Organizing Adolescents(-ce):
A Dynamic Systems Perspective on Adolescence and Adolescent Psychotherapy[1]

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It seems to me that papers about adolescence or adolescent psychotherapy frequently begin with a mantra, followed shortly by a lament. The mantra usually includes the invocation of adolescence as a developmental phase that reflects the confluence of physical and cognitive maturation, as well as the expectations of adolescents, families, and society within an historical context. We note its subdivisions into early, middle, and late manifestations that mark the progression of meeting the tasks of social, sexual, educational and vocational functioning, manifested in increasingly self-sufficient functioning. From an intrapsychic point of view, we note that the adolescent passage is centrally defined by a transformation of psychic structure, which we label identity or character consolidation. The concomitant subjective shift includes a realistic experience of oneself as unique, yet part of a context, with self-esteem resilient over a variety of circumstances. From the vantage point of therapists, we note our accustomed position of thinking about adolescent psychotherapy as removing obstacles that interfere with the unfolding of this developmental transformation, and even being a part of it through the opportunity for the adolescent to re-solve childhood dilemmas or to have a new experience of relationship.

Then comes the lament. The lament usually invokes the problems inherent in treatment during this phase of developmental change. Such problems are reflected in descriptions of the difficulty determining analyzability in adolescence, in the particular adolescent defenses that preclude the development of stable transferences, or in the special needs of adolescents for support and emotional contact.

In my view, the lament stems from the fact that psychoanalytic models of adolescent development successfully provide an overall picture of adolescent tasks and the psychological arenas that are engaged in meeting these tasks, yet they are of limited use in the actual encounters with adolescents. The distinct character of adolescence and adolescent treatment seems richer and more complex than the models that inform our understanding of the process. The result is some disjuncture between the pragmatic and flexible approach of adolescent psychotherapists, and the psychoanalytic developmental theories and their companion technical prescriptions that are meant to guide treatment.

In this paper, I will present a point of view that seeks coherence between our study of this significant period of reorganization in life, and our efforts as clinicians to be effective with our adolescent patients. I want to explore the question: How can we make more cohesive our view of the actions of therapists and the developmental transformations of adolescence? Recent applications of systems theory in developmental psychology provide us with a different framework within which to view adolescence. In my view, this perspective creates a more coherent view of adolescence and encounters with adolescents.

My thesis is that from the dynamic systems perspective, adolescence is a manifestation of the ongoing reorganization of the human system. The characteristics of adolescent psychotherapy are consistent with this view of adolescent development. Whether we consider adolescence as a developmental phase, adolescent psychotherapy as a technology for enhancing development, or the specifics of therapist and adolescent actions, is a matter of time scale and vantage point, rather than differences between developmental and therapeutic process. That is, the difference lies between a moment-to-moment perspective rather than one of years, and the view of transitions as nonlinear, flexible, and asynchronous rather than appearing as continuous stages or phases. At the level of patient therapist interactions, the process of development and the process of treatment merge. Our actions as therapists not only remove obstacles to development. Our actions as therapists, in interaction with our patients constitutes development. Rather than indicating any different therapeutic activities, this view suggests how we might re-assemble our view of the developmental process of adolescence so that our theory and our therapeutic work function with more coordination.

I will begin with a some comments on current models of adolescence and their efforts to address the operational process of adolescent transformation. Next, I will provide an orientation to dynamic systems. I will then offer a view of adolescence as a developmental process within a dynamic systems perspective. Finally, I will suggest that assembling our view of adolescence and our encounters with adolescents within this alternative framework has the effect of creating a more coherent, flexible system of theory and practice.

Current psychoanalytic approaches to adolescence

Despite the wide diversity of views on adolescence, there is general agreement that a central issue in adolescence is the shift towards guiding one's own experience (Richmond and Sklansky, 1984). This shift, variably

termed reorganization, transformation, or integration, occurs along a number of trajectories. Clinically, we observe behavioral and subjective manifestations that demonstrate wide variations in this process – if it occurs at all. We see, for instance, adolescent transformation occurring in the ordinary course of life. Alternatively, we see adolescent reorganization slowed in a particular circumstance to the point of clinical symptoms, but overall proceeding with minimal delay. We also see the central process of adolescent transformation require long term assistance to achieve, and sometimes life long assistance to maintain.

What do we have to work with to conceptualize these phenomena? As psychoanalytically oriented psychotherapists addressing development, we have a language to describe the motives, developmental tasks, and psychic reorganization that are manifested in this transformation. Each model has its underlying commitments to the fundamentals of motivation and developmental aims, as well as corollary commitments to the process of change in analytic treatment, how treatment should be conducted, and what one might expect as its outcome (Jaffe, 1991, 1997a).

From the theoretical perspective, psychoanalytic theories that follow Freud's emphasis on the biphasic nature of sexual development view adolescence primarily as the necessary revision of childhood sexuality in response to puberty. Independence, identity, intimacy, and realistic productivity reflect the successful transformation of oedipal and pre-oedipal structures so that the mature expression of sexual impulses and object finding is assured. Psychoanalytic theories that emphasize the primacy of object relatedness and self and object differentiation view adolescence as the manifestation of efforts to achieve self sufficiency, or autonomy, with stable internal self and object representations. Self Psychology is organized around the central importance of empathic relations with others as the key to forming a stable self that lives out a nuclear program of ambitions, ideals, and talents.

From our perspective as psychotherapists, whatever informs our specific views of motivation and development, we use that same framework to describe the conditions for change in psychotherapy. Ego psychology asserts that we can help developmental reorganization by removing the obstacles to drive, ego, and superego maturation through interpretation and analysis of unconscious conflict. Self Psychology centers on empathic immersion; the importance of establishing a stabilizing selfobject experience that eventually may be accompanied by explanation or narrative self-reflection. More recent contributions within Self Psychology place emphasis on the

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interpersonal field, wherein the adolescent can experience a secure base for shifting patterns of attachment, mature selfobject relatedness, or the appearance of a novel relationship with the therapist.

