

YOGABODYMIND

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NOTE TO READERS

I'm a working yoga teacher in the Ashtanga tradition. At the time of this writing I've been at it steadily for over 27 years in Santa Barbara, California, as a householder. My teachers in India have been Pattabhi Jois and Sharath Rangaswamy. Although the Ashtanga tradition is known for the quote "Yoga is one percent theory, ninety-nine percent practice", that never stopped me from turning philosophical research into a practice of its own. Joseph Campbell said his practice was reading sentences in books. I visited his library and every book I pulled off the shelves was marked by extensive margin notes.

There can be a problem when the busy intellectual mind gets in the way of the development of what I'm calling "yogabodymind", but this problem isn't insurmountable. Many yogis aren't intellectual but fewer of them are non-intelligent. The paradox lies in the fact that to get going with yoga, we need to make efforts to control discursive mind, and may go through phases where engaging heady yoga related ideas is the last thing we want. But I've found that getting a grasp of the larger yogic landscape is enormously beneficial, and I regularly get requests from students for concepts, talks, things to read.

In this book I try to honor many different kinds of intelligence, although you'll notice that some passages get deep into "hard" philosophy. Why? Several years into my career I began to feel that someone needed to be able to handle the brutal attacks by professional philosophers and scientists on what for many yogis is the foundation of their life's meaning. These attacks go way beyond mere dismissal of conventional religion, such as church-going Christianity, and into a bald challenge to any kind of larger spirit or purpose in life. Yogis: they're aiming straight at you. As spiritual practitioners we can try ignore these writers, partly because I think they're missing a big part of the picture as you'll find out. But if you were to choose to read a book such as Daniel Dennett's *Darwin's Dangerous Idea*, it might drop you into a vat of threatened confusion. In no small part because it is an excellent book. True spiritual freedom can supposedly handle anything (including the big "exit stage left" at the end of your life...)

A related theme has to do with what we can call the Bodhisattva ideal, which is to achieve high levels of yogic attainment and then to return to normal life and attempt to help others get there too. You can't enter the marketplace in a clueless manner and expect any success. I believe the yogi who wants to help needs deep knowledge of intellectual, political and cultural events of the present and the past of his own, and the global, society. That means, y'know, a fluency in complex relationship dynamics, understanding pop music and novels, watching shows and sports, aware of what the academics, politicians and Silicon Valley are up to. What the kids are up to. And holding down a yoga that not only can handle this but thrives on it. *Making* it your yoga.

Sometimes people extend a critique toward "self-absorbed" practices such as yoga, claiming it to be a navel-gazing cul-de-sac and that there are far more pressing issues to be engaged. My response is this: let's take the potential human and sentient-

creature disaster of global warming as a suitably pressing issue. Any success addressing this requires not just technological skill but also, and at this point according to scientists, mostly, political success. Democracy is the absolute worst form of government except for all the others. In democracies, a high level of awareness spread throughout the populous is needed for the political will to tackle the risks perceived by cutting-edge thinkers. People need to evolve in order to cast votes which will give us a chance to survive. Meditative hatha yoga, practiced on a regular basis over time, is the finest tool I am aware of towards individual human development, and this book is an attempt to back that claim up. Not just trying to help others evolve but being an example of evolution oneself is needed now more than ever. Yoga makes you smarter.

Technically, this is the third incarnation of this material. The first was a lengthy series of blog posts, which presented a rat's nest of ideas that much of the first edition of the book was an attempt to untangle. The time spent on this second edition has given me the chance to carefully organize it in a way I'm much happier with. It also adds many new things.

I chose to present this as a free online book as opposed to self-publishing, or e-publishing as a print on demand, primarily because it is a constant work in progress and a life-work. My intention is to continually add to, update and revise this. Also, I've been told that my yoga studio has an intimidation barrier to entry for some, which I'm not sure is warranted, so I wanted to make this writing as easily accessible as possible. May it shed light on your path.

THE 10,000 HOURS

The "10,000 hour rule" has captured the interest of the public, with journalist Daniel Coyle claiming it went "mainstream" in 2008. By that he is referring to Malcolm Gladwell's book *Outliers*. Much of Gladwell's inspiration seems to come from a paper written in 2002 by Canadian Physical Educators Joseph Baker et al, *Sport Expertise: Factors Influencing the Development of Elite Athletes*. A prominent prior developer of the theory was K. Anders Ericsson in the early nineties, who extolled "deliberate practice" which entails "forms of training that are not intrinsically motivating, require

high levels of effort and attention, and do not lead to immediate social or financial rewards.” This includes, “negotiating motivational constraints.” Ericsson also notes that “many characteristics once believed to reflect innate talent are actually the result of intense practice extended for a minimum of 10 years.” Earlier foundations by Chase and Simon- who called it the ten year rule- were worked out in 1973, who, along with Ericsson, found that "masters" develop powerful working memories for the kind of data that shows up in their circumscribed fields.

The essence of working memory is the ability to temporarily hold pieces of information in mind bearing on the situation at hand. Baker et al: “In a study of expertise in chess, Chase and Simon indicated that differences between the expert level players (grandmaster players) and lesser skilled players (master and novice players) were attributable to the ability to organize information in more meaningful 'chunks' rather than the possession of a superior memory capacity.” One way to express this is the metaphor of the forest and the trees. As, the saying goes, “the people had a name for every tree but no name for the forest.” But if we spend enough time with one individual tree after another, at some point a forest pops into view; only one thing to remember but with lots of pieces in it. The grandmasters can make these chunks because they've put in more time, not because they're special geniuses who can do it effortlessly. A common theme in these studies is that genius by itself isn't nearly enough.

Coyle also conveys the disappointment of some prominent voices in sports training on the subject of 10,000 hours: “It’s absolutely nuts,’ the head of one nation’s soccer federation told me. ‘Coaches are tracking practice hours and the athletes are clocking in and out with time cards like they’re working on an assembly line. There’s no ownership, no creativity.’”

So, obviously, although learning happens through dumb repetition, just logging the hours won’t necessarily cut it. In his fine little book *Mastery* by Esalen co-founder George Leonard, we find four development curves for those who undertake a discipline, in his case, Aikido. The first and of course the best is *the master*, who gradually develops from plateau to plateau, each one a little higher than the previous. The plateau is where outward progress isn’t overtly visible but where inward things under the surface are developing physically, neurologically and psychically, and they typically emerge and become evident in surprisingly mature form in a sudden rush. Leonard contends that those who are inclined toward mastery love the plateau.

The next three types: *the dabbler*, who goes from one thing to the next and always quits when he hits a plateau; *the obsessive*, who goes like crazy and then burns out and burns her bridges; and then, the great bummer for our soccer coach above, *the hacker*: “after sort of getting the hang of the thing, he is willing to stay on the plateau indefinitely”, a guy who loves “hacking around with other hackers”. So, even if he somehow makes it to 10,000 hours, the hacker is still hacking because he isn’t really focusing during this lifetime. Why? Well, one possible reason: staying with a practice over time will eventually ram us directly into ourselves, including our shadows, the places where the light doesn’t easily go. Keep hacking and these difficult uncomfortable things can sort of be avoided. If we stay in the moment with focus (which is not hacking)

at some point we're going to discover the facts of our limitations, which are often surrounded and shrouded by unresolved emotional content. Not everybody is up for that.

So, we have to pay attention, and even be creative, while we practice if we want to get to a place which could be called mastery. And if we look at this from a yogic perspective, paying attention is the point, and it leads us somewhere, somewhere that eventually will likely become more important than the skills gained in the gross realm by the practice. And if we keep paying attention we get better at paying attention. I'll get into these last two points in a bit.

The literature of 10,000 hours is by and large one of gaining abilities at competitive human endeavors, such as sports, chess, music, law, business. Gladwell's outliers are almost entirely those who have achieved fame and wealth, with a major character in the book, the Montana-raised-fighter-bouncer-elite-elite-elite-genius-writer-of-a-theory-of-everything Chris Langan being portrayed as a failure because he didn't make it in academia. In the next chapter, I'll introduce a kosmic organizing system called the W-C Lattice which would place such endeavors mostly in the gross realm of existence, in a map that also articulates spiritual levels subtler than the gross. (I'm using "kosmic" instead of "cosmic" to include but go beyond the scientific view of the universe, adding to it each sentient being's subjective internal experience.) These subtler levels become relevant when we're talking about the yogic dimensions of mastery. From the worldview expressed by the W-C Lattice, gross level mastery, fame and wealth are all fine, but they are not the whole story, not by a long shot.

One way of looking at Patanjali's yoga sutras, that quiet brooding living text still hiding there behind the profusion of market-place yogas, is one long celebration of what happens when we focus our attention, allowing it to turn itself inward. The sutras are also a guide to what we will find if we do. Pattabhi Jois used to say, "Ashtanga Yoga is Patanjali Yoga." Which is to imply: 10,000 hours of focused hatha yoga practice will do something to us, will take us somewhere, other than just getting better at the asanas.

However, we can begin our discussion in the gross realm, because physical changes to the body are important in themselves as well as laying the foundation for the special whole-person transformation that sincere hatha yoga can make possible. From a fitness perspective, hatha yoga as it is in Ashtanga- which is a root form for most of the hatha yoga in the world at the time of this writing- offers primarily strengthening and stretching in about equal measure, the strength coming from weight-bearing movement and static holds, with these holds and the stretching sustained in a stable manner between five and eight breaths. To a lesser but still significant extent, Ashtanga also develops balance and coordination, and it has us turn the body upside-down and stay there multiple times per practice. The breath in yoga never gets as deep into aerobic conditioning as the classic aerobic endeavors such as running, but Ashtanga's emphasis on Ujjayi pranayama develops extensive awareness and intelligence in the lungs and respiration process. These are the basic physical exercise categories in Ashtanga.

Like any other kind of physical training, the muscle exercise over time does many amazing things. The following is a list of the main discoveries on the subject from exercise physiology. To begin: Ashtanga and the strength poses in hatha yoga in general

are mostly static holds often held no longer than 8 breaths. The main energy delivery system for such work is known as the phosphate-creatine system, and it operates anaerobically, which means without oxygen. If we subject ourselves to difficult arm balances on a daily basis we will get better at them, and whether the phosphate-creatine system improves its ability to regenerate rapidly, which the aerobic system is known to do, is a matter of conflicting studies, as far as I know not resolved at the time of this writing. Not under debate is the main source of such strength gains: muscles will grow both the size of their existing fibers as well as the number of fibers, i.e.: they'll get bigger. The filaments that force movement between the fibers within the muscle- the basis for muscle contraction- will increase in number. The muscles will increase their storage of exercise-ready fat and glycogen as well as the speed that they can restock these stores after exertion, especially in endurance trained people. If we practice multiple asanas in a row, which the Ashtanga system asks of us, the aerobic system processes of oxygen delivery will kick in and the longer we go, the more we will need to use oxygen to fuel the muscles. The research on how the aerobic system upgrades is on firm ground: the enzyme systems that get nutrients and oxygen into the muscle cells will upregulate, which progressively allows the entire muscle to make energy happen faster. Mitochondria, the engines in the muscle cells that burn the nutrients, will increase in size and number. This will up the energy consumption of the body, speeding metabolism, which, among other benefits, burns excess fat: the fitter the muscles the more fat they burn when the body is at rest. New capillaries will grow, surrounding the muscle fibers, allowing greater blood supply. Likewise, the myoglobin content of the cells will increase, which allows faster transfer of oxygen to the mitochondria (the "fire" which puts energy to use in the mitochondria needs oxygen, just like a flame does). There is also a neural component to fitness gains: nerves which control the muscles will steadily improve their synchronization at the level of the motor units (a motor unit is the group of fibers that one nerve controls). Coordination between agonist and antagonist muscles is refined. These two phenomena are known as "increased neural drive". To sum all that up: the body has multiple responses to regular exertion, it's just waiting for it to present itself.

