I regard this award as a significant honor, and I would like to acknowledge the Society of Pediatric Psychology (SPP), the extraordinary generosity of the Levin family, and the efforts of my own mentors, most especially Dick Lanyon, Bruce Cushna, Gail Gardner, and Don Routh. This occasion has afforded me the opportunity to reflect on mentoring on a personal level and to address the implications of mentoring for the field of pediatric psychology.

To provide context concerning my current mentorship experience, at this time I am mentoring faculty psychologists and physicians at various stages of their careers, graduate students, and fellows. In my current position as director of a division of behavioral pediatrics and psychology within a department of pediatrics in an academic medical center, I provide research mentorship to students in a graduate program that specializes in pediatric psychology (Drotar, 1998) and mentorship for students’ clinical work in a department of pediatrics (Drotar & Zagorski, 2001). This discussion focuses on three key questions that have been drawn from these experiences. What are the challenges to the career development of pediatric psychologists? What characteristics of effective mentoring relationships will help our students best meet these challenges? What strategies are needed to enhance the quality of mentorship in the field of pediatric psychology? This discussion of mentoring is intended primarily for those with academic careers as pediatric psychologists.

Current Challenges to the Career Development of Pediatric Psychologists

Each phase of career development (e.g., undergraduate, graduate, internship, postdoctoral level, transition to the first job, and subsequent career transitions) poses specific challenges, the details of which are beyond the scope of my discussion. Having had the opportunity to mentor some individuals through the transition to their first jobs and beyond, I’m impressed by the level of complexity and hard work on the part of students and mentors that is necessary to develop a career in pediatric psychology that involves professional contributions in multiple areas: research, practice, and teaching.

What are the most significant challenges to the career development of pediatric psychologists that create the need for mentoring? A short list is shown in Table I. My review of some of these challenges makes me appreciate in some ways that I trained when I did in the late 1960s, when pediatric psychology was quite new and more of a “frontier,” in which there was much less of a coherent body of scientific and clinical knowledge to learn. Given the maturation of the field of pediatric psychology, the available knowledge base provides a much more comprehensive road map for our students than my peers and I had when we started out. On the other hand, the expanding knowledge base also creates significant challenges in that it not only lengthens overall training requirements but also means that each phase of training is more densely packed with much more to learn. Moreover, there is an ever-expanding set of research, clinical, and teaching skills for students and fellows to learn. One reason is that many successful pediatric psychologists are “multitaskers,” who conduct a wide range of activities (e.g., completing clinical work, conducting research, preparing research-based manuscripts and research grant applications, teaching, mentoring, administrating, editing, grant reviewing, etc.). Some of these activities also occur in an interdisciplinary context, which requires students to learn specialized skills that will equip them to conduct interdisciplinary training, research, and clinical care (Drotar, 1995).

Can we expect pediatric psychologists to be equally good at all of these tasks? Probably not. Do trainees need to specialize for success? Absolutely. But it is easy to figure out what one should specialize in and what best fits one’s talents? Not at all. Will it be easy to find a job and a setting in which we will be paid to pursue our talents? Not necessarily. Available jobs may or may not fit trainees’ personal/professional requirements. Moreover, in this era of managed care, some jobs that focus on clinical care...
Table I. Challenges to Career Development in Pediatric Psychology That Create the Need for Mentoring

A Short List

- Knowledge base expansion
- Length of training
- Requirements for multitasking
- Interdisciplinary job context
- Specialization versus “all around” training
- Available jobs
- Setting-based constraints
- Personal and relationship choices

have built-in constraints such as expanding quotas for patient care numbers that clearly threaten career development in professional areas such as research and teaching. Finally, training and career development choices are not made in isolation but in a personal, familial, and relationship context.

All of these challenges pose potential barriers to career development and heighten the need for mentorship support at all phases of career development. In this regard, there is increasing professional recognition of the career development vulnerabilities of clinical researchers (Nathan, 1998), including pediatric psychologists, and hence the need for specialized mentoring and training strategies to facilitate career development (Drotar, Palermo, & Ievers-Landis, 2003a, b).

Characteristics of Effective Mentoring

What kind of mentorship support is most needed and potentially most effective? To address this question, I begin with definitions: Johnson (2002) defined mentoring as a personal relationship in which a more experienced (usually older) faculty member or professional acts as a guide role model and sponsor of a less experienced (usually younger) student or professor.