In contrast to ego and Self Psychology, object relations theory emphasizes the central importance of establishing a holding environment, with attention to internal representations of good and bad objects as they are enacted in thought and deed. Parenthetically, modern relational theories have little to say about the adolescent transformation, being almost exclusively focused on infancy (Frank Summers, personal communication). Apparently, the stepchild status of adolescence lives on!

When it comes to the central concern of this paper, however, – an explanation of the process of adolescent transformation itself – again each particular model of mind supplies its own view and we trail off into problems. Psychoanalytic models are at a loss to address the <u>actual processes</u> of integration and transformation in development in general or for adolescents in particular.

Of course, with whatever limitations, psychoanalytic models have certainly evolved over the past thirty years, and have been most usefully applied to understanding adolescence and to the treatment of adolescents.[2] Classical theory of adolescent phenomena as a reaction to puberty and the necessity of disengaging from now dangerous childhood imagoes has given way to viewing adolescence in a much broader range that includes a number of paths for the adolescent passage, (Offer and Offer, 1975; Galatzer-Levy and Cohler, 1993), and more distinct criteria for separating developmental fluctuations from psychopathology. We have come to appreciate that psychic disruption manifested by internal and behavioral turmoil is neither intrinsic, nor necessarily salutary in advancing from childhood to adulthood. While retaining an appreciation for the importance of fundamental aspects of development like sexuality and differentiation, we no longer subscribe to a narrow view of an optimal outcome marked by heterosexual object choice, or to an ideal of the rugged individualist. We have also learned that there is more that motivates and organizes psychic structure and development than sex. We have learned that people need people throughout life, and not just parents, but that it does not necessarily make them the luckiest people in the world. We know that adolescents need stabilizing and stimulating experiences through the adolescent transition and beyond. We see the developmental advantages of being empathically understood, and of being able to adopt various points of view in understanding oneself and others. And finally, I think it is fair to say that over the past thirty years we have learned that we are organisms, not thermostats or computers. Consonant with the rest of analytic thought,

we continue to struggle with the way in which biology counts, whether directly through puberty, through advances in cognition, or through one's subjective experience of oneself in the process of change.

Regarding a theory of change, while some view interpretation of unconscious conflict as central and others view an empathic relationship with intersubjective negotiation culminating in a new experience in as key, all subscribe to the idea that the therapeutic environment should be safe, with the goal of limiting the iatrogenic interferences created by a therapist's stance that is either overly controlling and intrusive or withholding and frustrating. Most analysts believe that analyst and patient impact each other in a way that makes each treatment unique and that may provide important data to further understanding the patient. At the same time, they most certainly do not agree about how central this factor is in the role of therapeutic change.

Overall, psychoanalysis has made significant progress in describing and providing an environment for psychic change in adolescents and in understanding that a variety of interventions facilitate this transformation. Analytic models address this process and its role in development as it is played on many stages. It may be the Oedipal drama in all its permutations, or the dance of attachment, or the rich or impoverished encounters with useable objects. The process may be quiet or raucous. It may look like a scene from <u>Our Town</u>, where Emily, perched on a stable ladder, could tolerate seeing her place in the cosmos. Or, it may resemble a scene from <u>Rebel Without a Cause</u>. Here, a similar encounter with the cosmos in the form a trip to a planetarium reveals the turmoil and loss of personal integrity amongst shame, rage and isolation.

We are left, however, with psychoanalytic theories that provide a view of the conditions for change, but leave a theory of transformation on the periphery of explanation. This is hardly a new problem or observation for the field of psychoanalytic psychology in general, or for the study of adolescence in particular. However, it is particularly unsatisfactory for us, since adolescence is centrally about this very process.

Efforts to identify the operational process of reorganization in adolescence.

There is no question that our psychoanalytic theory of adolescence has been most finely honed by Peter Blos' detailed elaboration of the phase appropriate challenges and transformations that occur during the second decade of life. Blos (1962) elaborated a model that included phase specific drive and ego modifications and specific conflicts to be solved. His account of the process begins with the upsurge of instinctual impulses, necessitating the

withdrawal of cathexis from the parental imagoes of earlier childhood, and the appearance of typical defenses against the presence of dangerously increased drive pressure that threatens regression to pre-Oedipal attachments. The process moves through the period of fluctuating moods, erratic and contradictory behaviors, and passionate though transient identifications that reflect the loss of the internalized parental super-ego and a recrudescence of bisexuality. Subsequently, there is the transition to a more stable sexual identity and choice of object that reflects re-encountered positive and negative Oedipal constellations. In the final phases of adolescence, a stable character configuration emerges, the overall purpose of which is to allow management of revived or unresolved childhood difficulties through signal anxiety, sublimations, and particular patterns of object relations. In this view, fixations provide specific choices of libidinal needs, relationship choices, and fantasies, residual trauma provides the force behind the compulsive repetition that pushes unintegrated experience towards ego integration, the super-ego and ego-ideal provide the direction of this process, and the environment and social institutions offer the avenue for expression (1962, p. 134).

Almost every paper on the topic of the psychoanalytic theory of adolescence includes reference to Blos' phases of adolescence. Even those who vigorously disagree take Blos' position as the point of departure. Many analysts still subscribe to this view of adolescent psychic transformation. Others dismiss as anachronistic the Freudian suppositions that frame his model, and assert alternative motivational foundations such as autonomy, self-cohesion through selfobject use, or attachment maintained through intersubjective relatedness. Still others see adolescence primarily as a social construction, a fabrication of historical curiosity in our culture. While each of these positions has implications for a view of the behavioral phenomena, clinical technique, and the expected outcome of the period, they nevertheless remain organized around the basic description of pre- and early adolescence, adolescence proper, and late adolescence that Blos set forth.