These gains are temporary: muscles worked on Monday will typically peak in their growth response by Wednesday- or later than that if soreness takes more time to clear- and will begin to degrade thereafter, so if one practices on Monday and then goes on bedrest, much of her progress will be lost somewhere around Saturday for endurance type gains with strength type gains degrading more slowly. Which is to say, to keep the muscles on an upgrade curve, they need to be worked at least twice a week, and with progressively greater loads. If one works up to a certain level of asana intensity, and keeps it there, the muscles will improve up to that level and eventually go no further. If the yogi quits asana and just lives a daily life without specific exercise, the muscles will downgrade to the level presenting itself, lots of chores, couch potato, whatever.

Ligaments, the collagen bands that connect bone to bone, and tendons, the collagen bands that connect muscle to bone, will also upgrade. The repeated strains on these bands will stimulate an increase in collagen production. The fibers within the bands will organize with maximum alignment advantage towards strength in the direction of the forces being asked of them. If exercise stops, the advantageous fiber alignment gradually

loses its organization, and the "band width" decreases.

The same goes for bones. Exercise makes them stronger, more durable, less brittle. In particular, bones need at minimum the weight bearing loads of the earth's gravitational force to be healthy. There is a unique page in Wikipedia called "Spaceflight Osteopenia", which is the unforeseen calamity of gradual bone deterioration that astronauts suffer from the mere fact of no gravity out there for the bones to work against. Fittingly, the best bone workouts are load bearing, which yoga covers quite nicely, for upper and lower body bones. If you are hiking, it is the downhill part that really convinces them to upregulate. The cells that maintain and build up the bones are called osteoblasts and they need movement and stress to even function properly. Bones will be most dense in exactly the areas where the most stress is received. And similar to the muscles, when the exertion routine is stopped over time, the bones, as well as tendons and ligaments, will adjust down to the strength of what is asked of them, and they will also become more brittle.

Surprisingly, most of the fitness gains that happen to athletes are covered above. Believe it or not, this is even the case for distance runners, with whom many of us would associate strong hearts and lungs. The heart, as a muscle, does upgrade like other muscles, but apparently not as much; a very fit individual will have larger stroke volume than he did before he began exercising, which is the amount of blood his heart can pump per beat. But this has been described as a "drop in the bucket" compared to what happens to the skeletal muscles that are used in the exercise, i.e.: for runners, legs and hips (Hahn, 2003). As for lungs, they barely change at all, with endurance athletes primarily gaining greater neurological skill at using the lungs. We know that this also happens to yogis who regularly engage pranayamas: the lungs get "smarter", but, as per the literature, they really don't change much. What does change is blood volume in the entire body, which goes up with exercise, as well as the chemistry that delivers the oxygen to the cells, as mentioned above.

All of these strength gains happen equally across gender. To be sure, mature women have a special hormonal situation with their bones, but if a woman is dealing with bone loss, the more exercise she can get the better, as long as nothing gets too rough. Interestingly enough, concerning muscle strength, women's muscles are exactly as strong as men's on a fiber to fiber basis. The difference is that women have more adipose tissue (fat) mixed in to a muscle with the same area as that of a man. Women's muscles are also usually smaller than men's. Otherwise, the training curve and ultimate limit per fiber are exactly the same.

These are all dimensions of building a stronger physical body and they are contingent on two essential things: rest and nutrition. Rest: much of this book will be a presentation of the way that yogabodymind can be seen as an elaborate and far-reaching form of rest, allowing for optimal conditions in body and mind. And on a more basic level, simply getting enough sleep is important. Nutrition: this book is not a treatise on nutrition, and I won't be weighing in on the food fight as it were between thirty-bananas-a-day and the paleos. But, in general, after working the muscles, our genes receive messages to build in a very specific-to-the-exercise manner, and they need energy and proteins to do this job right. If the nutrients aren't there, that job will suffer, and in worse

situations, it won't happen at all, or cross over into breakdown; exercise shreds the muscles from slightly to hugely, and with inadequate resources and rest, they'll remain in that state. An interesting line of research has shown that with less protein intake over time, the body can get more efficient and creative with what it has. Our paleo ancestors likely found themselves in tight spots relatively frequently; the ones who survived the deprivations passed on their genes. But this has its limits and is clearly not optimal.

That's all strength conditioning stuff. Yoga also obviously has the stretching part. Intelligent stretching will lengthen the fibers of muscles, tendons and ligaments, as well as creating a little more space between fibers. *Modulus* is a mathematical term used in exercise science to express the elasticity of tissues; increasing the modulus of muscles, tendons and ligaments will allow them to receive a blow by warping but not snapping. Stretching will increase the modulus of these parts. (Modulus will be increased in bones as well, but primarily through the strengthening work.)

A primary indicator of stretching's benefits is that of increased joint mobility. Such gains allow freedom of movement and far greater options for movement, which, in addition to the obvious physical advantage, has big psychological benefits in terms of *felt interior spaciousness*. This last benefit is a major aspect of hatha yoga's larger purpose of reformatting the body and opening it up, allowing the soul to reside deeply within it, which provides a foundation for an approach to the timeless pursuit of the spiritual life, more on these last few points in a bit, which you may have noticed has us moving away from strict scientific terminology.

Range of motion gains by stretching seem to go on the rule that six weeks of practice will be lost after four weeks off. (The published physiological studies primarily reflect stretching effects on dabblers [or maybe even hackers]; in one of the most cited studies, they only stretched for six weeks; I've found that those of us who do this over years eventually gain a very durable flexibility once we're warmed up.) But in general, if you stop stretching, the body will become less flexible.

All of these are essentially the body's incredible evolved need to not just receive the shock and awe of life on earth but actually dial up its abilities in the face of such challenges. After an exhausting workout the body doesn't merely recover but, given sufficient nutrition and rest, also upgrades its abilities. All of it happens completely unconsciously, higher mind and deeper awareness not needed. Millennia of nasty brutishness for cavemen and women bequeathed us moderns a set of genes prepared for messages of stress and strain, genes that respond by sending out developmental materials that won't be forthcoming otherwise. Couch potato cavemen got assimilated into the bellies of saber-toothed cats and did not pass on their genes.

The statistics on total bed rest are astonishing. Studies with coma patients, where the body doesn't move at all, show that just getting up to putz around in the bathroom for a few minutes before getting back in bed does a lot. Twelve weeks of absolutely no movement and the bones will be half their beginning density and strength, tendons and ligaments will be sixty percent. All three will greatly lose elasticity. Muscles will atrophy at twelve percent a week- after twelve weeks that's not much left. Nerves will die back and lose their capacity to organize motor function. All told, not a pretty picture.

Keeping all this science in mind, I'd like to move on to a deeper dimension of exercise, which gets into neural organization at the level of the brain. It is one step up on the consciousness-evolutionary ladder, although it too shows up on its own as a response to experience, it's just that it can also be subjected to helpful degrees of conscious awareness. That is to say, it will happen unconsciously if need be, but awareness can make it happen more and better. Physiologically, this is the "arborization" of brain regions involved in somato-motor coordination, such as the cerebellum and motor cortex, in a development of neurons, glial cells and cerebrovascular elements occurring as a result of experience. It can be exemplified by the phenomenon of learning to ride a bicycle.

We can see two parts of bicycle training, one obviously being the fact of learning how to ride the bike itself, the other being the building up of strength and stamina through training. The latter comes and goes, as per the conditioning factors considered above. The former is rarely ever lost once gained. I've noticed that women who logged long hours in dance studios as girls have better balance than most everybody else, even though few of them are still practicing dance. And in my own experience, once I've discovered a solution to an Ashtanga challenge, I don't lose it. If I haven't done it for a while it becomes "rusty" which is an apt descriptor because, for example, in a rusty tool, the rust only decays a fairly small surface percentage of the whole thing. During my heavy parenting phase, my guitar spent years as an untouched piece of wall-art. But eventually playing it again, I found many of the finger patterns still there, but the hands were weak and susceptible to strain. I logged some hours in high school juggling balls. The basic three ball cascade, which took a while to learn, has remained nearly effortless, even after years of neglect. This is a problem for the aging ex-basketball player: his nerves still remember how to slam dunk, but after doing so, his body says to him, "What the hell did you...?"

In developmental psychology, outside of dementia or injury, once a cognitive level has been attained by the child, it is not lost except under situations of regression or dementia. With the resolution of the stressor that caused the regression, the highest attained level is typically regained. That level then becomes the foundation upon which development eventually proceeds to the next one. Although the brain may not be the whole story in regards to such overall mind development, it is obviously a huge part of the story. (Here I'm implying the possibility of the brain's interaction with the psi-net. Neuro-scientists may howl at this, but they're not the whole story either.) So, the general conclusion here: muscles, tendons, ligaments and bones come and go; barring illness, nerves are far more durable. Once laid down, a nerve circuit will lose some synapses, or a nerve or two (or thousands), will lose details and refinement with non-use, will be subject to potentially constant modification according to experience; but the basic foundations of the overall circuit will remain in place, even if rarely used. That's why a person can go to yoga class only once a month and still make progress, not from the muscle fitness, which

will come and go within a week typically, but from the learning.

Sequential cognitive levels of development, as mentioned above, can be likened to computer operating systems; our current cognitive level becomes the software running the background engine which powers the entire show moment to moment. As we go through life, particularly in the earlier years, just by gathering experiences and data- doesn't really matter what kind of experiences- the bodymind will eventually gather enough information and stimulus to get the wherewithal to self-update its own operating system in a relatively sudden process, into something more adequate to the life complexity encountered. For adults who choose "the road less traveled", this can continue throughout life.

Recent lab findings have also added a new dimension to the neurological picture: that of bodily exercise's incredibly positive effect on the brain. This is a less intuitive finding of recent science, which gets into physical fitness as a means toward mental development, adding that to the more obvious factor of mental training toward mental development. On the mental side of use-it-or-lose-it, the brain is like the muscles in that its training and use will positively condition it. There are those who see a hill to walk up and they do not want to do it and they don't. Likewise, there are those who sense intellectual and developmental challenges and they don't want to accept them and they don't. Brain not used up to capacity. Humans have a choice in this matter. Studies with rats, for whom free will is a low percentage likelihood, have shown that each day several thousand new neurons appear in the hippocampus, and for those who have successfully learned a challenging task, the maximum number of those are retained. Those learning easier tasks kept fewer. For unstimulated rats, these new neurons mostly died. The extensive literature on rich-rats/poor-rats shows convincingly that those raised in environments providing a constant stream of new things to explore, social opportunities with other rats, and challenges to overcome, had bigger brains as a result of the learning they did than those left isolated in empty cages. But people are different. In India in 1908, Shri Aurobindo spent a year in solitary confinement, charged by the British for violent subversive activities. Isolated in an empty cage. But he took it upon himself to undertake a severe meditation regimen, and achieved a widely recognized spiritual awakening. This is to say that a yogi can turn within and discover a profoundly rich environment in each moment.

It's really not fair to expect rats to practice yoga. They need outward stimulation in order to self administer evolutionary pressure. The problem is, many people are in the same boat. Some kids in a boring situation will, a la Van Morrison, "stare out the classroom window and dream". And in the age of devices and social media, there have been strong calls to get some boredom back into kid's lives. But many won't thrive with less. And a good percentage of adults need constant strong outward stimulation, which, once removed, "don't do very well." I believe Donald Trump ran for president for this very reason. The bulk of professional yoga offerings in the marketplace at the time of this writing resort to music and various bells and whistles to position themselves within the spectrum of typical entertainment, and there's no question that it helps them pay their bills.

However in regards to the internally motivationally challenged, perhaps the more

common problem for your average adult person is on the other side of the stimulus equation: she's too stressed out and feels daunted by life's difficulties. Her mind and emotional chemistry are over-taxed. Such a situation releases crisis chemicals into the body and brain, such as cortisol. Put a neuron in cortisol and it tends to shrink back its dendrites, which are the branches that connect it to the rest of the brain. The unhappy conclusion: too much stress causes brain damage. So, inconveniently, the mental challenges that beget the mental exercise which helps the mind develop now cross over into too much, which becomes stress, which starts to break the brain down, whereby one needs to find a way to rest the brain so that it can be ready to receive such strong inputs and translate them towards mental fitness.

