and well-described procedures. As a result, program evolution is possible because implementation problems can be distinguished from procedural adequacy problems.
2. At each level, skill-oriented training is provided. Children learn a variety of social skills; Teaching-Parents learn specific teaching and other treatment skills; and the Site staff learn specific training, consultation, evaluation, and administration skills.
3. Data systems are built into service delivery so that the response cost is low and evaluation procedures are routinized. At the child level, motivation system data tell us a great deal. At the home level, Teaching-Parents report demographics and critical incidents to the Site. At the Site level, Site staff annually report to the National Teaching-Family Association.
4. Convergent data systems are built in at each level to reflect effectiveness, cost, and consumer satisfaction. Convergent data tell us about the system as a whole, help us move toward an "ideal" program, and help us balance our goals.
5. At each level, we are striving for staff who are generalists and systems that are integrated. Staff in Site Development need to know how to effectively train, consult, evaluate, and administer Teaching-Family homes so that we can teach each Site staff person to reasonably and competently perform' all these functions. We want Teaching-Parents to receive consistent training, consultation, and evaluation services. If specialization occurs it is easy for Teaching-Parents to be trained on one set of skills, consulted to implement something else, and evaluated on a third set of expectations. We also expect Teaching-Parents to operate as generalists and run integrated systems. We want them to work well with schools, families, and the community and to teach curriculum skills that will help children be generalists--they too live in an integrated system and need to get along successfully in school, at home, and in the community.
6. At each level we teach a common philosophy that involves an openness to real world contingencies and feedback. At the child level, a basic curriculum skill involves teaching children to accept criticism and review data related to their own behavior. At the Teaching-Parent, Site staff, and Site Development levels, we are careful to teach and define professionalism as the specific skills needed to give and receive feedback in a nonpunitive fashion.

Building effective dissemination systems is exciting and challenging but there also are disadvantages to creating new systems that impact our ability to adapt to a changing society and survive:

1. A problem of scale: Size alone begins to make it difficult to communicate in a timely way. Feedback loops that were once short and immediate now may have to be filtered through several systems with the real possibility of distorted data and dysfunctional delays. Errors can be quickly compounded. The potential now exists to not only impact 1 home and 6 children but 13 Sites, 250 homes, and 2,000 young people a year.
2. Inertia sets in: As an example, in the early 1970's, we were collecting data at family conferences in the group homes. Part of the data system involved having the Teaching-Parents announce the beginning and ending time of the conference. Several years after the Site stopped collecting data, a whole new generation of Teaching-Parents was still announcing start and end times for family conference.
3. Process becomes primary: For example, Teaching-Parents can be taught many "sophisticated" intervention techniques, but they may not be useful or the Teaching-Parents may not be applying them to remediate adolescent behavior disorders.
4. External resistance to change persists: A new program that requires a reassignment of resources, sets new standards, and alters the status quo creates resistance in the existing systems and punishes program developers.
5. Internal resistance to change develops: Internal resistance to change occurs as the program gains in stability and acceptance. Also, any change reverberates up and down the system. For example, at the home level a new point card system was put in place to make it easier to incorporate treatment planning into the motivation systems. It took about 2 years to effect the change because it meant having to retrain and monitor implementation at the Site level so that Site staff could train Teaching-Parents in order to have Teaching-Parents more closely monitor children's treatment goals. The pain of changing causes you to think seriously about changing any aspect of the system.
6. Impatience sets in: Over time, we also may be increasing the response cost for adoption. In effect, we know too much. There is a tendency to want to select for or get changes up front in important variables. We want to avoid pain, so we may begin requesting changes immediately that would be more appropriately worked on over time. We may refuse to adjust our program to meet reality and instead unrealistically expect systems to adjust to us.

So, successfully creating treatment systems is not without its hazards. But it is possible with hard work, persistence, attention to data, an awareness of the complex settings, and a willingness to change.

CONCLUSION

Stolz (1981) issued the challenge when she wrote, "Do we care enough about the adoption of behavioral innovations to develop the behavioral technology necessary to shape those adoptions?" (p. 503). We think the answer is "Yes, we do care enough." We also think that it is not just a behavioral technology that needs to be developed but a systems view as well. Our experience suggests that there likely will be different behavioral technologies specially suited for clients, programs, organizations, and society. The systems view is important for helping us to see and account for the complex interactions among the technologies at all levels.