In this rich construction, Blos drew from a number of principles of ego psychology to form a theory of structural change in adolescence. For example, he incorporated the principles that a wish or defense relevant to one phase of development could, over time, change its function, or meaning (Hartmann), that a bit of psychic structure originally connected to libidinal impulses could become an autonomous ego function (Hartmann), that there was a normative fluctuation of progression and regression in the service of structural change (a principle that mirrored the clinical psychoanalytic finding that a certain degree of regression promoted enhanced ego functions), that this

fluctuation occurred in the context of a number of developmental lines (A. Freud), and that each individual appeared to have a habitual way of integrating drive, ego, and defense (Lamp de-Groot).

To account for the final achievement of adolescence, the consolidation of character, Blos (1962) employed another central ego psychological concept, the synthetic function of the ego: ".... it is obvious that the psychic institution where the consolidation of the adolescent process occurs is the ego (ego synthesis)" (p. 134). For Blos, formation of character in adolescence is the outcome of psychic restructuring accomplished by the synthetic function of the ego. It is implied then, in Blos' assertion, "character formation and adolescence are synonymous" (Blos, 1968, p. 246), that adolescence is defined by and proceeds in relation to this capacity. To put this another way, integration, or reorganization, is at the very core of adolescence, and that core is the synthetic function of the ego. Blos supports his claims by referencing Erikson's concept of ego-identity, Gitelson's emphasis on character synthesis as the central task of adolescence, and Hartmann's assertion that the synthetic function must be supra-ordinate to regulation by the external world (1962, p. 177).

The synthetic capacity is, then, a central aspect of Blos' influential theory of adolescence as the route to character formation. But the concept is far from simple. In many ways, it cuts to the core of what moves character to form, whether character is an outcome of a process or a process itself, and when and whether it can be said to consolidate.

In their review of concept of the synthetic function of the ego, Bley and King (1981)note that the synthetic function has been described variously as automatic and inevitable once the proper conditions have been created by breaking up resistances (Freud, 1919), as a participant in symptom formation (Freud, 1926), as an ego function subject to a range of splits and disturbances (Freud, 1940), as appearing with superego formation and thus connected with libido as the self-preservative instinct (Nunberg, 1955), and as resting on other ego functions and leading to insight in analysis (Kris, 1956). Furthermore, the synthetic function of the ego has been described as a special case of a more general biological principle of "fitting together", or organization of the organism, that transcends the specific relationship of the synthetic function to self-preservation (Hartman,   ).[3] This last, the relationship of the synthetic function of the ego to a broader concept of the organizing whole person, the self, marks the expansion of considerations of the integration process in adolescence that stretch the theoretical concepts that informed Blos' descriptions of the adolescent passage.

Blos (1962) himself seems to be at a point of straining beyond his own ego psychological foundations when he leaves us at the end of his chapter on the ego in adolescence in his definitive work, On Adolescence. Here, Blos notes Spiegel's (1959) reference to self, whose operational significance is as a framework: "This constant frame of reference acts as a steadying flywheel to overcome disturbing discontinuity of intermittent self-representations." Blos concludes: "The nature and function of the self have been presented here because it appears that the concept of the self is becoming an investigative and conceptual tool of increasing moment for the study of adolescence. The extensive exploration of defenses during the adolescent period seems to be giving way to an investigation of the self in its genetic and pathologic aspects, and the study of the psychic organization and psychic restructuring is complementing the concentration on instinctual conflict as the paramount feature of the adolescent process"(p. 196-197).

Blos (1968) again seems to stretch the boundaries of ego psychology when he notes that the engagement of individuation, response to trauma, ego continuity, and sexual identity (his four preconditions for character formation) are not yet sufficient for character to emerge: "Character reflects on the level of personality development the attainment of the highest form of psychical structure formation and functioning. References, explicit or implicit, to the complex structure and function of character can be found in the analytic literature that attributes to character a holistic, integrative principle of various designations: the synthesizing function of the ego, fitting together (Hartmann), identity formation, organizing principle, consolidation process, the self, the whole person, etc. All these connotations have in common the subjective experience that one's character is identical with one's self. Psychic life cannot be conceived without it, just as physical life is inconceivable without one's body" (p. 260).

In this way, Blos leaves the impression that his delineation of prerequisites for character formation go only so far, and we are left with a series of rather ambiguous terms that try to capture some overarching function of weaving together that must occur for an individual to achieve that sense of continuity, resilience, membership, and uniqueness that is the hallmark of adolescence.

As is well known, the once secure metapsychological scaffold on which Blos supported his elegant observations and clinical formulations has been shaken by a ferment in psychoanalysis that has included revisions of the biological basis for thought and subjective experience, contributions from the clinical situation, and considerable input from developmental and cognitive psychology. This ferment is intimately connected to issues of the scientific

standing of psychoanalysis, the definition of psychoanalysis as a method of introspection and empathy rather than of interpretation, and uses of the concept of a self within a model of subjectivity or as a concept synonymous with an organizing biological system.