The stressed muscle, when rested and fed, will become stronger. The same with the brain. And hard work followed by rest is different than constant rest without the hard work part. In yoga terminology, the latter leads to *tapas*, thick dark sluggishness. The former, if done in balance, leads to *satva*, lucid illuminated energetic peace. The only problem is that resting the overworked stressed brain isn't always easy to do. Many people don't have much of a clue how to do that, and it's not as simple as resting tired muscles on the couch. One obvious method is sleeping, and that indeed will rest the brain. But it's often those who are stressed who lose the quality of their sleep. Pushing personal stress to the point where we can't sleep is akin to exercising a muscle until it gets injured: at this point the usual mechanisms for positive response are at a loss. An injured muscle may come back stronger but it may not. The overworked mind may naturally win through to hard won healthy wisdom, but it may also get stuck in a zone where sufficient rest becomes rare. Another option is alcohol, which actually hurts the brain and turns *sleep* into *sedation*, a concern that sleep researchers have noted, with sedation being entirely inferior. There is a better choice and a potential elixir for mental exhaustion. (Enter yoga.)

And there is also more to the picture than just cortisol. There is another chemical called Brain-Derived-Neurotrophic-Factor (BDNF). Put a neuron in it, and it *grows* dendrites. One of the best ways to release BDNF is exercise. A way to release more BDNF: stronger exercise. And BDNF has cousin chemicals, also released by physical exertion and with similar effects. There is lots of research on this, and a good starting point for it is in John Ratey's book *Spark*, where he outlines the ways in which nature has set us up so that physical exercise allows incredible optimum chemistry for both brain health and mood. Studies have shown that rats on a physical exercise regimen had more new neurons produced each day in their hippocampi than did those who were sedentary. Up to a point, the stronger the exercise the better in this regard. Most of the research is based on aerobic studies. My personal experience was that as a former competitive runner, I knew the joys of relaxing after the workout, the "runner's high"; I also discovered that different kinds of exercise had different "cocktails", all of them pretty good once enough rest happened. When I got to strong hatha yoga, I couldn't believe it- for me it was by far the best. Studies still need to be done to get into what the "yoga high's" exact chemistry is, but the consensus is clear: yoga helps you feel really good, you even begin to take such a state for granted. Alcohol and weed completely lose their betraying allure when you feel like that.

So, 10,000 hours: any discipline taken up with focus, Ashtanga, ballet, piano,

chess, will emphasize exercise in a specific set of bodily regions and nerve circuits. Put in the 10,000, and those nerve circuits will be utterly robust, fleshed out, ramified, bushy, arborized, with huge numbers of connections within the immediately relevant circuit as well as to the rest of the brain and nervous system. Play chess with a 10,000 hour guy, and you will not be seeing the same board as he sees. Not only does each piece pattern fire off circuits sculpted by actual experience- not speculation, but actual, hard knocks been-there, seen-that memory- but also, as per the literature, he has an ability to hold more chess patterns in his working memory than you do in yours, even if you have a better than average working memory. In piano playing, he will not have that working memory advantage. In chess, he does. (One point here would be the possibility that since he has attained lofty perspective at chess, he may be able to maintain that toward other regions of life. But that doesn't mean he won't need to log the hard hours on the piano; it may mean he understands the mastery process, which could kick in once he's woodshedded for a while. In my opinion, the Canadian musician Bruce Cockburn is a master at guitar playing, music composition, writing lyrics and singing; clearly his abilities at one skill contributed to those at the others.)

How does this operate in yoga? To answer that question, I would like to back up a bit, and address the subject of overall human development. The thought may have crossed your mind, in the example of the chess player, that his skills don't involve somato-motor sophistication, unlike the piano player, or an athlete or a hatha yogi. This brings us to multiple lines of development.

2. WHAT I WAS WAITING FOR: THE W-C LATTICE

Way back in 2005, I embarked upon the process of addressing what I'll call an *urgent internal issue*, in this case not so much a psychological crisis but rather a theme that my mind and soul kept returning to, accompanied by a strong unconscious push to find a solution. It began when Michele gave me the book *Sex Ecology and Spirituality* (SES for short) by Ken Wilber for our anniversary in 2004. A big long book, I took it to Mysore, India for Pattabhi Jois' 90th birthday in July the following year and sat there in my Gokulam flat, at a beat up plastic table for the six week period of practice, taking notes in the hot nights after the rest of the family had retired under the mosquito net. I kept at it because it was one of the few spiritual books I'd ever read where I had a keen sense that some grand revelation was going to come from getting to the end of it.

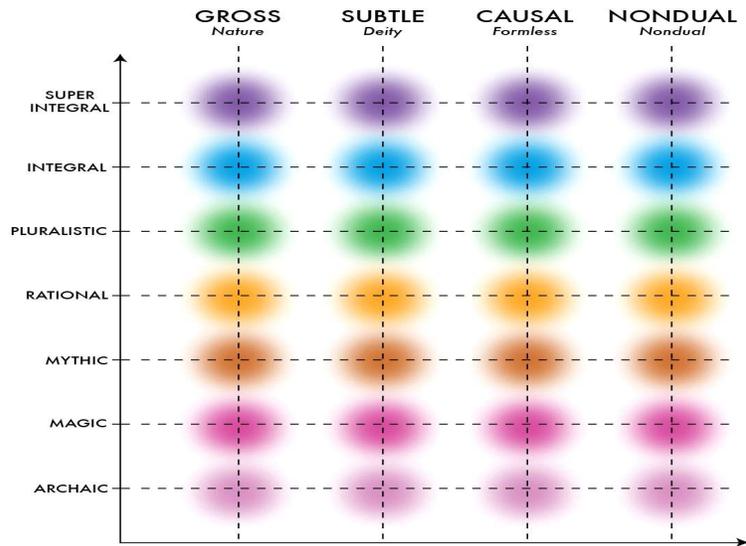
I'd encountered variants on the phenomenon three times before. One: Jung's "magnum" *Mysterium Coniunctionis*; it knocked me over in my early twenties as his full world came in, but finishing it was a Herculean chore. After I read the first 20 pages

something weird and wonderful appeared on my inner horizon, again I was in India doing intense yoga and I felt Western and Eastern subtle contents merging together. This carried me through- I read every word of Hull's translation, even most of the copious footnotes- to the last chapter where it all falls into place. Two: The *Yoga Sutras* of Patanjali: already sort of aware of it, I first carefully sat down with it age 23, reading the second sutra I was apoplectic that I hadn't recognized its importance before, kicked off a veritable catalyst of mind and soul, answering multiple burning questions right then and there. I was glued to it to the end, through the practical wisdom and subtle phenomenological sophistication. Only problem: it winds up with the yogi...um...bailing out altogether. Left me uneasy. Three: Shankaracharya's *Brahma Sutra Bhashya*: after an initial conversion experience, Vedanta in all its profundity, it wound up putting me into a coma every time I touched it; the book is longer than you can imagine, leaves no 8th century didactic stone unturned, and would've morphed me into Rip Van Winkle entirely if I hadn't done the right thing by putting it back on the shelf, allowing me to recenter in normal waking consciousness, thereafter only chipping away at it occasionally just to get a sense of the territory. Anyone who has awakened from a jet-lagged nap in a scorching flat in a polluted Indian city and needed the rest of the day to recover has an idea of the region of being aroused here. But, if you find yourself lying awake at night, try it, healthier than Zolpidem. (This was where I realized becoming an academic translating scholar of Sanskrit texts was not for me, a path I had considered.) Four: Aurobindo's *Life Divine*, another book known to cause spontaneous sleep- is it boredom or is it weighty transformational vibration? One of the biggest bricks you can find, the first 30 pages blew my head clean off and may do the same to you. I also found out how God comes down to earth, such a large number of angles into this theme that I finally skipped to the part where human rises up to God, much more on this later. But Wilber's brick was clearer and quite exciting in the way it integrated so much cutting edge materialist thinking into a glorious hard-won spiritual context, so I slapped at mosquitoes and finished, footnotes and all, wiser for the experience and...something wasn't quite right.

There is a happy ending though: two years later I was teaching in Manhattan and realized that Wilber's *Integral Spirituality* had recently been published, and there it was, St. Mark's Bookstore, East Village, page 90, the thing I was hoping for but couldn't figure out myself: the *W-C Lattice*. The icing on the cake of *SES*. An even more fleshed out version appeared in 2016, *Integral Meditation*. It has taken several years, right up to the present day, for me to recognize the helpfulness of this tool- I feel thankful for Wilber and cohorts for getting it out there, and it pops up again and again in my thinking on an ongoing basis. I see it as the keystone to the overall model of human development which is his primary project. Since then he has added many refinements to his larger story which encompasses the lattice, a few new ones each book, and I can't imagine a more thorough, carefully considered and rigorously vetted model of human evolutionary process and potential, both in theory and in practice. His mature approach currently asks pointed questions, such as: if 70 percent of the world's population is at "it needs to be us versus them" levels of development or lower, how are we going to deal with the urgent problems facing humanity, such as climate change, which require a global perspective? So he puts his efforts into getting people to evolve in the fullest and fastest way possible. In this book I will be using his basic developmental structures as the bones upon which to

elaborate my own ideas about development and the cosmos.

SES is where his mature basic map originally came into view. First written in 1995, and revised since, it was where his grand organizing scheme, the *four quadrants*, initially appeared. Laid out roughly the opposite of *Life Divine*, the first part of the book draws on front edge science- in addition to everything else under the sun- to explain how life evolves into greater complexity and inclusiveness: *ascension*. The second part integrates this with a cosmological perspective, rooted in Plato, that affirms a view of spirit that both ascends *from the many to the one*, but also *descends* from the *one into the many*, thereby giving ultimate value to the multitude of earthly experience, necessitating both directions. The WC Lattice has explanatory value for either direction. Here 'tis:



There are two axes to this box, vertical: *stages*, and horizontal: *states*. The vertical axis charts lines of human development through successive *stages*. We all develop differently as we go through life, and this can be captured by different “lines” which rise up through stage levels, for example: emotional line, interpersonal line, kinesthetic line, morals line, cognitive line, (the grid above doesn’t specify a particular line but you could choose which one to put in there, climbing vertically up through the colors). Each line utilizes a slightly different region of the body and brain, emphasizing assorted learning areas and skills. A variant on this approach to the diverse ways that people can learn and grow “vertically” has also been offered by Howard Gardiner with his well received idea of *multiple intelligences*.

Individual lines will climb up the vertical axis depending on the degree of evolutionary resource and willpower a person possesses and can apply during her lifetime, and some lines for some individuals can eventually reach up to that “purple”/super integral stage or even above. Different people are inclined toward different groups of lines, so some will push the emotional line up there, others kinesthetic, etc. Each stage has increasing degrees of inclusivity, embracing more of the

cosmos, as well as increasing the sophistication of the patterns and algorithms of connection within that larger field- to reach a stage, one must satisfy certain criteria in this regard. These aren't tests with God sitting there report card in hand, threatening to give us an F, so much as what Wilber calls cosmic habits or grooves, and they correspond to broad generalities that appear to reflect the way human bodyminds evolve over time; for those who are inherently or deliberately working at an evolutionary process, the claim of this grid is that it describes stations through which such individuals will progress, and once we actually understand the structures and vibrations at each level, either consciously or unconsciously, we will naturally settle into them. Before that, these levels will be "over our heads". Wilber's research into the literature behind this process is exhaustive.

However- and this is a glimpse into the complicated kind of issues the lattice clarifies- there are some human practices, such as yoga, that take us along the horizontal axis, growth through *states*. Regarding states, the W-C Lattice uses the classic divisions, first set down in the Upanishads before the common era, which correlate the first three spiritual states, or yogic attainments, with the ability to maintain "witness stability" within the main states of sleep. The gross/nature column corresponds to normal waking consciousness, the subtle/deity column corresponds to dreaming sleep, the causal/formal column corresponds to deep sleep (also called *nidra*: "yogi sleep"). These first three states can be seen as progressively more subtle supports for the witness. Put briefly, the fourth column, the non-dual, then corresponds to a complete transcendence of any need for material support for our witness, which ironically drops us into a newly realized capacity to be in any of those first three states while totally identified with the larger "I", and that larger "I" is the cosmos, without division between "me" and "that". Got that?

