

February 2013: *Comfort Zone ONLINE*

## **Fulfillment of a Dream--Vantage Sensitivity**

In 1996, I attended my first scientific conference on temperament as a budding researcher in that field. I remember listening to a speaker describing a large minority of infants who have "negative temperaments" at birth and grow up to be shy, anxious, depressed, neurotic, and so forth. This was at the same time that Jerome Kagan was researching inhibited children who, as infants, were highly reactive to a pinprick in their foot or to being restrained, and at three or four would hesitate or seem afraid when brought into a room full of strange, bright, noisy toys or invited to play by a loud stranger in a clown outfit. Not *my* favorite things as a kid.

I knew intuitively that the speaker had it wrong. Many of these infants were just highly sensitive. I dared to stand up and try to say something about how these infants' negative reactions might be due to being over stimulated or more sensitive to pain. Maybe some or most inhibited children, too, just preferred to observe, and with the right parenting would grow up just fine.

Of course my voice probably trembled and my words were a bit incoherent--I was much, much more emotionally invested in this issue than the other, non-sensitive researchers, and I was definitely over stimulated. Who was I to question the paradigm held by the entire audience? Of course I was politely dismissed. But I knew in my heart as well as my brain that they were wrong. First, you and I are more than a bundle of negative emotions. Second, a large minority of children born in every generation could not be simply negative and difficult. Traits that make individuals less fit, including socially, just disappear from the gene pool. But every year more "negative" infants are born.

### **First Came "Differential Susceptibility"**

Seventeen years later we know those researchers dividing the world into negative and positive infants who became troubled or happy adults actually were wrong. As just one example, a recent study of infants with "negative, difficult" temperaments and who received "positive, responsive maternal care" during the first six months of life scored higher on academic and social skills at age six than those who were not "negative" as infants. Those lovely positive infants seemed quite unaffected by good mothering. The same was true of a study of infants in high-quality childcare outside of the home. Negativity in infancy led to more social competence at age 4.5, but the quality of child care made no difference for other kids, because now we know that negative infants are also sensitive ones, and sensitive individuals are more affected by their environment, "for better and for worse."

For a few years now, there has been mounting evidence for this idea of *differential susceptibility*, as [described by Michael Pluess and Jay Belsky](#), and [to which I have alluded before](#) also. They set out to examine closely all the studies looking for an interaction between certain indicators of innate sensitivity ("nature") and

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environment ("nurture"). The environments studied were usually either parenting styles observed at home or out-of-home child care, but sometimes the studies were of the stress adults were experiencing in their environment. The indicators of sensitivity varied in these studies--a high score on the HSP self-test, certain genes (found to be associated with the HSP self-test), a more reactive physiology, or "negative," "difficult" behaviors in infancy or childhood.

These interaction studies were usually designed to show that people, especially children, with sensitivity indicators were more at risk in bad environments, but did as well as others in good ones. This in itself was a new idea. Before that, it had been assumed but never demonstrated empirically, that sensitive people generally had more problems, whatever their environment. The startling finding was that in study after study, in good environments the sensitive individuals had not only "just-as-good" outcomes, but better outcomes than the non-sensitive subjects. Rather than begin "vulnerable" to damage, they were "susceptible" to everything. Or as [some biologists have put it](#), more responsive. Pluess and Belsky used the term *differential susceptibility* to describe the phenomenon revealed by this interaction of nature and nurture in sensitive people.

### **A Dream Fulfilled--Vantage Sensitivity**

But it gets even nicer. Since the differential susceptibility of sensitive types was discovered, and this was only a few years ago, there has been a flood of new research focusing on the "for better" side. So many studies have gone on to test for and find the positive side of sensitivity that Pluess and Belsky adopted a new term for it, *vantage sensitivity* (first used by Stephen Manuck, while giving a talk at a conference in Montreal). By that they mean gaining more than others from a good environment because of being more sensitive. The term "vantage" (it's in the dictionary) was chosen to indicate a general advantage, going beyond a particular advantage (intelligence, a house in a good location, having the best hand at cards etc.).

You can share, I am sure, in my satisfaction at having it recognized and empirically demonstrated that being an HSP bestows broad advantages. Although we knew it, it is a revolution in the field of temperament, genetics, and child development--and will soon begin to impact clinical psychology and psychiatry, *I hope*. New ideas can be difficult for established professionals to embrace unless they are directly involved in creating them. Often we have to see an entirely new generation of scholars before a revolutionary idea like this one is embraced. Twenty years ago there was a huge battle raging over what most determined personality: "nature" (temperament) or "nurture" (environment, especially attachment style in infancy, before a child's temperament becomes measurable). Now no one sees any battle there. It's an interaction, stupid.