In my view, the field has taken three directions in response to the failure of Freud's theory to provide an adequate biological basis for psychological development, or for the process of therapeutic change. The first has been to continue to use the language of ego psychology without concern for the problems with theoretical coherence that arise when one uses ego as a metaphor. For example, Coppolillo (1984), adding to Rapaport's concept that the ego can make alternative responses to the environment and to the id, suggested the additional view of the ego's capacity to view itself. Over time and in various combinations, there are flexible shifts between sensitivity to the environment, drive investments, and a sense of self in relation to the world. These three alternating ego activities comprise the synthetic function. Taken together, this activity creates an organizing, integrating effect, while the moment to moment shifts are manifested in typical adolescent behaviors. Richmond and Sklansky (1984) presented a critique of structural change as described by Blos, Gitelson, and Schafer, and suggest that the significant issue in adolescent synthesis is the attempt to establish ego autonomy, sighting the relationship of failed identity formation and early childhood conflicts over autonomy. And most recently, Bloch (1995) argued for three basic issues in adolescent development: internal striving to complete development, the need for parental sponsorship towards that end, and a wish to maintain a positive relationship with one's parents. In his orientation, Bloch retains an ego maturational view, while using infant observation, systematic research on adolescence, and clinical studies of subjectivity.[4]

A second direction has been to reject any need for theoretical coherence with biology or the developmental sciences and proceed with a view that psychoanalysis is purely the study of meaning systems and narrative coherence. Schafer (1979), for example, in his examination of character formation and change, argues that questions of character and character change are best described in terms of the way a person organizes and changes action patterns that relate to problems, conflicts, and priorities. While these processes may be unconscious and ego-syntonic, they are not governed by an inner agency.

The third direction has been to attempt to arrange the clinical findings of psychoanalysis on a coherent biological foundation. It is with this in mind that I now turn to a discussion of dynamic systems as it applies to

developmental and clinical phenomena. I believe that a dynamic systems view of development has implications for

our understanding of adolescence and our activities with adolescents. This approach may help us to describe more

accurately the integrative process in adolescence, and, through that avenue, to bring together the theory of

adolescence and the variety of therapist actions we take with adolescents.

Dynamic systems[5]: An introduction

Systems principles occupy a burgeoning area of interest for psychoanalysts (Spruiell, 1993; Galatzer-Levy,

1995; Shane, M., Shane, E., and Gales, M., 1997; Stern, 1998). However, they certainly are not new to our field.

General systems (von Bertalanffy, 1969) concepts have been adopted by psychoanalytically informed researchers

studying infants (Emde, 1983; Sameroff, 1983; Stern, 1985) and by some psychoanalysts (Gedo and Goldberg,

1973; Basch, 1980, 1988; Gedo, 1988, 1993; Lichtenberg, 1989) as the foundation of a theory of motivation,

development, and adaptive dysfunction. Analysts who remain convinced that psychoanalysis must be coherent with

knowledge from related fields of biology and cognition have looked to general systems theory to organize the yield

of infant research, linguistics, learning and information theory, and neurobiology to provide a theory of mind. While

analysts use this information in a variety of ways, there is little question that this trend has significantly impacted

psychoanalytic explanatory and clinical theory, challenging and broadening accepted therapeutic techniques and

views of the therapeutic process.

Systems principles in general have certain properties that are relevant to biological systems in particular

(von Bertalanffy, 1969). Biological systems are self-organizing, self-righting, and self-stabilizing. They

demonstrate multiple ways to achieve a common developmental outcome, a principle termed equifinality. In

addition, as biological systems become more complex, they tend to progress from wholeness towards differentiated

subsystems. Two aspects of this tendency are important for our discussion. First, while differentiated subsystems

remain constituents of the whole, each subsystem develops more fixity and less flexibility, creating the appearance

that the part may be separate from the whole. Second, if one part is more prominent, it may appear that the system

centralizes around that part. In such cases, small changes in that so-called leading part may create large changes

through the system as a whole, or appear to be the primary cause of changes in the system. In this sense, an

individual may be defined as a centralized system, and individuality may be seen as a function of the hierarchical

arrangement of relations of subsystems within a whole.

There is an interesting paradox embedded in this view. With greater complexity comes increasing differentiation and centralization, creating the appearance of independent elements. At the same time, the differentiated organization is entirely a function of the unity of the whole. "In this view, individual stands for indivisible. Strictly speaking, biological individuality does not exist .... only progressive individuation" (von Bertalanffy, 1969, p. 71).

While systems principles have been accepted for some time, they have only recently been formally applied to empirical studies of the developmental process.[6] The goal of an empirical application of dynamic systems is to understand how local processes lead to global outcomes. These new contributions provide the opportunity to extend the application of a systems perspective in psychoanalysis beyond its previous bounds.

A core assumption of the dynamic systems approach (Thelen and Smith, 1994) is that "the acquisition of mental life is continuous with all biological growth of form and function" (p. xiii). This view is consistent with the core concept of the self system as it has been used to instantiate systems principles in psychoanalytic views of development. As with Freud, a self embodied in biology is fundamental, but the "biology" of self is defined as the ordering activity of the whole person.

The concept of self has multiple references. It connotes a system of organization that includes the whole person as a biological system, behavioral organization, and self-reflection or subjectivity. The concept of self replaces Freud's constructs of a mental apparatus constructed of instinctual energy with concepts of order and self-organization, affect, pattern matching and feedback, and the decision-making functions of the brain (Basch, 1988).[7] There is no primary motive here; no biological bedrock of sex, aggression, attachment or autonomy. Similarly, there is no built-in force or instructional set that determines a particular developmental goal, nuclear plan, or even completing development. There are only some elemental tropisms in brain organization (i.e., visual orientation, kinesthesia, thermoregulation, satiation) that tilt the organism towards responding to circumstances that promote internal and adaptive function. The functional status of the self system is inferred via descriptions of behavioral and subjective phenomena that result from the systematic inspection of a person. In psychoanalysis, these views of the functioning system have been described in terms of motivational systems, levels of behavioral organization, and subjective domains of self and relatedness. The emphasis in this approach is on the shifts in functional organization

and subjective experience.[8]

Dynamic systems (Thelen and Smith, 1994) assumes that while "the endpoints of human development are complex and unique, the processes by which we reach these endpoints are the same as those that govern development even in simple organisms, and to some degree, even in complex, nonliving systems (p. xiii)." Dynamic systems asserts that developmental principles are isomorphic from the level of DNA to the level of the day to day. As we shall see, this view allows general statements about development and attention to the moment-to-moment exchanges between therapist and patient to be treated as of a piece.