This arranges the territory of the spiritual life into four basic divisions, which themselves have been further broken down into subdivisions in spiritual literature. Everybody, including the *degenerate couch potato who stays as far away from yoga as possible* travels their way through the first three states in their nightly sleep, mostly unconsciously, with varying degrees of awareness of the dream part. But the spiritual life, to broadly generalize the way it has been expressed through cultures and time by adepts in different traditions, has described spiritual development as the realization of variations on these states of sleeping mind while still fully conscious.

Many of us know of classic images of meditating yogis whose eyes are rolled back in their head behind semi-closed lids. This also happens to the eyes of people during sex and orgasm. In 2003 I saw the Rolling Stones in India, poured rain the moment they started and stopped the moment they got off stage. Darryl Jones, their bassist during that period- considered among the finest- had his eyes rolled back the entire time. These are examples of someone entering a zone similar to the dream state while still awake- in REM sleep the eyes fly all over the place behind the lids- seeing things inside, or using the visual capacity to add dimension to *internal subtle feeling*.

So, the beauty of the WC Lattice is that it makes room in the cosmos for spirituality while still affirming and even celebrating the "manifest" or material parts. I'm adding a further contention here: that the spiritual dimension, whether pursued consciously or unconsciously, becomes the engine which allows the manifest parts to rise; the operations of the aspect of existence that cannot readily be perceived by the "big five"

outward senses I will cast as the foundation of the entire individual evolutionary process.

Now here was the initial problem I had with *SES* before the lattice showed up. In that book, and a few later things, and in all of his previous books, Wilber made no clear differentiation between states and stages and simply placed the highest yogic *states* at the very top of the vertical axis, on top of the very highest *stages* of cognitive, emotional, kinesthetic and other types of achievement, as he later and wiser put it, “Bam bam bam bam...East and West integrated!” He also noted with hindsight that since the higher stages “have characteristics that appear similar to those of the higher states, it was almost impossible to spot the difference.” After reading the book, I sat there scratching my head for a while. It occurred to me that a scientist or a basketball player, or even a person taking hatha yoga classes, could integrate himself way up an active developmental line, doing almost all his work in the gross waking state, barely if at all aware of the impressions left on his subtle body by his physical and mental activities, and never getting anywhere near the causal state other than in his sleep: he could attain high levels on various vertical lines but have zero conscious realization or even awareness of the spiritual states. If you look at highly accomplished people in life, this is not an uncommon situation; accomplished in the world frequently doesn't mean spiritual. It seemed to me that yogic/spiritual states were a different kind of line, a certain mode of intelligence that unfolded in a learning way just like the other lines, but one that often developed by relaxation rather than exertion, and uncovered foundations within which our deepest identity dwelt, an identity far larger and more profound than the part of us which is the typical doer in any particular activity. Also, many spiritual people haven't attained high levels of ability at material pursuits, often even shunning them. It wasn't until I finally found the lattice and its addition of the horizontal line against the vertical line that I was satisfied with Wilber's attempts to integrate human development with spirituality.

So, let's look at hatha yoga development in this light: a person walks into her first of many Ashtanga classes. She brings with her a life history of somato-motor experiences which have given rise to a series of developments in the somato-motor systems in her bodymind. We can call this region of steadily accumulating organization a somato-motor line or kinesthetic line on the vertical axis of her lattice. The history of the contributions to this line starts with wiggling around as a baby, reaching for things and trying to eat them, figuring out crawling, walking, running. For most of us it develops from there. She has been using her somato-motor capacities non-stop since birth, and all this practice has entered data into her memory, and her brain and nerves have been crunching it up and putting things in the right places towards the goal of effective action, with much of this occurring beneath her awareness, unconsciously. The nerves have been making connections in an *autopoietic* fashion, which means that they organize themselves, following their own informed-by-experience yet subterranean will. And, most interestingly, periodically through time, there have been incidents of global reorganization, where suddenly a threshold is passed in the bodymind, many things shift at once, and the somato-motor movements, awareness of them, capacity to do them in the moment, and to put different pieces of them into coherent wholes, suddenly increases. She has moved up a level on the vertical axis: the crawler suddenly stands (balance is added to the mix), the stander suddenly walks (balance problems are now solved in a complex spontaneous manner, as quantities of banked data suddenly organize themselves

and begin to successfully participate).

Where can this go? Let's switch the example from yoga to sports to discuss issues around the higher reaches of development of the "vertical" somato-motor line. Then we'll pursue the "horizontal" potentials that yoga adds to this process. I spent the first eleven years of my life in Boston and my Dad is an inveterate Celtic fan (pro basketball), occasionally we still watch, they advanced to the conference finals in 2012 and lost a great series. Their chief foe: LeBron James of the Miami Heat, age 27 at the time. He had put in thousands of hours of intensely focused basketball practice and play by that point- he had probably attained the lauded 10,000 hours by the time he was twenty- much of it in heightened prana environments during games, often with millions watching, thousands actually in his physical space, the rest on TV. He was putting together spontaneously improvised moves of enormous complexity, every fraction of a second presenting the possibility for large numbers of new adjustments, each one coming both from his internal toolbox- partly conscious, partly unconscious- and modified on the fly. All NBA players do this; anyone who makes the league has survived countless winnowing trials and can be called a master; the standout professionals are masters among masters. But for a good percentage of the games James played, he operated at a vertical level up- or more- on most of the other players: greater complexity and thus greater options for new arrangements, or as they say in neurology, greater calculation speed through more efficient signal routing drawing off of "richer high-level representations" (Lynch & Granger). That which less advanced players would see as a chaotic situation, he sees as a whole; where others see a mess, he sees patterns.

And there was another force operating on that floor too, one with implications for yoga and longevity: another great player, Paul Pierce, age 34 at the time, more hours logged on the court than LeBron which meant that his toolbox likely had more relevant information to work with, and also very high-level, among the world's best, but having to add another twist into the neurological data-crunching: all that time in all that physical intensity has left him with a few strained and even broken parts; he knows more than when he was 27 but his musculo-skeletal body can't do what it used to. He can still evolve along the vertical axis of somato-motor development, which is largely neurological, but that doesn't necessarily mean he's better at winning basketball games than a young guy whose gross body parts aren't broken down yet. In this particular series, the beat-up-smart-old-guys held their own until the structurally sounder young guys finally passed them right at the end.

Basketball, like ballet, is a young person's game. 34 and you're nearly over the hill. But yoga is a different story- hopefully. One of the points I want to get to a little later is that conscious residence in the subtle realm is a huge contributor to creativity, such as our bass player above: eyes rolled back, that's the zone from which his creativity flows. Those who have managed to get themselves to the higher states have the potential to tap a special creative fund that can be applied toward gross-level artistic and other forms. And in Hatha Yoga, as opposed to basketball, gaining traction along the horizontal path of the lattice, along the states corresponding to sleep, is really the basic intention of the practice, at least as it has developed in Indian history. NBA basketball (and much of the material world) is about winning and money, so that vertical stages- and aggression

and luck- rule the roost. Yoga is about enlightenment and happiness, and these need some horizontal progress, something that is known to mature with age if valued and given a chance, with the potential of getting progressively more developed even as the physical body wears down, i.e.: into old age.

Back to the basketball players: a typical non-mystical player will put in hard practice time during gross waking hours and then sleep at night. What happens within him as he sleeps? On the simply physical level, sleep is the time of maximum anabolic activity: physical growth and repair. It is when the body's response to exercise happens the most, the complex process of muscle upregulation along with neural growth and neural organization which drive both increased strength and coordination. This is also when more severe strains and injury heal the quickest, partly because deep sleep is when the most growth hormone is released. (Yogis can take a unique kind of advantage of this, see below.)

At the brain level, things get very interesting during sleep. A prominent theory in current brain and sleep science is that memories stored from experience are "interleaved" in a progressive process into the cortex from the hippocampus, with this happening particularly during events called spindles that occur during deep sleep. The hippocampus stores memories short term, the cortex stores them long term. And they get put in the right places in the cortex. Essentially, impressions received by the bodymind during the day are autopoietically organized that night into coherent, intelligent patterns, the process being steered by a variant of the same innate wisdom that guides the cells in their profoundly complex unconscious operations. An almond has around 21 amino acids; when we eat one, we do not need to worry about where to put them or what to do with them, the body does it for us and does it with a nearly incomprehensible biochemical genius; likewise, I'm drawing a parallel to what the brain does, especially during sleep, with the daily intake of data. If our player has actually done a lot of basketball that day, these impressions will arrange themselves. If he sits around doomscrolling all day, those impressions will arrange themselves, poor guy. If he does lots of focused basketball, day after day, he will, without conscious effort on his part other than the practicing itself, begin neurologically developing higher order representations, more efficient signal routing, longer lines of association, brain items which indicate degrees of *mastery*. He puts in the focused basketball time, his self-organizing bodymind does the rest.

This physical and neurological progress also happens during waking hours. But if sleep doesn't happen- if he never moves horizontally along the lattice- he will eventually catabolize: break-down, the opposite of anabolize. And it doesn't take long; the feeling we get at the end of a long hard day is that of our subtle and gross systems wearing down. They call out to us to get horizontal, both in bed and along the W-C Lattice. Once rest and sleep begin, then everything suddenly switches to the positive, and the strong impressions received from the tough day become the evolutionary fuel for greater development, for both vertical and horizontal attainment- and those who advance furthest in this life, along either axis, have a hunger for strong impressions. Our basketball player is going to need to get himself way up that vertical axis if he wants any chance to make it in the NBA, couch-potato lifestyle ain't going to work. And his nightly sleep can be seen as the matrix which regularly, reliably- miraculously- brings him into the force that can

get him there.

Vertical development in the gross waking state cannot happen without regular passes through the deeper horizontal stages. Put differently, regular passes along the horizontal axis are required to get anything going vertically. Yoga is the art of getting into these horizontal stages while still fully awake, with the possibility of thereby giving us a chance to increase the rate of vertical development.

Looking again at the difference between varying lines of development, I've mentioned both mental and physical mastery pursuits, and I want to offer a sense for how they unfold in a similar manner. We can compare a weightlifter doing bench-presses to a new yogi attempting to learn handstand to a hobbyist chess player in a match with a master.

The least mental is the bench-presser: the weight-lifting world has worked out good relevant techniques, but he doesn't need to know them to achieve the basic developmental function of getting stronger, beyond simply making himself tired by doing reps. As per the physical benefits of exercise mentioned above, one of the changes happening will be an increased coordination of firing between the nerves driving the muscles. A relatively chaotic neurological situation in his arms and chest will become organized as a result of the work.

The yogi learning handstand: one can't simply want to do handstand, one must work at it. Our new yogi starting the process will bring what she has developed from the physical pursuits in her past, which have left various moves in her memory. She will also bring varying degrees of willingness to show up totally in this new situation, which will allow her to consciously and unconsciously create new spontaneously generated moves. But most of what she throws against this barn isn't going to hit it yet. For just about everybody, the needed muscles will have to get stronger, but much of that which handstand requires we can put under the category of skill. What she brings initially won't be enough and will be chaotic and unorganized when compared to what she can successfully pull off two years later.

And the weekender chess player facing a master: the master has logged the hours and is referring to large numbers of internally cached categories that the novice has not yet made. In the eyes of the master, the novice's hapless competitive attempts will look chaotic, much like our handstander's initial tries. Both players are trying to do the same thing, but the master's experience gives his side far more "strength" in the fight because he has been "stressed" by a huge number of competitors and study, and his moves are now well coordinated toward winning. So, in all three of these endeavors, from higher to lower percentage physical, we can see attributes within a person's bodymind responding to experience by taking on greater degrees of organization, and this can occur across different surface fields while sharing a similar deeper structural transformation process. The shared element can be expressed as that of a group of previously not related or only loosely bound elements being brought together into a newly created or much more tightly bound group, where they interact, subsumed under a new and higher category which came together for the purpose of effective action toward the desired goal. "Higher" here expresses the presence of a more all-encompassing organization, bringing greater value to

the cosmos as a consequence. An implication here is that whether physical or mental, the development process resulting from experience follows similar lines.