In the May 1985 issue of the *American Psychologist*, the lead article was "Constructing Psychology: Making Facts and Fables for Our Times" by Sandra Scarr. Her discussion of how reality gets created seemed a fitting way to summarize the points we have discussed in this chapter:

> All the world's a stage ... each of us has our own reality of which we try to persuade others. Facts do not have independent existence. Rather, facts are created within theoretical systems that guide the selection of observations and the invention of reality. (p. 499)
>
> A constructivist view frees us to think the unthinkable, because our view of `reality' is constrained only by imagination and a few precious rules of the scientific game. The problem is to persuade our scientific peers and policymakers that our variation on the cultural theme is the wave of the future. (p. 512)

REFERENCES

Anderson, R.B. (1977, April). *The effectiveness of Follow Through: What have we learned?* Paper presented at the meeting of the American Educational Research Association, New York.

Bailey, J.S., Wolf, M.M., & Phillips, E.L. (1970). Home-based reinforcement and the modification of predelinquents' classroom behavior. *Journal of Applied Behavior Analysis,* 3, 223-233.

Bernfeld, G.A. (1982). *Dynamics and correlates of individual differences in social and non-social information-processing in children.* Unpublished doctoral dissertation, Queen's University, Kingston, Ontario.

Bernfeld, G.A., & Jung, C.H. (1985, October). Crossroads in the role of psychologists: Conceptual and practical issues and services in residential settings. In G.A. Bernfeld (Chair), *Crossroads in the role of psychologists: From consultant to service manager*. Symposium conducted at the meeting of the Psychologists' Association of Alberta, Edmonton.

Bernfeld, G.A., & Peters, R.DeV. (1986). Social reasoning and behavior in reflective and impulsive children. *Journal of Clinical Child Psychology,* 15, 221-227.

Bernstein, G.S. (1982). Training behavior change agents: A conceptual review. *Behavior Therapy, 13,* 1-23.

Blase, K.A., & Fixsen, D.L. (1987). Integrated therapeutic interactions. *Journal of Child Care, 3,* 59-71.

Blase, K.A., Fixsen, D.L., & Phillips, E.L. (1984). Residential treatment for troubled children: Developing service delivery systems. In S.C. Paine, G.T. Bellamy, & B. Wilcox (Eds.), *Human services that work: From innovation to standard practice* (pp. 149-165). Baltimore, MD:

Paul H. Brooks.

Cantrell, M.L., & Cantrell, R.P. (1985). Assessment of the natural environment. *Education and Treatment of Children,* 8, 275-295.

Christian, W.P., & Hannah, G.T. (1983). *Effective management in human services.* Englewood Cliffs, NJ: Prentice-Hall.

Christian, W.P., Hannah, G.T., & Glahn, T.J. (Eds.). (1984). *Programming effective human services: Strategies for institutional change and client transition.* New York: Plenum Press.

Connis, R.T., Braukmann, C.J., Kifer, R.E., Fixsen D.L., Phillips, E.L., & Wolf, M.M. (1979). Work environment in relation to employee job satisfaction in group homes for youths. *Child Care Quarterly, 8,* 126-142.

Conway, G.B. (1984). A place for discontent and tensions in psychology. *Canadian Psychology, 25,* 96-104.

Fixsen, D.L., & Blase, K.A. (1985, May). *Creating new reality: Program dissemination in the 1980's.* Paper presented at the meeting of the Association for Behavior Analysis, Columbus, OH.

Fixsen, D.L., Phillips, E.L., & Wolf, M.M. (1973). Achievement Place: Experiments in self-government with pre-delinquents. *Journal of Applied Behavior Analysis, 6,* 31-47.

Frederiksen, L.W. (1982). *Handbook of organizational behavior management.* NY: Wiley.

Hawkins, R.P., Fremouw, W.J., & Reitz, A.L. (1982). A model useful in designing or describing evaluations of planned interventions in mental health. In A.J. McSweeny, W.J. Fremouw, & R.P. Hawkins (Eds.), *Practical program evaluation in youth treatment* (pp. 24-48). Springfield, IL: Charles C Thomas.

Hoge, R.D., & Andrews, D.A. (1986). A model for conceptualizing interventions in social service agencies. *Canadian Psychology, 27,* 332-341.

Hunter, J.E. (1987). Multiple dependent variables in program evaluation. In M.M. Mark & R.L. Shotland, (Eds.), *Directions for program evaluation* (Vol. 35, pp. 43-56). San Francisco: Jossey-Bass.

Jung, C.H., & Bernfeld, G.A. (1987). Enhancing the effectiveness of child care services through organizational behavior management. *Journal of Child Care, 3,* 73-85.

Kifer, R.E., Lewis, M.A., Green, D.R., & Phillips, E.L. (1974). Training pm-delinquent youths and their parents to negotiate conflict situations. *Journal of Applied Behavior Analysis, 27,* 357-364.

