

Original Contribution

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**PREDATORY
DETACHMENT AND
STIMULUS GRADIENT
THRESHOLD**

The explosion of information about right hemisphere function in behavior-disordered children is proceeding at a rate rivaling the growth of the Internet. In this new age of affect, every monthly

journal issue offers us word of disorders that can be traced to the same area of the brain, creating a kind of neurochemical and neuroanatomical scapegoat. I find increasing evidence for a link between ADD/ADHD and severe childhood alienation from society, and that we are missing an important nexus between what is known in neuro-biology and what is thought in the world of reform school, the domiciliary care of delinquents, and the study of juvenile crime. If such a connection exists, how might it work?

Applying Tomkins's theories of affective operations, we can hypothesize a single neuroaffective flaw that may be common to a number of disorders: Variation from the normal range of sensitivity to stimulus density or gradient might require that unusual stimulus density or fluctuation thereof be required to trigger interest-excitement or other affects. What is more, since the difference between excitement and fear involves only quantitative differences in essentially the same stimuli, that which might inspire fear in a normal child would therefore be merely thrilling or only exciting to those destined for headlines. Let us now extrapolate how a mechanism that alters a single affective stimulus threshold, at the "machine language" level, can have predictable consequences on higher level scripted programs, though the latter involve other than biological "input." We may also be able to formulate how the resultant behavior can be mistaken as drive-determined.

Human offspring blessed with properly functioning parents must be able to signal discomfort, seek and respond to solace, and learn to manage affective resonance (Nathanson, 1986, 1992). They must be able to attach and accommodate to caregivers, peers, and an extended social circle, and to form group alliances. They require an intact capacity for empathy in order to be protected and to protect.

Affect signals an internal state, and empathy is defined as a process in which that state is communicated and handled. The receiver resonates to the broadcast stimulus. Empathy has favored evolution by supporting intra-species cooperation in which, for example, an adult responds to distress by attending to child, or in a wider social scheme, individuals respond in kind to one another's needs as their own affective states come to depend on the maintenance of a harmonious environment. Interest-excitement becomes a communal product. However, some affects, particularly distress or fear, signal vulnerability, which is of primary interest to, say, a carnivore. Among social animals, victims may be exploited for status or power. I define this as an "inverse empathic response" in which interest-excitement is aroused not by a like stimulus, but by

perception of fear, distress, or other vulnerability on the part of another. By analogy, anger can provoke symmetrical anger, or conversely, fear and shame.

In short, the predatory imperative involves interest directed toward a victim, toward one to be eaten or exploited. I posit that this is an empathic process, as is the symmetrical one which we ordinarily think of when we usually use the term "empathy." This is yet another aspect of the highly skilled and intricately developed empathic wall that Nathanson (1986, 1992) suggests we all erect as protection from and management of our affective climate. My concept of the predatory imperative meshes with conventional schemes of love vs. power and may shed light on the common observation that among humans such feelings extend to property and territory. Although in the report that follows I will refer to the caregiver as female and the predatory child as male, this is less my wish to retain an archaic nomenclature than a reflection of my experience with this cohort in more than 20 years as a consultant for the Juvenile Rehabilitation Authority of the State of Washington.

The social order being a fragile web at best, few might survive in the face of the many conditions that strip away parental protection and remove the normal pathways into socialization. Sometimes, therefore, it is more useful for the organism to marshal predatory-detached responses. The ability to maintain confidence in isolation from confirmation by others, to seize immediate opportunity without hesitation, to ignore consequences in favor of immediate gain, and to exhibit no sympathy for hapless victims, are qualities most of us consider both dangerous for the species and too robust for normal social life.

A street kid who can fend for himself at preschool age, to scavenge or use others skillfully, can make it in a world of Hobbesian brutality. He will also have an edge amongst kinder folk when it comes to exploiting the altruism of others, notwithstanding the price he will pay for that tactic. Ultimately, the choice between cooperation and attack involves a complicated formula involving the probabilities cited in the game theories of Poundstone (1992). Hartmann (1993) noted that children with ADD may be seen as a kind of evolutionary link to a primitive hunter heritage. In this communication I am concerned more with those who hunt their own species. Current cultural anthropology (Leakey, 1992) allows the deduction that our primate ancestors became hunters coincident with the development of and nutritional requirements for increasingly larger brains, and that hunting was a highly cooperative enterprise. These are generalizations about the kind of complex schemata usually described as political behavior. It is important that we try to tease out biological or evolutionary principals from so complicated a field.

Affects are sets of physiological reactions that serve to amplify stimuli so we may respond to them. From an evolutionary view, mechanisms that produce a better response to environmental cues confer survival advantage, and those that allow for the elaboration of affect serve the organism just as well as any other adaptive anatomical structures. As biological constructs, affective mechanisms are capable of genetic variation. For our purposes, it is useful to consider each affect as if it were a biological organ, structure, or perhaps a piece of assembly code that directs and organizes arrays of machine code or neural network/neurotransmitter information.