So, returning then to the "grand revelation" I mentioned earlier, the one I thought I was onto as I read *Sex Ecology Spirituality*. For a long time, I had a burning question: how can hatha yoga bring us to the highest goals of the yoga traditions? It would clearly be misleading to claim that much of the purpose of the spiritual quest is improvement at various material skills. By that time, I had settled on my understanding of the tantric ideal as an excellent way to live a yogi's life, an approach to the time given us in this life which is fully aware of the material world and alive to its dynamic forces, and participates in these forces, but is also able to tap into the deeper realms of consciousness. Not all spiritual people have chosen to live in the world this way, see below. The great paradox at the heart of tantra- of which hatha yoga is a branch- emerges when we take even a perfunctory tour through the corpus of yogic and Buddhist literature, and the fact of the drashtu or seer or Brahman or witness (in the WC Lattice this is realized in the fourth column along the horizontal axis)- there are many more names for it- jumps out at us. It can't be ignored and is clearly set out ad nauseum in the spiritual writings of the East as the goal of spiritual life and the realization of enlightenment, either integrated with the grosser realms or not. This witness is not a thing per se but is the absence of any need for things, it is not produced as the result of our yogic efforts but rather, it is the presence that was there the whole time and has only, with the moment of recognition, and in a mysterious fashion as a result of our efforts, been uncovered and isolated in its purity. OK. No problem.

But the burning question and the urgent internal issue: how does all this relate to active life and practice, such as hatha yoga, where we aren't doing *nothing* but rather, are developing *something*. Like most meditations, hatha yoga is a deployment of attention, and that very attention develops the contents upon which it focuses. Also, it is a practice that develops hierarchically and as Wilber puts it, holarchically. What does hierarchical development of contents have to do with spiritual life?

Here's an example of a hatha yoga move higher up the hierarchy: kharandavasana is an ungodly difficult asana two thirds of the way through second series in Ashtanga. It puts together several pieces of things which require development time on their own. To begin, one must be able to do lotus, and for some, this is a huge hip-opening undertaking unto itself, requiring full attention; for many people, putting the parts of lotus together is as much as they can do at their present level of practice. If things are given a chance to progress, with practice, all the separate openings and movements required for lotus become unified in a coherent whole: the many have become one. The same goes for the next part of kharandavasana, which is forearm balance: the strength and balance may take a while to develop before any kind of success sets in. We then put these two together, lotus and arm balance- and there's even more to the asana than that. I don't need to go any further with this description to convey the main point, which is a different angle of my take on LeBron James from above: to achieve kharandavasana, one must put together multiple wholes, which themselves are comprised of multiple wholes, each of which needed learning and development time before it could even be realized as a whole. Before that we were just struggling through the parts, which themselves can be broken into parts,

which themselves...you get the idea. Development within active life and practices- the vertical axis on the lattice- proceeds through the transformation of parts into wholes, which then become parts of larger wholes, on and on as far as we have the guts to keep going. This is progress up the vertical axis of the lattice. And the thing that was bugging me: when and how does this process eventually help us to get over to the subtle and causal realms, or especially to the witness, which is...gasp...nothing, nothing at all. How does hierarchical physical attainment uncover the blockages to our recognition of the witness? If a basic definition of tantra is “use of material forces towards spiritual gain”, how exactly does this translate?

We can keep doing asanas for years and, while we will get physically fit and better at performing the asanas, what exactly about it is spiritual? Does spiritual progress just sort of show up one day?

One clue to answering these questions has to do with that which happens to us as we yogically focus our minds. What do I mean by “yogically focus”? Recall your high school career, an evening where you needed to do your math homework but were distracted as you sat there. Let's say in this instance you eventually managed to get rolling on the problems and got the assignment done. Obviously, this is the attainment of pulling your wandering mind together and putting focus toward active problem solving. By the end of the assignment, we can likely say that your mathematical developmental line got pushed up a bit on the vertical axis. You achieved focus within the mathematical end of discursive mind.

But this isn't what I mean by yogic focus here. A common expression for a different kind of focus is “bare awareness”. A typical natural state of the mind is to take in bits and pieces of gradations of bare awareness and then to work them over with mind, and to simply become immersed in a mind which runs various kinds of thoughts which draw almost entirely from memories and feelings. Remaining with bare awareness is an active focus which counters such usual tendencies. Most yoga teachers at least make some reference to quieting the mind and staying in the present moment. Many also emphasize focusing on the breath, and in Ashtanga, hopefully, these guidances are overt. Making attempts to focus the mind on an actual sensate field in the present moment, and in particular our own internal subtle sensing- which is different than giving energy to memories and plans for the future, or intellectually analyzing a problem- and then adding breath control to this, transforms hatha yoga from "just exercise" as Pattabhi Jois used to say, to something greater. The goal of the spiritual aspect of yoga is stable identity in subtle material or in a realm where the word "material" either isn't relevant at all, or experientially has undergone a radical transformation. From such a purely spiritual perspective, all gross-level goals in yoga are subsidiary to this. Notice that the overt goal of the basketball game is to win the game and/or entertain the people.

Wilber's earlier, all vertical model didn't work because it never made the *yogic shift* that turns the project of getting better at the asanas into a calm observation while material work is being done, it didn't see these two, calm observation and material work, as autonomous themes that can work fairly independently of one another as well as working together. His early idea apparently had it that enough time working to get physically better at the asanas- or basketball- will eventually give rise to witness stability

through gradations of subtlety until any and all support is no longer needed, which may or definitely may not happen. His other previous idea seemed to be that those who continuously transform heaps of parts into meaningful groups, which then become parts of the next meaningful group, and so on, eventually achieve some kind of theory-of-everything which has turned the many into one. But I see this as an endless cycle because there is always more to master, and the present moment never fails to show up with the next new thing, and there is not necessarily much that is causal or non-dual about this process. The addition of the horizontal axis was needed to make calm observation both a skill that we get-better-at and one that can transform any and all gross level improvement projects into spiritual ones. The horizontal axis can also be seen for its potential to infuse the getting-better-at project with unusual creativity. Think of what it is like to dream: unending, inexhaustible creative energy toward the presentation of stories. Even the novelist with a terminal case of writer's block will creatively dream at night. What's the source of *that* creativity?

Two things begin happening at once to the hatha yogi (which I am contrasting with a “pure” seated meditating yogi, more on that shortly). One: time spent doing the asanas will have its developmental effects on her body, as well as neurologically stimulating the generation of higher order mental representations, etc.: movement up the vertical axis of the lattice, particularly in a somato-motor line. But then, two: what does the steady mental focus and breath while practicing the asanas do? My answer: over time, it can simultaneously move her towards an ability to calmly witness progressively more and more of manifest existence without being pulled out of that calm witness. Remaining with or “resting” in this calm witness has been demonstrated within yogic circles to steadily take the default identity of the practitioner deeper into the subtler sheaths over time. Dreaming sleep is viewed as a sheath interior to gross waking states, and deep sleep is seen as interior to dreaming. Mental focus towards bare awareness and conscious breath will generate horizontal movement along the lattice; calm observation will eventually take us deeper within by moving us through the nest of progressively subtler spheres.

Seated meditation is a way to get horizontal without the distraction of bodily movement. One aspect of seated meditation is that it is the absence of doing anything, we've pared it all down to inner focus, or inner bare awareness, minimizing distractions. Of course, what is really happening is just a more simple and subtle version of hatha yoga, because the back and neck muscles are still working and the hips are being stretched, and anyone who has gone on meditation retreat knows that around day three these areas begin to express their opinion about the forces to which they are being subjected. Hatha yoga, rightly understood, is a meditation with an elaborate and more obvious physical aspect, informed by the realization that as long as we are on this planet, detaching from the experience of the body is highly problematic. Hatha yoga also addresses the recognition that the act of feeling deep into the body while undergoing the effort of physical fitness projects can fire off all kinds of chaotic attractors for our attention that will likely pull the meditator who's only used to sitting out of his bliss zone, into a narrower more ego-centric identity.

At some point along this act of focusing and noticing, the bodymind begins to

move into a realm where different kinds of things present themselves, and these things take a form akin to the dreaming bodymind- less logical, more visionary, more aware of the actual flow patterns of internal energy, heartfelt, transcendent to the space and potentially the time of the practitioner's body. In particular, we will be able to remain conscious while allowing these more dream-like states of mind to function. Usually, this is the unconscious material that we only engage while dreaming and while barely, if at all, aware. It often puts us spontaneously to sleep. This is why the yogic path has been described as a path of “awakening”. Shifting our identity to such an apparently insecure region can be a horrid threat to our limited grossly identified ego.

Also, specifically in hatha yoga, we will somatically begin to feel our way into gross and subtle tension patterns that previously were constraining our bodymind, opening the option of relaxing them. This process of tension release can eventually make the expansion of our identity natural and obvious, grounding it in the body, making the territory more alluring than frightening. With varying degrees of bodily involvement, psycho-spiritual technology, both East and West, has developed as a way of realizing such overcoming of contraction. The path is robust and well-worn, and has been walked countless times all over the world; there appears to be an innate human curiosity and urge to explore the territory opened within us every night as we sleep, but to follow it while awake, and to plumb its depths with our witnessing consciousness fully aware.

So, I mentioned above the lady who walks into her first of many yoga classes, bringing along her accumulated somato-motor history, which is about to be developed further as she undertakes this new endeavor. The essential thing in the question of how to relate this material development to the spiritual is the issue of her moment-to-moment mental situation. This brings us to the notion of Yogabodymind and the basic elements and dynamics of spiritual progress.

3. YOGABODYMIND

Look at your hand and try to press the index finger and middle finger together, and then separate them from the ring finger and pinky which are also pressed together, a V shape with two fingers on each line of the V. Spock used to do this. Make it flat. Not too hard? Now press the ring finger and middle finger together and separate the pinky off by itself and the index finger off by itself. Make it flat. Can you do it?

Apply yourself for a moment and you'll get these. They require a bit of concentration as you identify and create two muscle groupings and differentiate them from each other, which is asking a system to separate one group of its components from another in a way that it usually doesn't. It may be a distinction that you've never made before. The identification part of this may operate unconsciously. We all know of people who are clumsy with their hands, who for some reason never chose to put a certain kind of attention into the process of hand-use, a kind of attention which would begin to change

the hands into a more articulate version of themselves. For people such as this, the absence of that attention leaves them in a situation where their hands never develop much beyond what can be attributed to unconscious haphazard “practice”, which may never provide enough transformational energy to get past certain thresholds of improvement. They may get no further with various required moves than “kind of getting the hang of it”, and from there on out, these moves get cemented at the level of habitual pathways, with begrudging extra attention paid when absolutely needed.

We can take the act of doing the dishes as an example, often considered one of the more boring things a human being can do. Most of us proceed, if we're doing them by ourselves, as if there's no question that the stream of discursive mind in our head is way more interesting than the physical task of the dishes. As a working yogi (and householder not rich enough to hire a maid), I've held the ideal of making the dishes into a deliberate hatha yoga in itself, but often struggle with the choice to quiet discursive mind and focus on the “same old” sensate experience of water, dishes, soap, hands, arms. After years of this struggle I've recognized that, in the “getting-better-at project” that we can apply to skills on so many levels within the Kosmos, doing the dishes has a large number of dimensions and possibilities within each moment, that it provides a robust setting for “getting better at”, as well as being a fine “research project” into a deeper understanding of the kosmos. I've also been confronted by the contrast between the dishes and another art I pursue, which is juggling balls. As I apply myself to various juggling tasks, I make noticeable steady progress, and patterns such as plateau periods, followed by suddenly-getting-it, have occurred regularly. It can get pretty fun and satisfying. But, am I, uh, getting better at the dishes...? Are they fun and satisfying?