Kouzes, J.M., & Mico, P.R. (1979). Domain theory: An introduction to organizational behavior in human service organizations. *Journal of Applied Behavioral Sciences*, 15, 449-469.

Krapfl, J.E., & Gasparotto, G. (1982). Behavioral systems analysis. In L.W. Frederiksen (Ed.), *Handbook of organizational behavior management (pp.* 21-38). New York: Wiley.

Maslow, A. (1966). *The psychology of science.* New York: Harper & Row.

McFall, R.N. (1982). A review and reformulation of the concept of social skills. *Behavioral Assessment, 4,* 1-33.

Meyers, A.W., & Craighead, W.E. (1984). *Cognitive behavior therapy with children.* New York: Plenum Press.

Muller, H. (1943). *Science and criticism.* New Haven, CT: Yale University Press.

Paine, S.C., Bellamy, G.T., & Wilcox, B. (Eds.). (1984). *Human services that work: From innovation to standard practice.* Baltimore, MD: Paul H. Brooks.

Paul, G.L., & Lentz, R.J. (1977). *Psychological treatment for chronic mental patients: Milieu versus social-learning programs.* Cambridge, MA: Harvard University Press.

Peters, R.DeV. (1983). *Behavioral contracting with conduct problem youth: A review and critical analysis.* Unpublished manuscript, Queen's University.

Phillips, E.L., Phillips, E.A., Fixsen, D.L., & Wolf, M.M. (1971). Achievement Place: The modification of the behaviors of pre-delinquent boys within a token economy. *Journal of Applied Behavior Analysis, 4,* 45-59.

Scarr, S. (1985). Constructing psychology: Making facts and fables for our times. *American Psychologist, 40,* 499-512.

Skinner, B.F. (1953). *Science and human behavior*. New York: Macmillan.

Stokes, T.F., & Baer, D.M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis, 10,* 349-367.

Stolz, S.B. (1981). Adoption of innovations from applied behavioral research: "Does anybody care?" *Journal of Applied Behavior Analysis, 14,* 491-505.

Thomas, E.J., Bastien, J., Stuebe, D., Bronson, D., and Yaffe, J. (1981). *Procedural descriptiveness: Methods for assessing behavioral technology*. Unpublished manuscript, University of Michigan.

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CE Questions for Systems Perspective on Service Delivery

Gary Bernfeld

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1. The article suggests that only a broader and deeper *systems perspective* can help us narrow the gap between what we _____from our human services and what we actually can _____

2. The importance of perspective when applying a behavioral technology that has been validated at the microscopic or single-client level to the macroscopic service-delivery level is exemplified by Bernstein (1982) who noted that the impact of a particular intervention can have a ____-level impact. Introducing changes in one system has implications for the _____ and _____ systems.

3. What are the four levels of analyses one can use to examine the delivery of mental health service to children? Give an example for each level that illustrates the importance of a systems perspective on service delivery.

4. Explain Cantrell and Cantrell's (1985) *eco-behavioral model* of behavior

5. What are the differences between skill, production and control deficits

6. Peters' (1983) review of the use of behavioral contracting procedures by paraprofessionals with delinquent youths concluded that the single most important contributing factor to the success or failure of programs using this technique was the quality and quantity of _____provided to those who implemented the technology.

7. _BM does challenge us to broaden our scope from a client to an _____level of analysis.

8. Hoge and Andrews (1986) postulate that the ultimate outcomes of human service agencies are functions of the main effects and interactions among six sets of intervening factors. Name these factors.

9. Kouzes and Mico (1979) postulate that there are three distinct domains that impact on human service organizations. Name and describe these.

10. What did Stolz (1981) note to be the strongest single variable influencing the diffusion of behavioral innovations.

11. To illustrate the behavioral systems perspective, the authors describe what they learned as they progressed from research on treatment procedures (the _____ level) and the development of the original Achievement Place group home (the _____level), to the creation of the Teaching-Family Model (the _____ level), and to the national dissemination of the program (the _____ level).

12. In their discussion of the Teaching Family Model, the authors refer to "*Procedural Adequacy.*" What is this concept and explain why is it important *at the home level*, from a systems perspective, using an example?

13. What factor adversely impacted on *program survival* when the authors' initially attempted to use a national dissemination strategy? As result of this experience, what new approach to dissemination was begun?

14. Explain why the authors found that a systems view was also important at the *Regional Site level* and provide

an example of how this related to program adequacy?

15. What are three functional responses to variables that mediate the impact of societal systems such as boards of directors, funding and referral agencies, and zoning commissions?

16. What are three disadvantages to creating new systems that impact our ability to adapt to a changing society and survive?