I would also like to contribute a definition based on my experience: I would define mentoring as the privilege and opportunity to teach and learn together with a student/junior colleague in the context of a relationship of mutual respect, trust, and coordinated goals.

What are characteristics of mentoring and mentoring relationships that may be effective in helping our students and trainees? My personal experiences as a student and as a mentor, together with modest empirical support based on feedback from current and former students, suggest that some features of effective mentoring are remarkably similar to those that have been associated with effective parenting (Belsky, 1984; Wentzel, 2002). Some of these are listed in Table II.

Security of attachment is a central construct of child development theory (Bowlby, 1988), which I believe has relevance for the mentor-student relationship: at the most basic level, ideally, individuals who are being mentored should experience a sense of security in their relationships with their mentors. A secure mentor to student message goes like this: “You have been highly selected for your abilities and potential, so you and I are in this relationship to help you in your career for the long haul. You may make mistakes, but that does not change your potential or my trust in your potential.”

But not everyone agrees with this basic trust idea, which contrasts rather starkly with a “survival of the fittest” mentorship approach (Drotar, 2001). This alternative mentor-to-student message goes something like this: “You are one of many students. It doesn’t really matter which of you finish so long as you demonstrate the right stuff to do so. We’re not too sure about your potential so you have to prove to us that you have what it takes. If you don’t succeed, that’s living proof that you weren’t good enough in the first place.”

At this point, one might ask how students and trainees can learn effectively under conditions of insecurity in their relationships with their mentors (i.e., when they are more concerned about establishing the security of their relationship with their mentors or with reducing the personal threat posed by such interactions) than they are with pursuing a relevant agenda of professional development? The short answer is: not easily.

Another concept related to security of attachment that I would argue is very relevant to mentoring is contingency or responsiveness (Ainsworth, Blehar, Waters, & Wall, 1978), which can be defined as a rapid, reasonably sensitive response to initiatives and interactions by one person to another (in this case a mentor to a student’s work). One operational definition of contingency in mentorship is how rapidly and sensitively mentors respond to ideas and written materials produced by their students. Early in my career, I was “spoiled” by Don Routh’s very rapid response time to whatever I gave him to review (Drotar, 2001). Through my experience as a student, I learned to value the quality and the timeliness of his feedback. Now, as a mentor, I have tried to emulate what I learned in my student role and respond quickly to my students’ work, hopefully without sacrificing the quality of my feedback, irrespective of whatever else is currently on my professional plate. I recognize that this may be a tall order for the multitasking mentors of pediatric psychology, but I would suggest that this task is no less strenuous than the expectations for task requirements we place on our students.

It seems to me that the responsiveness of mentors to their trainees’ work has a number of positive benefits:
From the vantage point of sheer efficiency, it simply keeps the work moving forward. Students and trainees depend on their mentors’ feedback for support and to facilitate their completion of the many deadlines in graduate school and subsequently. Consequently, delayed or unresponsive feedback from mentors can disrupt work in progress as well as frustrate students, especially those who want their work to move quickly. Mentor procrastination also gives students the wrong message about the need for timely task completion. Finally, mutual or shared procrastination between mentors and students can be particularly disruptive to productivity.

Apart from efficiency and from the vantage point of the mentor-student relationship, the contingency of mentors’ responses to students communicates a clear sense of the value of students’ work to mentors. The mentor message of a timely response to our students and trainees is: “Your work is so important (in general) and to me (in particular) that I am going to give it my top priority and primary attention.”

In addition and related to the contingency of the mentor’s response, reliability and consistency of the nature and timing of feedback to and interactions with students are important. Specific examples include providing consistent feedback, clear guidelines, and expectations for students’ general progress as well as their performance on specific projects (e.g., proposals and manuscripts). Such reliable feedback can be contrasted with inconsistent or unpredictable feedback or expectations (e.g., alternating between giving very little feedback vs. very critical comments). To ensure optimal performance, students need to know that they can count on their mentors for consistent feedback and response.