Dynamic systems explores development as a context sensitive, opportunistic cooperation of subsystems that result in the emergence of general developmental achievements and stable patterns of self-organization (Thelen and Smith, 1994). In this approach, the fundamentals of dynamic systems in operation occupy the central focus, rather than their emergent manifestations as phases or stages of development. This approach suggests a re-examination of the relationship between descriptions of development as phases and the actual operational occurrences that constitute developmental progression. It highlights aspects of development that may shift our understanding of the phenomena we observe, and therefore our approach to it in the clinical setting.

A dynamic systems view of development

Ordinarily, we think of development as progressive, orderly, incremental, and having direction (Thelen and Smith, 1994). For example, we expect that newborns will follow an orderly sequence of walking, talking, physical and psychological self-sufficiency, and reaching reproductive maturity. We can circumscribe the ages and sequences of these events into a progression of "developmental milestones" or "stages of development" over the life span. This process is generally viewed as directional and nonreversible. That is, once new structure forms, the person does not revert to earlier forms. Functions may decline, or appear childlike, but this does not equal an immature organism. In our field, for instance, we may speak of an adult functioning like an adolescent, but we do not view the adult as returning to adolescence. Similarly, we may see people who, under stress, may be unable to use certain functions, but that does not equate with their having returned to an era when those functions were not yet developed.

Thelen and Smith (1994), in their application of dynamic systems principles to the development of cognition and action, label this view of orderly, goal-directed and directional progression as "the view from above". The view of orderly progression makes development appear to head towards an end state such as the adult standard of formal reasoning. In our field, this may include some adaptive goal such as genital primacy, autonomy, or mature relatedness. As noted above, a problem with these approaches is that they have to postulate some underlying guiding mechanism to account for the general progression. In psychoanalysis that appears as some primary motivator such as libidinal instinct, autonomy, selfobject functions or some central organizer like the synthetic function of the ego.

In contrast, development may be viewed the other way around. From the "view from below" (Thelen and Smith, 1994), "development is messy ...linearity, uniformity, inevitable sequencing, and even irreversibility break down...What looks like a cohesive, orchestrated process from afar takes on the flavor of a more exploratory, opportunistic, syncretic, and function-driven process in its instantiation...At close range, the rules for development do not hold. What determines the behavioral performance seems less like the grand plan or timetable then the immediacy of the situation or task at hand. Our efforts to organize developmental phenomena into lawful relations appear stymied by the phenomena themselves...The paradox is that the organism moves along as an adapted, integrated whole as the component structures and processes change in fits and starts" (p. xvi-xvii).

This "view from below" highlights the idea that although development appears structured and driven, there are no pre-programmed rules for maturational progression that ultimately govern psychic structure. Instead, there is complexity (Thelen and Smith, 1994), "multiple, parallel, and continuously dynamic interplay of certain stable solutions that emerge from relations, not design...When the elements of such complex systems cooperate, they give rise to behavior with a unitary character, and thus to the illusion of structure. But the order is always executory, rather than rule-drive, allowing for the enormous sensitivity and flexibility of behavior to organize and regroup around task and context" (p. xix).

In this view of the path towards overall order and integration, development proceeds by the simultaneous cooperation of multiple subsystems. There are a number of important features to this assembly process. First, development is asynchronous, meaning that not all structures and functions develop in step with one another or as a

unified whole. For example, humans are advanced very early in some abilities such as the sensory and visual systems, while motor skills develop over years. Second, elements of what will later emerge as integrated performance in cognition and behavior can be detected long in advance of the fully functional adaptation. In studying how infants learn to walk, for example, there is evidence that they are very competent steppers in certain contexts long before they can walk on their own (Thelen and Smith, 1994, p. 10-16). Third, there may be sudden appearances and disappearances of behaviors, referred to in dynamic terminology as phase shifts (p.84). Fourth, there is reversibility. There may be a decline of a function (sucking). Alternatively, the losses may be immediately context-bound and short-term, as in the commonly observed phenomena of décalage that occurs when new abilities are first emerging (p.86). Finally, at any given moment, the stability of the overall system, the manifest behavior, represents the cooperative function of the subsystems at the time the behavior is assembled. The assembly always occurs in a particular environment and task context.

Over time, developmental phases or patterns are formed from the cooperative interactions of subsystems that results in differing stable configurations. Change over time occurs in the context of any sustained internal or external conditions that create a context for reorganization. In the language of dynamic systems these conditions are termed control parameters. Over time, there may occur jumps from one configuration to another, there may be a seemingly linear progression from one to another, or configurations may not change at all. The overall view of phase-like progression is a function of the cohesiveness, resilience, and flexibility of the human system as it is active in assembly within parameters of context and task. There is equifinality, with many possible subsystem configurations yielding the same overall manifest adaptive responses. Patterns that emerge may change as conditions change, as subsystems vary in their overall effect, or as new subsystems are called into play.

From the perspective of "the "view from below", context is centrally important. The phase-like order and local variability are inextricably tied through the very here and now that comprises the context of experience and action. First, context creates order, since it is the repeated here and now experiences that taken together over time create global order. Second, the context selects which order, or system of meaning or behavioral repertoire, will be adaptive. Third, context fits the history of responses to the current situation. Over time, development takes the general direction of moving from the here and now to associations across contexts, creating the appearance that

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behavior is removed from the moment-to-moment shifts. At the same time, it continues to select details that can cause the system to reorganize, making it more highly differentiated (Thelen and Smith, 1994,p. 216-217). In other words, the local details, the here and now, and the global order or the developmental phase, are the same thing. The difference is one of scale between the here and now and history.