If we accept the idea that an affective structure is susceptible to genetic variation, just as is any anatomical organ, it follows that individuals may be born with varying thresholds for the stimulus

density and gradient necessary to trigger the 6 basic, innate affects. We should also expect an occasional gross developmental anomaly. Nevertheless, when it comes to social behavior, the line between variation and defect blurs. Paraphrasing Szasz (1974), who described addiction as a "habit disapproved by the speaker," we define a defect as "a variation disapproved by the clinician," adding a piquant quality to our discussion of such deviations from the norm. It is essential to recognize the context within which a definition is offered, for any label applied to behavior has sociopolitical consequences. In their analysis of the variables reflecting antisocial childhood, adult criminality, and criminal recidivism in psychopathic individuals, Harris, Rice, and Quinsey (1994) found that these childhood behavior patterns tended to cluster in definite groups rather than fit as extremes along a continuum. They believe that their findings support the idea that psychopathy is a distinct "taxon" or behaviorally differentiated category rather than part of a larger norm.

The specific affect mechanism involved in my hypothesis is interest-excitement. Like all affects, it is a response that focuses attention by bringing an object out front while relegating other information to background status. It also plays a vital role in the construction of memory and narrative. Interest affect is magnified by experience that provides memory of rewarding subsequent enjoyment. Stimuli are provided by whatever objects are to be found in the immediate environment, as arranged by caregivers and probability. Ordinarily, the first nine months of development are dominated by parent-child interaction, where in the course of normal play the parent will begin the process of introducing the child to a world of inanimate objects, reinforcing fascination with some and proscribing others. During the second year, the child continues its own exploration, often checking with its parent for mutual interest experienced as approval. Over the next few years the process of magnification of interest-excitement through observation of the same affect in others will become a basis for identification and for the formation of cultural values.

How much stimulus variation is required to trigger interest-excitement? There should be an optimum sensitivity level for normal function in intact human social systems. If the threshold is too low, even mild stimuli trigger heightened attention. The result can be the intense preoccupation of autism, obsession or paranoia. Perhaps this is why autistic children withdraw from eye contact unable to tolerate ordinary interest in them on the part of others, instead preferring the gentler stimuli of calendars, telephone books, and arithmetic. Too high a threshold compromises sustained attention and effort, resulting in the distractibility of "attention deficit disorder," as there are fewer stimuli that merit continued consideration. Either aberration makes for a "strange" or "difficult" child, as the parents' usual expectations of response are thwarted constantly.

It is as if the child had been delivered to parents who are reading the wrong user's manual and whose misguided efforts at communion bring repeated interference with the empathic process much in the way hearing defects disrupt the learning of language but with the kind of pain that can only be seen with negative affect. Nathanson (1992, in press) has commented at length that this interruption in interest-excitement must trigger shame affect that is then responsible for the lion's share of the unpleasant or apparently maladaptive behavior seen in these children. The impact on higher level script formation of chance variations or aberrations in this mechanism may be profound. This simple glitch can interfere with the most basic initial social connections, and may explain why the alternative to empathic bonding is so frequently a predatory *attack-other* script.

We must investigate four possible contingencies: the relatively normal infant, either with or without parents, and the affect-impaired infant, with and without parents. A normal infant shows interest as it begins to track and to focus upon a bright toy, a sound, or the glint in mother's eye, the latter associated with food, grooming, play (mutual exchange of interest-excitement) and comfort, leading to down-regulation of stimulus gradient and resultant enjoyment-joy. The ideoaffective complexes eventually constructed are eager anticipation, expectation, and pleasure. Similar experiences attend the detection, exploration, acquisition, and mastery of objects.

Repair is an ingredient essential for growth. A large proportion of early transactions involves an interest stimulus, an interruption producing shame affect as well as some associated distress, all modulated by the caregiver. Most typically one sees this when mother calms her frustrated child by distracting it to another object of interest. In a much broader view, this represents the building of culture, in which socially approved objects are presented at appropriate times to one who learns thereby to manage his or her affect in acceptable ways. (Of course, what is acceptable in one family or subculture may not be so elsewhere, which is why we have religious wars or their equivalents.) Interference at any stage of the process triggers shame manifested by the defenses Nathanson (1992) has characterized as the Compass of Shame. In a successful parent-child dyad the probability is great that any individual bonding interaction will be completed, leading to the construction of conventional empathic and protective relationships. On first inspection these appear to be instinctive responses, particularly in "lower" animals. Such relationships are actually complex behavioral arrangements, determined by the arithmetical probability of the activity taking place. Masson (1995) cites several examples of cross-species adoptive behavior. The stimulus for an empathic-protective response is often a small, cute animal with a big head. Evolution favors a penchant for nurture because it is much more likely that proximity will determine that the benefactor will be one's own offspring or a relative. The probability is high enough that outsiders are tolerated without threatening one's own genetic survival, although we know from the work of Stern (1985) that the ability of the infant to react to not-mother depends on certain built-in pattern recognition algorithms.