Of course we *can* get better at solving simple chore-type problems, at deliberately and phenomenologically gathering sensory information from eyes, ears, nose, touch while we labor, at attending to the disposition of the rest of our body so it doesn't slouch into latent unhealthy somatic dead-ends while our hands and arms are doing the work. When we notice that discursive mind has taken over, dragging our attention back to one of the sensory features of the dishes. If we find this entire dish production not nearly interesting enough, and either take creative refuge in our heads while we work, or often, just kind of fudge along both in our heads and hands, at times flirting with rumination (which I'll get into later), in such cases, the hands and other faculties suggested above will improve, if at all, in a haphazard unconscious way. The problem with haphazard unconsciousness is that life is short and the issue of not being present with the task we have in front of us can initiate a crisis within our deeper sense of how to achieve meaning and fulfillment in life. Marxism is to a large degree based on this crisis. The main dilemma here comes from the fact that there is a bodily component to everything we do, and the broader hatha yoga confrontation asks us “why are you getting lost in your head and not facing the fact of all this bodily information that offers itself at all times?” And then it tells us: “Face the body, understand it at the level at which it is asking to be understood, so you can then approach life as a mind-body integrated person.” This is a yogic solution to finding meaning in our labor by using it for both the *getting better at project*, which becomes a means towards fulfillment in and of itself, and as *a vehicle towards enlightenment* as understood in hatha yoga. Successfully turning the dishes into a hatha yoga will makes us both stronger and more dexterous as we engage a learning process about the gross and subtle worlds. If

need be, this can go towards factory work, or being a janitor, alienation from the outward products of one's labor receding as we claim the hatha yoga truths that any work with the body can make us not only stronger, smarter and more knowledgeable but also can lead us to enlightenment.

Returning to the Spock-finger thing: if our first idea above was identifying new groups within a known system and then separating them, many asanas in yoga present another facet of this theme, which is that of taking a unit which, up until now, has only been available for work as a single piece, and by leaning into it, discovering that this single piece actually contains multiple component parts, and that these components can be teased apart. A good example of how this can work is Urdhva Mukha Svanasana, Up Dog. Try to tease apart firm squeezing of the thighs with total relaxation of the buttocks. The unexamined Up Dog often leaves these two parts as one. (For people with tender lower backs, this differentiation can offer immediate benefit.)

Mula Bandha goes further. If Ashwini mudra is the anal complex of muscles, and Vajroli mudra the urogenital complex, Mula Bandha is recognized as the cervix for women, and the muscles further back at the base of the penis for men. Try teasing those apart: 1. genitals from perineum and anus; 2. for women: the cervix from the muscles that hold back urine; for men: isolations between the front and the back of the root of the genitals. You get the idea. (Check *Mula Bandha* by Swami Satyananda Saraswati for more than you ever thought you wanted to know about this pranically-dense region, as well as reasons why one might want to pursue it. Hint: the potential for training the genitals to be able to actually receive and feel immense sexual charge without crossing over into involuntary contractions, i.e. outward orgasm. Tantra holds this to be a fundamental way to channel transformative energy towards personal strength and evolution). These aren't easy groups to tease apart, the whole thing usually proceeds as a multi-component single piece down there.

We can then move into the lungs, a movement which will take us from the gross physical level into the next layer of subtlety, the pranic layer, hence pranayama. Hold your breath until you feel the urge to breathe; notice the nature and quality of this set of urges and the associations that may come with them. The prana, the life force, delivered by the breath is fairly important- hold your breath for a while and you'll see what life is like without it: nasty, brutish, with an emphasis on short. Tease apart: 1. a deliberate relaxed decision made by a calm mind to resume breathing from 2. an inability to refrain from crudely reacting to the steadily intensifying urges. I see this as a very easy way to get right at the heart of yoga: an intentional exercise of pushing ourselves all the way to the mystery zones at the edge of life, in a highly safe and contained manner, to *open a laboratory of reactions* in which we can train ourselves. Every little reaction-urge not acted upon is growth of yoga. Hold your breath long enough and the grim reaper himself shows up: what better teacher?! And how great that you can get him after only a few minutes. All yogas of any depth directly address death, and some even flirt with it. And the irony is that such death-encountering practices actually release and assimilate fear-trapped life force rather than destroying that life force. It gives us a chance to "get over it", liberate ourselves from "death seizure", which is incredibly freeing.

Both these acts, that of 1: working with known groups within a system in new

ways, and 2: teasing apart something that has been presenting itself as a single piece into its newly discovered component pieces, which are both ways of *leaning into* our nerves so we can come up with something novel, can be expressed as acts of *tapas* and I will call the region upon which they work a *tapas-field*. Tapas is a Sanskrit word which means "glowing fire" or "heat" and is used by yoga to convey a transformative act of concentration. The fire that will burn you clean, will burn you both toward higher personal development and deeper spiritual realization. The tapas field here is this: that moment where you can't quite get the two middle fingers apart, the fingers don't just jump to it because they don't yet know how; an act of learning something we can't do yet.

The Ashtanga system is designed to always have us up against this field. Learned through a teacher assisted self-practice setting (Mysore style), the student basically gets the green light to progress through the asanas until she encounters something that she can't do. At this point, progress through the series stops and she stays there until she learns at least basic competency with the difficult thing; she learns to do something that she can't do yet. An act of evolution. As the progressive series unfold in Ashtanga, the degree of asana difficulty becomes an insurmountable curve, and even the most willing and gifted yogi eventually peaks out and gradually slides back down. Tapas is built into the system.

So, fingers, mula bandha, the lungs- and now let's move on to the biggie, which is this: recognizing and then teasing apart what I will call *yogabodymind* from discursive mind. This too requires that sense of bearing into, a quality which will be a joy and a rapture at times when we are up to it, and a burden requiring discipline when we are less inspired. It includes a sense of *taking on inner work*, driven by our own intuition that we are following an evolutionary path, or guided by our faith in teachers and traditions that tell us so. It is the act, while sitting or doing asanas, of trying to quiet your mind. Not easy, especially during the first few years of practice.

Why do this? I will present the idea that *yogabodymind*, although to varying degrees an aspect of the experience of many of us throughout life, is a way of being that can develop deliberately and stably as an accompaniment to the development of discursive mind; *yogabodymind* is a possible option after a degree of development within discursive mind, and a necessary step for those who want to gain true *bodymind* integration, an alluring beacon for sure. In most people, these two minds are enmeshed, fused together, and it is the tapas of trying to quiet the discursive mind which allows them to separate. This is because haphazard or deliberate discursive mind is almost always the default human mental mode. This separation enabling a higher integration is at the heart of the hatha yoga mystery: the relation between the deeply somatic and the spiritual. If cultivated, *yogabodymind* can develop the capacity to unearth and then integrate powerful psychosomatic energies which have the potential for immense positive effects on physical and mental health. And it makes possible a sufficient carrying ability in the *bodymind* of the practitioner toward sustaining and embodying the states of higher spiritual realization promised to us by the yogis and sages throughout history. And a further contention I'll make here is that it is absolutely required for those who aspire to degrees of the ideal of Bodhisattvahood, which I'll translate as the role of skillfully helping others attain spiritual progress, and needs knowledge of such things as current events and a deep

understanding of culture. But without the hard work of teasing the two minds apart, discursive mind will muddy up the needed information and results will be very limited yogically.

What level of discursive mind is required before we can enact yogabodymind? Research around the WC Lattice has shown that individuals at many levels of personal/vertical development can develop spiritual abilities, which can include this deliberate capacity to quiet one's discursive mind. At some point the individual, instead of just thinking, must be able to recognize the option of not thinking. Such self-motivated recognition requires more internal awareness than many people possess, but it appears that people at various levels of personal development can engage a yogic tradition and be taught to value yogabodymind and get good at it. This includes people at lower levels, which becomes the possibility of an accomplished yogi with a limited world view.

As for the term “yoga”, taken in a broad sense, it can mean any of the multitude practices whose historical roots can be traced to India including meditation and "mindfulness". (China has also produced an indigenous yoga, but I refer to that as *tao*. Traditions such as Zen are rightly seen as a combination of yoga and tao.) Within the yoga traditions, we can roughly sketch out a continuum between two kinds of schools, of which the yogabodymind I delineate in this chapter would be considered on the *gradualist* end. Hatha and Raja yoga traditions, including Ashtanga, as well as Vipassana Meditation reside here. The other pole can be called *self-observation* or *inquiry* or *pointing out* traditions, which include Dzogchen, Zen, and Ramana Maharshi's “who am I?” practices.

Gradualism was characterized by Pattabhi Jois when he talked about "cleaning, cleaning, cleaning." It digs deep into tangible felt karmic residues within and clears them gradually, eventually getting the practitioner to the highest internal states and to enlightenment by removing the inner obstacles and building yoga structure. On the contrary, the inquiry traditions discovered that one need not do this to achieve a consistent residence in enlightenment, and instead emphasized pointing out who it is that exists at the root of all living and striving, trying to shift one's sense of identity from the limited personal ego to the all-encompassing witness. They have found that stable witness identification can be achieved without “all that yoga stuff”. My personal bias is for gradualism because I believe it eventually makes for a more stable witness less likely to get thrown off because it is less likely to float above the tangible imprints left on our bodyminds by our ongoing experience in the world. Suffice to say here that both kinds of practices appear to work, each with their own strengths and liabilities.

By taking non-discursive efforts and grounding them in a practice of Hatha Yoga, the object of meditation and the content of yogabodymind as I want to present it naturally becomes bodily sensations and states, which range from gross to subtle. The Sanskrit word for this is *vedana*, a complex term that includes the idea of Internal Subtle Feeling (see the psi-net section). Vedana is a field, which like all fields, is in constant flux; the act which focuses on the field also changes the field; attention upon a vedana field can generate a tapas which will eventually organize it into something higher, thus another term we can use here instead of yogabodymind is *Alchemical Mind*, more below.

Stable, deliberate yogabodymind is born from the state of a discursive mind that has learned to value the benefits of yogabodymind but, paradoxically, has a terrible time getting out of the way; doesn't know how to stop. Discursive mind periodically even engages in heated debates with the ego, attempting to talk it out of practicing yogabodymind; jilted former favorite son. The practitioner has to fight through all this just to get yogabodymind established. Most adults reach the level where this could happen but do not pursue deliberate yogabodymind, rather simply continuing development of the complexity and scope of their discursive mind, either haphazardly or deliberately; discursive proliferation and refinement is the typical way a Westerner's mind has developed in history. The vast edifice of the Western Academy is based on this, both science and art. Many people do yogas now in the West but I want to clearly state here that true yogabodymind is not easy, at least at first; it works against many of the native inclinations of the mind.

Before going further, I want to do more to characterize my understanding of these two minds, discursive mind and yogabodymind. Discursive mind is the default mode of interiority for most people most of the time. Within discursive mind itself, there are different types of thought paths, from the highly structured mechanizations of logic and syntax, "left brain", to spatial/associative/mytho-poetic flights of fancy, "right brain". For this reason it has been called "mentalese" in philosophy because it is not merely language based but also includes sense memory, various association processes, and logical (or illogical) moves. Within such a range of discursive forms we appear to be wired to spend the vast majority of our life as an interior self conducting a discourse, trying to understand the flow of our outward sensory-collected information and squaring it with what we already know as well as with our inner feelings and drives. Forms of this might be: highly precise applications of hard-won logic and outcome percentage calculations in a clear and rationally capable mind. It might be rumination, which involves an unresolved difficult emotional root with thought patterns tied up within it, in a situation where the unstoppable thoughts have little to no effect on transforming the emotion, and typically generate new and undesirable emotions. Or it might be enacted in a young man fantasizing about the great things he wants to do, or a scattered musician wrestling with inner music, a mother strategizing in an anxious manner about how to help her wayward daughter, or you yourself as you read this right now. It may be an executive sitting in her office deliberately and systematically thinking through solutions, or may be her later that same day walking home letting her mind drift where it will.