Variability of behavior is intrinsic to the dynamic process of development. Quoting Thelen and Smith (1994): "These variable, fluid, task-sensitive local effects are not just noise in a grand developmental plan, but are the processes that engender developmental change. It is the very nature of such local complexity to produce behavior with global simplicity" (p. xviii). Variability, then, is an indicator of a system in flux, and an important aspect of transitions to new overall forms of behavior. During times of transition, when subsystems are not strongly cohesive, small changes in the environment or the organism can create large reorganizations. The system is free to reorganize. In contrast, subsystems that are inflexible may significantly limit the overall ability of the organism to change.

Adolescence: The View From Dynamic Systems

Within a dynamic systems perspective, adolescence may be considered a period of reorganization in the context of greater complexity. In the most generic sense, the shift occurs simply because contexts for adaptation change. We call these contexts for adaptation the developmental tasks of adolescence. But there is no inborn, supraordinate, primary motive such as pressure towards instinctual discharge, or a need to separate from infantile objects, or a new selfobject requirement. Instead, the adolescent process may be considered in terms of the shifting equilibrium of the organismic system, or self. It occurs as it does, in various forms in history and cultures, because the subsystem assemblies that are necessary for adaptation vary in context. Some integration will occur, but the on-the-fly, opportunistic, context sensitive nature of adaptation means that this will not be the same across all time and cultures. In other words, one would expect that some new integration, or identity will emerge, but its behavioral manifestations, and even the individual's subjective sense of it, will always reflect the context specific nature of its occurrence. Developmental tasks clearly are not the same for everyone. For example, one can imagine that an individual's identity within a caste system, where all aspects of life are a function of specific status, would be quite

different that a sense of oneself in a system where one's role and status shifted as one moved in different areas of life (Sameroff, 1983).

From a dynamic systems perspective, psychoanalytic theories of adolescence may be considered examples of a "view from above". Freud's (1905) transformations to genital primacy, Mahler's (1975) progression from hatching through object constancy, or Blos'(1962) five phases of adolescence all serve as examples. These models carry the expectation of a maturational unfolding with order and directionality. To put this another way, psychoanalytic theory has largely approached development from the view of the desired end point, emphasizing analysis, or the question of how the whole can be understood in terms of the pieces. Recall that when Blos sought to explicate character formation in adolescence, he did so by analysis of the preconditions of individuation, residual trauma, genital sexuality, and ego continuity. The synthetic function of the ego was invoked to somehow tie everything together.

Dynamic systems (Thelen and Smith, 1994), however, emphasizes the alternative perspective that "development is not the specification of the outcome -- the product – but is the route by which the organism moves from an earlier state to a more mature state" (p. xvi). The emphasis is on the process of the emergence of new forms and functions. This view may shift how we think of such issues as re-working infantile structure and the variability of adolescent behaviors. Grandiose and narcissistic behaviors, well documented in descriptions of adolescence, provide an example.

The psychoanalytic study of toddlers includes the observation that very young children are apt to run headlong into dangerous situations. This observation has become associated with the proposition that toddlers are still driven by the pleasure principle, their infantile grandiosity holding sway over the reality principle (Mahler, 1975). Blos (1967) incorporated this idea into the theory that, consistent with the second individuation, the adolescent withdraws cathexis from the internal parental imagoes, with a return to narcissistic self-preoccupation. With it there is the re-emergence of grandiosity and a regression from the reality based ego of latency. A later revision of psychoanalytic theory added that the fearless behaviors of early childhood might also indicate the toddler's need for a safe, guiding other, the idealized selfobject. This idea, too, was carried into a view that the phase appropriate de-idealization in adolescence results in the emergence of the archaic grandiose self that requires

stabilizing selfobjects for self cohesion.

Interestingly, in a longitudinal study of how infants develop locomotion skills from crawling through competent walking, researchers have observed this very phenomena. In examining how infants learn to move effectively in different situations, Adolph and colleagues (as discussed in Thelen and Smith, 1994) examined how infants perceive the fit between their motor skills and the steepness of slopes. The researchers asked if infants could perceive whether or not a particular incline was beyond their ability to negotiate successfully. They found that infants' knowledge about slopes was quite context specific. At first, crawlers flung themselves headlong down the slopes. Over time, they learned to be good judges of their capabilities and were much more cautious and accurate about the task. However, when these same children began to walk, their knowledge about inclines did not generalize and they had to learn about slopes all over again. Strikingly, a child could be competent about slopes when on hands and knees, and immediately plunge headlong down the incline when standing.

These studies suggest that the so-called grandiosity of toddlers is, in actuality, evidence of developing locomotor skills that have yet to generalize into a broad pattern of hesitation at slopes until one can match skills to task. It is only through repeated trials in a variety of contexts that the overall adaptation emerges. To put this another way, dynamic systems highlights the exploratory processes that eventually coalesce into flexible knowledge. When the vantage point is on the route to adaptive function, context specific subsystems vary normally as stable patterns emerge.

The infamous variability and dichotomies in adolescent behavior takes on new meaning within this perspective. In this view, the fluctuations we observe in adolescents are not of necessity referable to re-evoked early developmental problems or modes of adaptation. They are not noise in the system, nor are they by definition indications of alienation from superego and ego-ideal with the reappearance of infantile narcissism, nor are they indications of loss of self-cohesion attendant to deidealization of stabilizing selfobjects. Instead, they are the very processes that engender developmental change. Such a person would be expected to demonstrate variations in capacities, some precocious, some crudely hewn and ungraceful, some functioning in harmony with the overall system, and some out of sync. There are areas where elements of maturity can be seen long before they are integrated towards adaptive progression, and there are areas where the need for external support leaves the

adolescent quite dependent on the care and guidance of others. This process may be subtle or gross, loud, or soft, smooth or tumultuous, consistent with observations about the variety of normal manifestations of the adolescent passage that defy efforts to classify the many faces of adolescence according to single motivational models.