Until the renaissance of biological psychiatry, most of the theoretical basis for mental illness grew around the premise that the infant was a constant as if all of them started out pretty much the same but were then molded from birth as the result of traumatic experiences caused by faulty parenting. The only aspect of "normal" I will address in this communication is the threshold for the stimulation of the innate affect interest-excitement. The effects of massive parental deprivation on children were first described by Rene Spitz (1946) and more recently in reports emanating from Romania and China. Without the interpersonal stimulation and interaffectivity normally provided by parents in the first year, infants are unable to connect to anything in their environment, and literally wither and die. Spitz (1946) called this "anaclitic depression," while in contemporary emergency rooms an analogous clinical presentation is described as the "Failure to Thrive."

Nathanson (1992) describes the Tomkinsian developmental process in detail, and I take for granted the reader's understanding of the role of innate affect. When repeated and intense shame affect becomes the predominant experience of the infant in the absence of parental availability for repair through comfort, affective regulation, or cognitive reorganization, the result is severe emotional pain, managed by any combination of four defensive responses: *withdrawal*, *attack-self*, *avoidance*, and *attack-other* (mobilizing anger). The permutations construct the bulk of conventional psychopathology.

Now let's consider an infant born with an unusually high threshold for the kind of stimulus which would ordinarily trigger interest-excitement affect. Empathic mother-child bonding requires a certain amount of face-to-face encounter, with expressions exchanged as the participants mirror each other. Experimental evidence (Stern, 1974) shows that the timing of such interactions is critical to their success. Mother's presence, however, is conventionally gentle, lest too much intrusive stimulus trigger shame, fear, or produce by affective resonance too much excitement for her taste. When the usual moderate stimulus neither triggers nor maintains the child's interest response, s/he looks away. I suspect that many mothers might think that this child simply doesn't like her, and as things progress, she may come to the conclusion that s/he also doesn't listen to her. Interruption of her own interest sequence must produce a shame response, which she will manage through her own characterological set of defenses produced by the pattern of affect magnification unique to her history. She may then attack, avoid, or withdraw in the mode we therefore describe as "depressed." Each of these strategies is likely, in its own way, to disrupt further the empathic bond. When she does manage to involve herself at an intensity sufficient to turn on her little rascal's winning smile, she cannot maintain the energy long enough to satisfy him. In short, the child's wandering focus preempts a repair sequence that can make life easier for either participant. To make matters worse, his relative imperviousness to fear (for the range of stimulus gradient that normally triggers this affect of warning produces nothing noxious in him) leaves him without a perceived need for protection. With a mixture of consternation and pride, his parents will speak of him as "accident-prone," as he precipitates himself into increasingly dangerous situations, seemingly oblivious to repeated warnings. The struggle against control will become one of his major scripts.

Meanwhile, Junior is having problems of his own, even with his toys. Since he requires an extraordinary level of stimulation to generate interest, attentive moments are fewer and farther between, with more than usual likelihood of interruption. He, too, is destined for a daily bath of shame affect. His siblings may have been quite happy to pile up blocks and knock them over to the accompaniment of chuckles of amusement from their parents. He tries to do the same thing with furniture only to be reprimanded at every turn. The odds of his adopting an *attack-other* script portfolio rises, particularly where authorities are involved.

"To lose one parent is tragic. To lose both seems like carelessness" (Wilde, 1895.) Lady Bracknell might well have been referring to the manners of hyperactive orphans. When such a child somehow makes it out of the cradle, his survival depends upon being able to move very quickly and opportunistically through a world of primarily inanimate objects. Other people are basically impediments to acquisition, and therefore sources only of. . . what was that? shame affect again? This is a tedious diet.

However, Junior has already learned to fight for more varied fare, preferably if it belongs to someone else, as contest introduces the heightened interest of uncertainty. Having little experience of symmetrical empathy, he is untroubled by the displeasure of others or with his exile from normal social circles. He lives as a fish, feeding on smaller fry, hoping to grow and take on bigger prey. He may learn to swim with the school and take on as camouflage the markings of his nearest companions. He may become a scoundrel in business or politics, a tyrant, a major or minor criminal. If he is not successful at enterprise he is

arrested, perhaps to become the subject for someone's study of psychopathy.

Fortunately, not all those afflicted with disorders of the initiation and maintenance of interest-excitement turn to predation despite how likely it is that they will spend their early years in conflict with authorities and ridiculed by peers. In practice, we see many such people (now diagnosed as having "residual ADHD") who somehow managed to adapt. They learned to read many books simultaneously, a few pages at a time. They learned to clown, thereby seizing control of the ridicule process. Perhaps they became chronic failures, only to get a late start after discovering stimulants. In any case, they did not detach from society to become its predators.

We still do not know of any key ingredient in the decision to "go antisocial." My guess, my best working hypothesis suggests that scripts built as the result of repeated failure to connect with others come to incorporate the rush associated with rage to form specific variants of the *attack-other* pole of the Compass of Shame. Considering the obvious limitations on the window of opportunity within which one might interrupt the reinforcing accumulation of antisocial experiences, it would seem that identification of severe ADHD in pre-schoolers should constitute a psychiatric emergency so that a child's earliest peer relationships might not be scarred by the alienation and ridicule that would ordinarily be inflicted on a child who lacked the normal interaffective controls provided by the empathic wall.

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