All of these are discursive mind. None of these are yogabodymind.

Yogabodymind is *the* great Other to discursive mind, to language, logic and associative mind, and to most of mentalese. It can be seen as the often ignored *ground* of all the varieties of discursive mind. As such, yogabodymind, specifically isolated and cultivated, is a great Other to almost all of that which has been generated by Western culture. In the history of the West, some cloistered monks, dancers, athletes, musicians, painters, manual laborers, alchemists have gotten close, but their expressions of it haven't been as clear as those that have come from the East, although the final highest stages of realization, or at least mindbody integration, may have been equally realized. Plato and particularly Plotinus are every bit as astute to levels of subtle consciousness as any

Vedantin, but they lacked a yoga- a step-by-step method- anywhere near as obvious, lucid and effective as we find in the East. The Western Vedantists- Fichte, Schelling, Hegel- also reveal a highly sophisticated spiritual perspective, partly informed by then current European orientalist research, but again, their *yoga* appears to consist of philosophical and general academic research, teaching and writing and basic forms of self-observation, with some lucky such practitioners apparently gaining privileged access to elite knowledge. Philosophers Husserl and Heidegger and some of their followers flirted with yogabodymind but their project can hardly be seen as adequate enough in the non-discursive direction to call a yoga. (Also, many pot smokers have gotten a strong taste of yogabodymind; Eastern yogic cultural items have had a funny way of popping up in stoner circles of the West, which trace their roots from native Americans, blues/jazz, the beats and hippies. Undoubtedly, this is because pot and other psychotropics can open the door to yogabodymind, generating flashes of a dramatic dreamlike- and in my view, precarious- version of it. The stoner way is closer to shamanism than it is to yoga. More on that below.)

The West has certainly had its share of mystically informed religious people, and the Plato-into-Plotinus worldview is not far from Vedanta, and even offers perspectives not clearly found in the East. A highly valuable dynamic spiritual landscape can be found from Augustine through Aquinas, which I hold to be an accurate representation of the territory yogis will find themselves traversing today, with an overtly living spirit behind it all. This “inner sanctum” of Christianity is a far subtler and better account than the Bearded God Sitting Out There On His Throne Fairly Unhappy With Women guy often presented to the usual members of the flock. And fabulous spiritual yoga-like practice is clearly evident with the Catholic mystics and Kabbalists. Typically following their own inner path, with guidance from their given traditions, Western mystics have often arrived at a spiritual outlook quite similar to that of the East once we look beneath surface cultural forms. Conceding this, my efforts to clarify and teach what I'm calling yogabodymind are largely about finding an accessible and durable *evolutionary engine* that anyone can work to put in place which will help him along the spiritual path in a stable way. That doesn't mean it's easy to *realize* so much as it's easy to *recognize* and get started; mature yogabodymind is not easy. My biggest beef with the West is that the way to climb the "stairway to heaven" is not clearly spelled out, even as the East has shown that this is possible without it being reduced to something trite. Indeed, it has often been outlawed in the West with lethal outcomes.

So, although the spiritual life is typically associated with right brain poetic/associative mind, the yogabodymind I'm getting at is closer to a somatically grounded non-discursive mind, which is less about right or left brain and more towards a mind learning to differentiate raw sensory information from the memory-based data streams produced by the brain, and to arrest the application of categories as *low down the processing ladder as possible*. As a basic human capacity, aspects of yogabodymind aren't all that strange to Westerners so much as the Western experience of it never really had the discursive and outward sensate (ie: outward vision, outward hearing, etc.) aspect clearly teased out of it so that yogabodymind's own internal intelligence could be experienced in its purity. (Yogabodymind has an outward and inward aspect, see below.) So much Western mysticism operates in a cloud of unknowing; the East plainly and

simply put it out there for all to see, Patanjali's *Yoga Sutras* being a prime example.

Perhaps Western philosophy's greatest strength is its mind altering insights into sensory experience, one of which is that all "outward" sensing is really an internal "representation" within our minds. Let's say you're looking at a tree. At the level of your eyes, that becomes photons at varying frequencies hitting the "pixel" grid of our rods and cones, often in philosophy called "colored patches". Immanuel Kant put immense and extremely influential effort into explaining the process of simply turning those patches into a unified object, that can then be engaged by our judgment capacities, meaning it can then be put to use by discursive mind. He called this process a synthesis. More contemporary philosophy often looks at this at the level of actual brain physiology, which can't really negate Kant but can side-line him somewhat. For example, Paul Churchland has presented a compelling account of how the particular configuration of a synthesized object, say a tree, sets off the most excitement in neural pathways that embody our personal concept of tree. Neurons dedicated to other concepts won't fire if the visual system presents to them a synthesized tree-like object. This concept of tree has been slowly "sculpted" in our minds by our repeated sensory experience with trees, which interfaces with the cultural presentation of "tree" that has been bequeathed to us by the people and informational materials in the society into which we have been thrown by fate.

So, that tree out there that you see is, as far as we can know, a complex, mostly unconscious production by your sensory system and mind. There's actually no such thing as external for us, it's all internal; even sophisticated scientists recognize this. Within this realization, we can *then* make a distinction between representations of the outward world and those within our own body, the latter of which lie predominantly within the domain of internal feeling. For example, we can feel the food we just ate in a representation based on the nerves in our belly. That too would rightly be called a synthesis. In yogabodymind, we are trying to get as close to that representation as possible, either outward or inward.

So, at first yogabodymind is a state of focused attention to our experience in the present moment, as close to the root of our perceptual capacities as we can get. It might be seeing the field in front of us as it is, just looking with a minimum degree of interpretation or need for the field to be different; this can also apply toward hearing or touching or tasting or smelling. Imagine eating a delicious bite and simply staying with the sensation of taste as it plays out. Discursive mind can be seen as an interruption that pulls us away from this. The art of yoga is to "continually return" from this interruption, to the sensation as it is. This can be done with all of five of the outward senses, just letting attention rest on whatever is presenting itself. This is "outward" yogabodymind and is an incredibly valuable skill for grounding one's energy in the present moment and for freeing oneself from the bondage of discursive mind. But at a certain point, we become called to move these outward senses inward, folding them into an inner experience which is based on internal sensation, (*pratyahara*, the fifth limb of Ashtanga: taking outward senses and turning them inward), based on the data that the nerves take in from inside, and this will primarily be based on *vedana*: internal felt sensation. Crude forms of internal sensation include those feelings in our belly when it is full of food (interoception), or the stretch sensation in our hamstring as we do forward folds (proprioception), two examples of the most rudimentary forms of internal somatic

sensing. Not outward touch, like running fingers along a textured surface, but inward feeling. This makes the somatosensory cortex the part of the brain that is the mature ground for yogabodymind. The one tendency that is almost universal in spiritual literature of higher states is that we must feel our way into the higher state of being; just thinking about it is not going to cut it, and logical analysis of the content of outward senses won't either, nor will looking for an outward sign, like a vision hovering over that tree out there. Incidentally, by feeling I'm not talking about "feelings", ie: emotions, but rather data from somatic nerves, which may or may not be part of emotional experience.

There is a spectrum of internal somatically sensed phenomena, from crude to profoundly subtle. Now, on the crude side, the previously mentioned raw sensations such as full belly or stretching muscles, or simple nerve discomfort or delight, is the predominant form of *cognition* in infancy. Needless to say, cognition steadily gains in sophistication (hopefully), as the individual grows and develops, moving beyond mere *sensation*, (and often, a la Freud, negating and repressing aspects of the somatic sensation process itself, unfortunately) and giving rise to the *discursive* way of viewing the self and the world, which includes internal felt sensate data among other kinds of information in the calculations it makes. Here is where language-like organizations come to the forefront. We could call this the basic cognitive capacity, an ability to turn attention to various fields and begin to work them out using different kinds of data and thinking. This can evolve from quite simple modes, which only accept particular and limited forms of data and arrange it in stereotypical ways, arranging it the same way even in different settings, to functions with an incredibly broad range and complexity, at humanity's front edge. Some people are highly aware of the bodily sensate data parts of their cognition, others less; the discursive minds of some people are quite "grounded", others are "out there".

And here we come to the crucial required act, and a radical move it is for many Western minds. It involves the psychological concept of fusion which I was getting at earlier in this section. Fusion is a condition that is necessary and unavoidable at each point in development and is only viewed as fusion when seen from a higher state of development. So, if you never tried to do Spock fingers, you would never wonder about your inability to do it. But the moment someone shows it to you, you become aware of a fusion of muscle groups as you take a moment to tease them apart. Only when you began reaching for the greater differentiation of hand muscles did anything like a fusion become apparent. Before that you were happily fused. Let's draw the concept into finer material: as a two year old, it was entirely appropriate to scream out "MOMMY!!" As an adult, if you get off the phone with her and aspects of yourself are still screaming this at some level, you may well get curious about it; you recognize that some parts of your personality are still fused with Mom. A little *fusion item* is noticed because a new bigger picture has been glimpsed, drawn into awareness as a result of the basic psychological urge to evolve, in this last case, the urge to individuate from our parents.

And here is my claim for the teasing apart of yogabodymind from discursive mind: having arrived at the state of mature adult mind, at whatever level, based in discursive mentalese, we remain there for a while before some of us begin to get itchy for something different. One essential outcome of this urge- and the source of it really- is

the internal bodymind evolutionary process itself, which progressively upgrades our "operating system" to higher, more sophisticated, more adequate-to-reality levels of thinking and acting. But these are usually just more intricate versions of discursive mind which can continue upgrading without ever hitting on the possibility of yogabodymind. (Wilber believes that at the highest vertical stages, some yogic capacity is woven in, even if not recognized as such. I'm guessing in the case of, say, a high mathematician, this would be a degree of mature witnessing stability as the numbers play themselves out in his mind. While recognizing the yogic summum bonum, ultimate value, of pure witness identification, I'm drawing a distinction between this and yogabodymind, the latter of which could rightly be considered a little lower on the spiritual evolutionary rung, a way station toward possible higher realization, and something immensely valuable in itself.)

The problem is this: whether we are at rational levels of cognition, or lower, or higher, we are frequently in thrall to the flow of discursive mind and it doesn't always lead us in great directions. If we remain in our typical discursive state, we occasionally or frequently get caught in thought patterns that don't feel good, or are akin to spinning our wheels. This doesn't seem to be an issue when we are happy and everything is going well. But happy and going well is definitely not always the case: we often find ourselves in less than ideal external and internal situations. These are the times when discursive mind typically does not help, and instead is prone to negative thoughts and unhappy or hurtful interpretations, often emanating from areas beyond our control. We can address this by gaining skill at replacing bad thoughts with good or productive thoughts, we can let our emotions flow and try to understand them. But...what about not thinking at all? What about just being?

What about the act of simply existing in the present moment and letting go of the mind that needs to think and plan and remember and desire its way through everything? For some of us on the developmental trajectory (presumably in increasing numbers due to the current popularity of yoga), this strikes us as somehow a higher way of being, partly because we begin to get a glimmer of how it allows *traction on deeper material in our psyche*.

Western psychotherapy has typically attempted to manage these psychic depths- which can be seen as the sea on which discursive mind sails, complete with surf, storms, sharks- by addressing these depths discursively. Yogabodymind addresses them directly with minimal mediation. Western psychotherapy wants us to get in touch with our emotions. Yogabodymind drops into the basic fact of somatic sensation itself.

Yogabodymind can be contrasted to the rational independent inner witness that was born with the maturity of discursive mind as it rose above mythic levels of thinking. Western philosophy has made much of this Rational Subject, and invested great effort trying to figure out what needs to emerge next, partly based on a keen sense of the limitations of rationality. Ideally, the rational witness can put its attention capacity wherever it chooses, although total freedom as such is quite an accomplishment. But, assuming such a level of accomplishment, the rational person could will herself to work on, explore, enjoy whatever she wants. She is the ego and she has her objects freely at her disposal. What could be the problem?