Let me provide an example.[9] A nice boy wants to make love to a nice girl. There are many aspects of behavior and meanings that must work in harmony to effect the desired goal. In order to effectively develop a relationship, then perform sexually within it, he must first tolerate the intensity of the feeling. He must also associate it with pleasure without becoming overwhelmed so that a goal of satisfaction can be recognized. He must have realistic expectations for the sexual experience; that is, it may satisfy physiologic urgencies and bring about a temporary feeling of warmth and security, but it is not the entire relationship and will not in itself serve issues connected to power, attachment, or self-worth. He must find an appropriate partner who can mutually participate in the sexual experience. Problems in any area result in maladaptive behavior. For example, intolerance of tension may result in withdrawal from the stimulus. His inability to tolerate reality over illusion may lead to disruption in attaining sexual pleasure because it fails to fulfill the goal of establishing self worth or insurance against abandonment. If desire is morally unacceptable then inhibition or inappropriate choice of partners may be the outcome. Our amorous young man might be really competent in one area of this complex behavior, but quite inept in another.

Here lies the crux of the argument. What is important is the view that a reorganizing system requires many trials in multiple contexts to recruit many aspects of experience that will emerge in a stable overall adaptive pattern. In this view, action in thought and deed is the very soul of development. Exploration, trial and error, assembly and reassembly in various contexts is how development proceeds. Interference with any one of the subsystems may derail the overall goal. In other words, it is the absence of opportunity for reorganization, or premature closure that is evidenced in adaptive problems. Turmoil is not necessary, but flexibility is.

Adolescent psychotherapy: A dynamic systems perspective

Like the psychoanalytic approach to development, the approach to psychotherapy has been from the perspective of an ideal of desired end points of maturation that are reached in an orderly, directional trajectory. It

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follows logically that such a position treats departures or variability from this trajectory as problems. That we have come to consider these phenomena as they appear in treatment in terms of resistance, deficits, or regression serves to perpetuate the notion that, save for problems creating disruptions, development would continue smoothly.

Of course, smooth is hardly a word most of us would use to describe adolescent psychotherapy. Therapy often unfolds erratically, with interruptions in sessions or crises in family or school. Even with a fairly reliable treatment setting, patients may manifest rapid shifts from reflective thought to reflexive action, or from organized goals, ideals, and ambitions to vague goals, unconnected to the paths towards their achievement.

Adolescent therapists are also distinct. The therapeutic process with adolescents typically includes interventions well beyond interpretation. In fact, the specific intervention of interpretation of unconscious conflict may form only a part, if any part, of the treatment. The therapist's activity is typically greater than in therapy with adults. It is not uncommon to hear that a colleague has appeared in a patient's life beyond parent or school conferences, having attended school plays, graduations, religious ceremonies, or weddings. While acutely aware of John Meek's (Meeks and Bernet, 1990) elegant cautionary advice about "unholy alliances", therapists nevertheless pursue the practical idea that the best alliance is developed by someone who can help genuinely, supplying both emotional authenticity and practical utility.

Still, somehow this fluid and messy process of actions and interactions does result in an overall shift towards adaptation, sometimes with a companion shift to a sense of oneself as at the center of one's own life. The addition of a dynamic systems view may point us towards a closer integration of these actualities of practice and a theory of adolescence. Recall that the "view from below" approaches development from the perspective of the processes through which stable organizations of behavior and cognition emerge. Moment-to-moment conditions create opportunities for behavioral responses that evidence the assembly of subsystems in the present, the history of that behavior in similar contexts, and the associations of that repertoire in the context of personal history.

As the adolescent, like our amorous young man, brings various subsystems to the fore in the form of behavior and subjective experience, the treatment provides a venue for multiple, context-specific trials towards reorganization. Venues may include individual, family, activity, and educational components. Sessions may run the gamut from interpretation to therapist self-revelation, and content may include fluid movement between existential

contemplation to completing that night's homework. Each patient therapist pair will create a unique process.

Therapeutic change is embedded in these moment-to-moment interactions in the clinical encounter. Taken together, all these may reflect the active assembly process of adolescence itself. The organizing concept is that all these components of action, interaction, and reflection are of a piece, and together they result in new stable patterns of organization as they are assembled and influence the whole as it appears in the current environment. The process unfolds in a fashion isomorphic to the toddler learning to negotiate slopes.

Perhaps this approach can clarify the disjuncture between our view of adolescence and our encounters with adolescents. When we think in terms of stages of development, developmental tasks, or the recrudescence of childhood motivations and psychic structure, we organize our "view from above". Yet in our day to day experience of patients, we see and are part of exploratory, opportunistic, syncretic, and function-driven processes. Clinically, the "view from above" causes confusion because we look for sequential progression, while in fact we encounter multiple, often poorly synchronized interacting actions and experiences. In other words, a disjuncture arises when we think globally but act locally.

The advantage of a systems based theory is that it can retain the study of the unique organizing processes of each individual through exploration of meanings and motives contained in words, dreams, behaviors, and moods, while at the same time understand that the principles of change are related to the shifting organization of the system. Change is not a function of any particular technique informed by any particular theory; rather, change is a function of the actions, the moment-to-moment, opportunistic exchanges from which emerge a different self-organization. An understanding that there is an isomorphism between the scales of variable, context specific action and emergent stability over time allows us to see that developmental phases and the details of a moment are of a piece. There is cohesion between therapy and development because the processes of therapy are the processes of development itself. Therapy does not simply remove obstacles to development so that the synthetic function can step in to create spontaneously the denouement of the developmental story. At the level of patient therapist interactions we can appreciate that synthesizing and the events of the moment are merged. In this way, the central core of adolescence as a period of reorganization of behavior and self takes its place on center stage, rather than remaining in its previous role as the phantom of the developmental opera. And in the clinical encounter, we become part of the show.