Coordinated goals or purposes are also very important to learning (Rogoff, 1990) and are critical to a successful student-mentor relationship. Coordinated goals are those that are agreed upon by mentor and student (e.g., the need to develop skills in manuscript writing). However, some mentors erroneously assume that their goals are shared by their students and vice versa. One example of uncoordinated goals, which was suggested by one of the reviewers of this manuscript, is the following situation. The mentor has the goal of helping the students complete their dissertation research in order to enhance their careers as independent researchers while the students are most interested in the research to finish graduate school and accomplish their personal goal of becoming practitioners. To help prevent frustration and conflict among mentors and students, coordinated training goals need to be developed and reevaluated in response to students’ progress and interests, rather than assumed or taken for granted (Drotar & Avner, 2003).

Another applicable principle of parenting and child development relates to the concept of goodness of fit (Lerner et al., 1986). In parent-child relationships and in the mentor-student relationship, I suggest that there needs to be at least a minimal level of “fit” between mentors’ and students’ goals for competent performance. Even more than this, to be most effective, I further suggest that mentors need to tailor their approach to their students’ learning styles, abilities, and personalities. Students also need to accommodate one way or another to their mentors’ styles, especially given the power differential in the student-mentor relationship. In my experience, serious mismatches of style, personality, and expectations can be quite disruptive to student learning.

On the other hand, some degree of discrepancy in expectations between students and mentors is to be expected, if not fostered, to develop necessary individuation of students’ professional development and identities from that of their mentors. Simply put, mentors should not attempt to train their students to be carbon copies of them not only because such attempts are often ineffective but also because they could turn out to be somewhat frightening if successful.

Another relevant idea drawn from modern child developmental theory is the notion that individuals are not passive recipients of input from their environments. On the contrary, all individuals, including students, create their own learning environments to a significant extent (Scarr, 1992). Based on this principle, it follows that mentors should facilitate their students’ abilities to define and determine their training environments and autonomy as professionals.

But this is much more easily said than done. Students generally need a good deal of support from their mentors to discover and develop their own expression of their personal and professional voice, which can be broadly defined as the following: “What do I really want to say?” (e.g., publish and create); “How does what I want to say fit into the broader picture of science and practice needs for the field?”
In my experience, mentors' validation of the professional significance of their students' scholarly and career initiatives can help to give them the confidence to dare to challenge the status quo of science or practice and create a special professional niche for their work. For this reason, I would argue that mentors need to foster their students' confidence and initiative to challenge, criticize, and otherwise develop the state of the art in science and practice in pediatric psychology.

Feedback and reinforcement are critical constructs in many theories of human development (Bandura, 1986) and are clearly important in mentoring students and trainees. Moreover, communication of positive affect/support is as critical in the mentor-student relationship as it is in any other relationship. Such support can help students appreciate the value or importance of their own work and encourage them to sustain and persevere in their work through times of frustration, which are inevitable in the professional science and practice of pediatric psychology. It is an important lesson for students that the outcomes of research and clinical work in pediatric psychology do not always mirror what was expected. However, the necessity to get the work done and to sustain a sense of meaning in the face of seemingly adverse outcomes when one's hypotheses are not confirmed is important.

My experience suggests that another principle of effective mentoring is based on the developmental concept of scaffolding (Rogoff, 1990), which can be defined as support and structure that challenge the professional growth of students yet stop short of unrealistic demands. Mentors can be influential in helping students and trainees manage stressful tasks that are potential milestones in their skill development (e.g., scientific presentations, developing data analytic expertise, and writing), which may not be their most preferred activities, at least initially. Potential methods to facilitate effective scaffolding of students' work include encouraging, setting clear expectations, and providing opportunities and contexts for practice, practice, and more practice, of relevant skills.

By now, I trust that mentors and students will appreciate that this list of effective mentorship relationship attributes is idealized. In fact, the road to an effective student-mentor relationship is often much rockier than the ideal. Moreover, unethical mentoring occurs more than we would like to believe and should be identified as well as prevented (Drotar & Avner, 2003). Examples of unethical mentoring include fostering the mentor's projects and published work at the expense of trainees' careers, taking credit for trainees' work, teaching or tolerating scientific misconduct or fraud, or furthering a sexual or racial agenda through discrimination or harassment (Drotar & Avner, 2003; Johnson, 2002).

### Recommendations for Strategies to Enhance the Quality of Mentoring in Pediatric Psychology

My personal experiences as a mentor have broader implications for strategies to enhance the quality of mentoring in the field of pediatric psychology. These are summarized in Table III. The first two recommendations (develop guidelines for training and disseminate information concerning training/mentorship models) are already being implemented by SPP as shown by the Task Force on Training Recommendations (Spirito et al., 2003) and the recent special issue of the *Journal of Pediatric Psychology* on training (Brown, 2003).