I wish I had discovered this empirically. I did my best to shift the tide just by naming it sensitivity, not neuroticism, shyness, innate anxiety, inhibitedness, negativity, and all those other terms. I also decided to demonstrate, [and did](#), that a troubled childhood affects us more, but without that we do as well as others. We even did an experiment to demonstrate that bad news produces more negative

feelings in HSPs than non-HSPs, but good news... creates less negative feeling. We never measured positive feelings! A better outcome for HSPs when receiving good news. I think I was too used to being disbelieved to look at whether we did better than others if raised in a good environment, or felt more positive emotions than others in a positive situation, but it was a fact waiting to be discovered by many more than me when the time was right. (We will soon publish two studies that look more closely at the processes behind this tendency to feel more positive affect than others.) It's so exciting to see it accepted after all these years of work, whoever discovers it.

### **The List Grows Long**

Just to give you a flavor of the range of research supporting this idea of vantage sensitivity, here is a partial list, from dozens of studies involving thousands of subjects, of the good outcomes that went with being sensitive that were not found for non-sensitive subjects in the same study:

- Better parenting leading to higher teacher-rated social skills
- Better parenting leading to higher academic performance
- Receiving more attention from father leading to daughters having more prosocial behavior
- Good relationship with mother leading to more "effortful control" (a bit like will power)
- Parents given a brief course on how to make their child more secure in fact leading to more security
- Secure attachment leading to later sociability
- A treatment for "disruptive behavior disorder" leading to less disruptive behavior
- Low family adversity leading to more prosocial behavior
- Good home environment leading to less aggression
- Positive feedback during a literacy-skills training leading to greater literacy skills
- Mother's responsiveness leading to child behaving in a more moral way
- Positive parenting leading to positive emotions in adolescence
- Cognitive behavioral therapy for anxiety leading to reduced anxiety
- Recent positive life events leading to lower neuroticism scores, more life satisfaction
- Partner's positive emotions before discussing a marital disagreement leading to more positive feelings in the sensitive partner after the argument
- A resilience-promoting program leading to less depression (this is a study by Michael Pluess and an associate using a new version of the HSP Scale for older children and adolescents)

I should add that some of the results in these studies were found with "negative" children who had genes or behaviors associated with Attention Deficit Disorder, which I have usually viewed as the opposite of being an HSP, since the first is associated with impulsivity and the latter with pausing to check before acting. However, it makes sense that children with ADD are a little like HSPs in that they notice more in their environment (and are easily overwhelmed), even if in the case of ADD this noticing more results in being distracted and in the case of HS it results in needing a long time to think all these details through. While the genetics may differ, what they appear to have in common is a survival strategy involving being more responsive to one's environment. It is also possible, perhaps, to have a touch of both if different genes govern them, as in the case of the high sensation seeking (HSS) who is also an HSP, causing the types of inner conflicts [I have described before](#).

### **"Poor Little Orphans"**

My favorite of all of these studies is one involving 136 abandoned infants, age 6 to 30 months, in Bucharest. There was room for half of these children in high quality foster care homes. The rest remained in institutions due to lack of funds. The children were randomly assigned to one of these two very different situations and then compared at 54 months on "indiscriminate social behavior," one of the main indicators of harm from institutionalization in early childhood. The infants in the high quality foster care and with a particular genetic variation (determining the availability of serotonin in the brain) that is associated with sensitivity (you score higher on the HSP Scale if you have it) had the lowest indiscriminate social behavior scores of the group, where as those without the gene showed no benefit from the foster care. Some people are even thinking that interventions should only be targeted towards those who can most benefit--the highly sensitive! Maybe these sensitive abandoned infants might have grown up more troubled than others without the intervention, but their sensitivity actually helped them gain from their good environment, even after such a bad start. Ever felt like a poor little highly sensitive orphan? Given a little tenderness, you can still shine!

### **Vindication**

For years, our vulnerability was stressed, and those who were less vulnerable were called "resilient." You hear the term all the time now. I don't know about you, but I have always secretly cringed at that word. It comes from studies of children growing up in very adverse environments. Some were "just fine" as adults, while others suffered greatly. I knew which group we belonged to. We are the ones told, "Too bad you can't be more resilient" and "Everybody's had some kind of hard time in childhood" and "Why not just put the past behind you." Grr.

Pluess and Belsky think one reason the positive side of sensitivity was not seen was that there was no theory or even word describing this specific positive quality of sensitivity. Resilience took up all the space. But if resilience means protected from negative influences, it could also mean not affected by good influences either, as the research on vantage sensitivity seems to indicate. As you saw from the list above, people without one or more of the factors indicating sensitivity do not seem

to benefit much from good environments or from interventions to improve their functioning. Indeed, Pluess and Belsky call them *vantage-resistant*. So now I could say to those particularly entitled, insensitive people I run across, if I had a mean vindictive streak, "You had every advantage--good home, great schools--so why are you being so difficult? It's almost like you *put the past behind you*. Are you *vantage resistant*?" (Well, at least we have a term to use in our private thoughts.)

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**More resources:**

- [Belsky 2009 Beyond Diathesis Stress - Differential Susceptibility to Environmental Influences](#)
- [Belsky 2009 Vulnerability genes or plasticity genes](#)
- [Pluess & Belsky 2012 Vantage Sensitivity: Individual Differences in Response to Positive Experiences](#)

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