In that regard, let me add a final word on the place of empathy and relationships in psychotherapy. A number analysts have applied developmental findings to an understanding of therapeutic processes. Basch (1988), in particular, has aptly described psychotherapy as applied developmental psychology. Psychotherapy seeks to facilitate a reorganization in functioning through empathic immersion in the patient's subjective experience as well as an explanation of the patient's efforts to adapt. The fulcrum for change is the establishment of a relationship wherein the patient is able to use the therapist to enable self stability during the therapeutic process.

How does this square with a dynamic systems perspective? As I see it, dynamic systems suggests three perspectives from which to view relationships. First, in psychotherapy the therapist acts, in the totality of his or her verbal and behavioral conduct, as a control parameter; that is, as a steady, reliable, consistent presence, that creates a new context for the patient, promoting reorganization in relation to that influence.[10] Second, behavioral and subjective organization occurs throughout life in the context of interactions with others (Lichtenberg, 1989; Stern, 1985, 1998). In a systems perspective, that means that self-organization is not separable from relations. Self and other are inextricably entwined (Emde, 1983). It has even been argued that the appearance of a reflective self is itself an emergent property of, and dependent on, ongoing social interaction (Edelman, 1992; Barry, 1998). In that sense, as participants in the moment-to-moment exchanges, we are part of the system itself. The third point is related to the second. On the one hand, relationships ipso facto laden with emotion may serve as leading components of self-organization, and therefore small changes in relations may cause large changes in the overall system.[11] Nevertheless, there is no need to posit a primary motive of social relations embedded in the developmental process. If development is the process of reorganizing patterns, it is self-organization that is the thread through life. Some aspects of adaptive self-organization, in the normal course of life, may be unconnected to relationships at all.

Conclusion

The study of adolescents strikes me as a bustling marketplace of issues. Picture the open markets in Florence in the Renaissance or London's Portobelo Road of today. In the marketplace of adolescent psychology, everyone gathered seems to share one thing in common: that somehow, roughly in the second decade of life, people

transform from a state where they mostly behave and think like children to a state where they mostly do not. Merchants converge from diverse cultures with a variety of wares in the market square, loudly trumpeting their products, proclaiming their power and efficiency to understand development, describe its problems, and supply a fix. Biologists abound, proclaiming the power of their hormones to jump start development and to shape body and brain. Psychoanalysts have many kiosks, placed close together with the intent to drown out the cries of competitors with claims of superior power to explain and effect change. In this niche of the market especially, merchants tend to want their wares to occupy dominance, with the others' occupying a subsidiary role at most. Academics fill every spare inch, acting as monitors of truth in advertising, as referees reminding others not to occupy more space than they deserve, and as perspective enforcers who remind merchants that their much touted products are merely necessities of modern culture, with questionable enduring value or universal marketability.

In this chapter, I have suggested that a dynamic systems perspective points towards a cohesive, less cacophonous view of the study of adolescent development and adolescent psychotherapy. The concept of adolescence as a manifestation of an ongoing re-organization of the human system offers a unifying view of adolescent development, pathology, clinical interventions, and a theory of psychic change. Psychotherapeutic change and development represent shifting patterns of integration viewed from the differing perspectives of moments or years. Psychotherapy does more than remove obstacles to insight or development, at the level of patient-therapist interactions, we can see that it demonstrates the essence of development.

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2.   Our theory of adolescent development and treatment has continued to reflect these advances and controversies in the larger realm of psychoanalysis. Perhaps more than anyplace, the history of our own journal, Adolescent Psychiatry, reflects the influence of our progressively deepening understanding of adolescence. Fittingly, the first article of the first issue was authored by Peter Blos, while the first article of the most recent issue was by Dick Marohn, revising Peter Blos' concept of prolonged adolescence in light of our expanded knowledge of the importance of stabilizing others throughout development.

3.   See Lichtenstein (1965), on Hartmann's "fourth dimension" and its relation to a metapsychological definition of self

4.   Parenthetically, this is an interesting example of how theoreticians with a variety of commitments to the fundamentals of the origins of psychological life enlist the same sources to argue their case, despite the epistemological inconsistencies in these approaches.

5.   I use the term dynamic systems for consistency with Thelen and Smith's (1994) emphasis that these systems change continuously over time. The science has been alternatively named the study of chaotic, nonlinear, and self-organizing systems.

6.   This work has been richly described by Thelen and Smith (1994; Smith and Thelen,1993) and colleagues in two recent volumes. My overview is taken largely from their work.

7.   This is not to diminish in any way Freud's contributions of a clinical theory of development and psychopathology. It does however, seek to place these and other clinical contributions in a context coherent with modern biology. Thelen and Smith use the neurobiological contributions of Gerald Edelman (1992) for their fundamental assumptions about human development. Edelman has suggested a theory of brain development and organization that views action, cognition, and conscious self reflection as emergent phenomena of complex reentrant neuronal pathways. They are not viewed as separate, but rather as of a piece, all emergent from the same basic organizing principles of biological systems.

8.　　See Stern (1985), Basch (1988), Lichtenberg (1989), and Gedo (1993), for detailed clinical and theoretical explorations of this approach.

9.　　This is an application of an example first used in Jaffe, 1997a.

10.　　See also Fajardo (1993) for a discussion of patient and therapist vantage points for addressing and experiencing this process.

11.　　This is precisely what we rely on in brief psychotherapy (Jaffe, 1997b).