Examples of training guidelines and curriculum include formal course work on teaching and mentoring strategies, ethics and professionalism in mentoring, and so on. Such didactic experiences should be accompanied by experiences in supervision and mentoring that fit with the students' level of training. For example, experience in teaching and mentoring can be given by having graduate students teach courses or seminars under supervision, gaining experience by supervising undergraduates who work on the students' research by collecting or entering data. Postdoctoral fellows can be given specific experiences in mentoring graduate students or interns in research or clinical care. Finally, on-the-job training can be given by seminars for faculty that provide consultation and feedback concerning challenging mentoring issues.

Training recommendations should be extended to include developing strategies of mentoring that are necessary to facilitate different phases of career development (e.g., transition to the first job, career transition, etc.). For example, in our setting, faculty mentoring committees have been very useful to the career development of junior faculty. These committees are comprised of experienced faculty whose expertise reflects areas of research clinical care relevant to the career trajectories of junior faculty. Such committees convene regularly to provide input to facilitate specific research projects as well as to discuss career development issues (e.g., promotion and tenure, ways to enhance productivity, etc.) (Drotar & Avner, 2003).

Another interesting potential direction for the field of pediatric psychology is to pool mentoring resources on a local or regional level to provide a greater breadth of experience for trainees. One such example is the Ohio Child Health Research Initiative, which includes mentors, junior faculty, and trainees in three hospital settings in Ohio (Powers, Drotar, Linscheid, & Stark, 2001). This group has worked together to mentor junior faculty to develop funding for research career development awards.

Other potential directions for the field of pediatric psychology...
psychology and SPP include promotion of the training, professional development, and support of mentors. Most, if not all, mentors have not received formal training in mentorship but have instead learned their craft largely by means of exposure to their own mentors and on the job, which includes a good deal of trial-and-error learning. In addition, many successful (and not so successful) mentors labor in relative isolation. For these reasons, forming networks of mentors at a local or regional level has the potential advantage of providing education, support, and concrete information concerning mentoring challenges and strategies. Such peer support can also help to sustain the commitment to mentorship and the learning of mentorship skills. In addition, I believe that there is also a need to develop continuing education experiences in mentoring for professional psychologists. We cannot assume that we will learn to be effective mentors by simply repeating the experiences that we received as students. We may be simply repeating bad habits.

In addition to facilitating training activities, the field of pediatric psychology needs to develop research on mentoring in a number of areas. For example, research that describes trainees’ personal appraisals of critical ingredients of mentoring, both positive and negative (e.g., what worked and what didn’t), would be very instructive. Such research should include description of positive (e.g., career forming) as well as negative (stressful, problematic, or unethical) mentoring experiences (Drotar & Avner, 2003). In a word, we need to understand the best and the worst of mentoring. Some of us may have had the experience at least at some point in our careers of being experiments in nature, that is, having somehow been capriciously assigned by a bizarre twist of fate to a “bad mentoring” control group. In fact, some resilient students can survive potentially toxic, even unethical mentors and can “learn” what not to do as mentors from these experiences. But one relevant question in this context is: why should unethical mentoring be tolerated in the first place? As professionals who are concerned about the future of our students and the field of pediatric psychology, we need to document and reduce the negative impact of problematic mentors and empower our students to identify and report mentoring abuses. In addition, we need to promote the careers of our trainees by improving the quality of their overall mentoring.

I hope that this discussion will stimulate additional writing and research on mentoring. I believe that there is a good deal of extraordinary mentoring in the field of pediatric psychology that needs to be described.

One closing note: some of my students (prospective and present) have asked me what advice would I give to someone coming into the field. Such answers can be presumptuous, given the extraordinary individual differences in students’ learning styles, goals, and competencies. Nevertheless, some advice that for me has stood the test of time comes from Bob Dylan (1965): “Don’t follow leaders, watch the parking meters.” Beyond this, I would tell students the following: Follow your heart in developing your own unique professional, career development, and research agenda by first discovering and then focusing your efforts on issues that excite you. In addition, please give your mentors as much feedback as possible about their mentorship and its impact on you. We are, after all, only
human and need to learn from you. In fact, the opportunity to learn from you is one of the extraordinary privileges of mentoring. So please help us accomplish this.

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