The main response in continental philosophy was that rationality's "enjoyment" was actually quite a bit more removed from life and sensuality than the mythic level of mind which historically preceded it. This was diagnosed to have caused painful and even violent divisions on various levels. Solutions ranged from romantic embrace of nature experience to wild Dionysian orgies to redirections into non-rational thinking. Many of these can now be seen as historical expressions of a reaction phase in the attempt to discover the next level of mind beyond rational, a new mind which clearly needs to have a well-developed rationality as an important and foundational component. And of course, all these solutions were still wrapped up in discursive mind, none of them were a sustained deliberate focused yogabodymind.

Here is my "critique" of the rational witness: I would say that she is a witness that is free on surface levels, (ie: she can read this if she wills it), but if we look at the bigger psychic picture, she is often riding larger waves of primarily self-inflicted karma over which she has little control. If she were to turn her attention away from things to think about, discursive noticings about events, and gross satisfaction of needs and urges, and actually hold in attention the deeper movements of the psyche which supports that witness itself, she may very well begin to get a bit shaky; this is material that discursive rational mind can take notes on, point out logical processes about, recognize images and themes, refer to what came before and predict what will come next, and so on. But the deeper aspects of the self on which this ego depends have such a strong *psychic charge* that discursive mind is nearly helpless to take them and transform them. For this, the ego needs a mind which can contact felt internal reality itself, learn its valence in a wordless manner, and build the strength over time to begin the work of transforming it. To get this work done, such a mind will need to be able to take long excursions away from "figuring things out" and instead just remain with pure sensing itself, as low down the processing ladder as possible, and subtle somatic sensing in particular.

Nature experience and Dionysian orgies can definitely get us into these deeper psychic layers, but my claim is that even if practiced in a disciplined way- for example by psychonauts who take notes on their trips- the crucial step of *trying to deliberately quiet discursive mind* will never happen, will be haphazard and not stably realized. I see no way around this, no way of skipping this struggle that yoga puts front and center.

So, having spent some time in yogabodymind, and recognizing the benefits of it, we eventually perceive intrusions of discursive or analytic mind *as fusions*, as something we would rather not have during meditative moments but can't control...yet. And so the urge, when we are inspired, is to lean into the tapas field of mind control, and to seek tools and teachers who can help us with the project of teasing apart discursive mind from yogabodymind. I see the Western movement toward yoga as a way of addressing this emergent developmental thrust.

Mature yogabodymind "thinks" by constructing complex sensation

representations, based in feeling but informed by inner senses, inner seeing, inner hearing etc., in response to perceived inner fields, and it "crunches" such data in processes of integration and resolution that can be felt, both by ourselves and at a subtle level, by those in our presence. Of course, categorization is happening here, but my position is that categorization can happen entirely free from discursive mind. Yogabodymind is a mind, but ideally it is a mind free of any discursive overlay. I'm in agreement with Paul Churchland here that mind is not language-like at its core, and that vast amounts of computation occurs beneath, around and above that of language.

At this point, I want to clear up the situation somewhat: there are two orders of yogabodymind. The first we'll call *outward* yogabodymind, which is simply being with the outward senses either as low down the processing ladder as possible, or as free from discursive mind as possible. For vision this could be actually seeing at the level of the colored patches which make up the objects we usually see. I've wondered about Seurat's and some of Monet's later paintings which seem to be coming from this place. Or, further up the ladder, it could be more sophisticated, comparing and contrasting the seen forms, colors and movements, but drawing the source of all such cognition from visual experience and visual memory, without any interruption from mind-which-uses-words. This has been called the "zen of seeing".

The second order we'll call *inward* yogabodymind, which draws entirely from inner experience, and is primarily vedana, which is internal somatic sensation, from gross to subtle. At the more advanced end of this, we could also potentially have experiences with the subtle senses, *sukshma indriya*, said to exist in the subtle body, *sukshma deha*, and this phenomena would include subtle sights, sounds and even tastes and smells, in addition to subtle sensations. All these would fit under the category of yogabodymind.

One implication here is that the mind can conduct computations on a spectrum that moves from "outward" and crude to inward and extremely subtle, and, if the inner end of the process continues, the fields it can feel and sense go way beyond that of the rudimentary mechanical functions of our own body, beyond even super-fine grained perceptions of our internal subtle physiology. What does subtler yogabodymind sense? My basic answer: trans-personal subtle fields, received in ever increasing scope, strength and collectivity as yogabodymind matures. Our experience of our own subtle physiology itself is definitely an essential component of this process, but my contention here is that there is something more, something collective, beyond our body and it can be sensed. I'm also making the claim that these sensings begin to move beyond the merely felt and become pan-sensory access to the larger kosmic bodymind, the vast shared mind including but far beyond our limited egoic sense of ourselves, the huge wholeness of which each of our specific bodyminds are a part. (See *Psi-net* section).

So what I'm calling yogabodymind covers a range from getting as close to pure uncategorized outward sensate representation as possible, into grounding the senses in an internal feeling process whose realm is highly determined by the *repository of traces* left by our sensing, actions and thoughts, into gradations of refinement of internal subtle feeling that can take on a pan-sensory character, which is a sensing that can reach beyond our body.

Discursive mind, now seen as a state of fusion when it interrupts yoga practice, gives way to the work of separating itself from yogabodymind. Obviously discursive mind is far more than just a problematic fusion, and later yoga work can integrate and fully enjoy it. But there are phases of yogic development where its appropriate to see discursive mind during practice as an intrusion into what we are trying to accomplish. Untangle yogabodymind from discursive mind, then yogabodymind has a chance to really get to work. It "thinks" within the feeling substrate which gets marked up, affected, determined by both outward experience as well as by internal thoughts and emotions. It engages felt objects directly, an engagement which includes feeling its way into the *trace fund* that has built up from outward and inward experience, and it can transmute these traces, the greater the focus, the faster and more complete the transmutation of the trace into something more integrated, more evolved. Focus can be intensified with practice over time and the great yogis attest to how far this can go.

How does this transmutation work? Well, let's compare it to outward sensing. If we see an outward visual field, which includes that tree over there, we can't really do much to it, without picking up a real chainsaw and going mad with ancient antagonisms toward the great mother; or better, going over and hugging it, that might do something. But, following the fifth limb of the eight limbs of Ashtanga, pratyahara, which tells us to take outward vision and turn it inward, we can then begin to work on the fields that present themselves. The Tibetans would have us establish inner mandala-like visions, and then begin manipulating them. Acute outward vision can help put this in place, but it is the subtler ends of the inward theater where the work happens. On the other hand, outward vision is what it is, we have no choice but to accept what our eyes and visual brain present, regardless of which part of the field we choose to look at. The only way to change the outward field that we see is to physically enter the field and move things around.

With felt inner sensation, which is closer to the Hatha Yoga way, the gross capacity to feel a full belly matures into the capacity to feel subtle emotions, matures into the capacity to feel the feeling substrates to intellectual work, on up to highly subtle and powerful perceptions of collective processes. Let's call the upper end of this *radiant heartfelt somatic vibrational presence*, a state of higher and deeper feeling. (This is not a negation of the Tibetan tantra relying heavily on the visual cortex, or nad yogis who go with the auditory cortex; for those ways, look up one of those teachers).

Within this continuum we have samskara fields within us of varying size, potency and quality which can be felt by yogabodymind and can be transformed with yogic focus, (*samskara* is Sanskrit for "traces left by past actions"). If we feel them, we can begin transforming them. Here is where the alchemical roots of hatha yoga assert themselves: samskaras become seen as fusion items and yogabodymind can sense them in their elemental form, and like the complexities of chemistry, many patterns begin to emerge along with a qualitative aspect, ie: this here samskara is definitely not gold, but a little bit more like shit, or static, or the crud in the drain of my kitchen sink. But, I clearly sense it, and I'm willing to bear attention into it, I'm willing to work with my gross and subtle body in the recognition that these are the theaters in which this transformation process must happen. Thus asana, mula bandha, pranayama, energy of teacher, energy of a community

of at least a few others doing the same, etc: various hatha yoga methods to get the energy level up so that we can develop the work of yogabodymind. The samskara undergoes the alchemical process of purification, of teasing apart the strands that are mushed together, of feeling the greater energy that emerges from it as it becomes a finer substance, of feeling the energy that is released as that which was locked up in the crud is revealed and goes to work, of noticing how the inner aspect of the other senses begin to merge with inner feeling, begetting seeing-feeling, hearing-feeling, taste-feeling, etc., of feeling the Kosmos come in as another doorway of perception is opened once the blockage is cleared, of feeling the heart quicken and come to life as it instinctively senses something exciting happening which opens its desire to love and feel and engage.

An essential piece of this internal work is the recognition that perceived blockages are aspects of a larger *tension pattern* within the bodymind. A readily recognizable result of application of yogabodymind is that of relaxation. Yogabodymind can hover over a tense area in the bodymind as long as need be until the tension eventually lets go. This kind of *steady bearing into* a specific bodymind location, making it into a tapas field, is something discursive mind simply can't do. This overall tension map in the individual can be seen as the collection and history of ongoing attempts to define, limit and adapt the best one can against experiential onslaught. Each facet on the tension map corresponds to a specific experience from our past where our developmental thrusts knocked into outward and inward reality. Today's tensions within oneself indicate that this delimiting project is still happening, and for the most part, this is conducted unconsciously. Yogabodymind can follow a tension pattern into the depths, beginning by locating one that is conscious, perhaps in the jaw, and then following it as it leads down into a bigger pattern. By releasing and opening a tension event, the result of making it the object of meditation, channels open, freedom is gained, energy flow expands, the bodymind enlarges.

This is one of the things going on inside the life of actual sages who are sitting there "doing nothing". Such work can get progressively more fine grained and can go on into evermore subtle sheaths infinitely, can keep plumbing the depths of the unconscious which eventually becomes ever-more collective in its sphere, and it may become altogether transfigured at times as the realm of Vedanta's Brahman is entered (another name for the causal matrix, a state of apparent nothingness, the creative matrix itself). Those who come near such a sage (either materially or psychically) may feel something, because intense inner work like this registers in the energy fields of various material locations as it flows through subtle channels, frequently including the general vicinity of the sage's own physical body when he's in tapas mode.

Yogabodymind and discursive mind are not enemies, although discursive mind's role as the default mode of humanity frequently makes it the target as we go through the arduous winnowing of coming to higher awareness through yoga. The bodymind seeks to move perceived fusion towards differentiation and proliferation, and such a need will continue to assert itself until newly revealed elements can stand on their own. As part of this process, both minds can eventually settle into their best zones for work, which over time will give way to more complex integrations between the two minds. Once yogabodymind has been established to a degree, has wrestled itself free from being

dominated within the matrix of discursive mind, the correspondences between the two minds remains intimate.

Busy intellect makes yogabodymind's work much more complicated- the maneuvers in which discursive mind can take delight will involve varying degrees of mindbody integration, including the possibility of not much body, and may result in long hard labor for yogabodymind as it tries to sort out the vibrational chaos left for example by intellectual experimentation or fantasy play, which ironically may be considered healthy forms of discursive flow. So this is my claim: healthy discursive flow may or may not be helpful for our deeper mindbody disposition; certainly we can admit the possibility of a person who is fairly cut-off from his body but perfectly capable of having happy healthy thoughts. Eventually, the bill for his bodily ignorance will come due, even if some of those thoughts have a salutary trickle-down effect that he doesn't understand. But it gets worse: nobody's discursive mind is always healthy. The more the body is ignored the less the likelihood that thoughts will be healthy. Unexamined habitual emotional-mental patterns can be rough on the bodymind; if the psyche is in the grip of an old negative piece of ruminative history, discursive mind may be playing archaic unfortunate tape loops which are secretly fueled by unsatisfied needs of which it is ignorant, while our physical intelligence to the degree that we have it, desperately digs down into the psychic dirt endeavoring to root up the mess once and for all by actually trying to learn to contain the associated psychic charge. Discursive level rumination is for the most part hapless in this regard. Yogabodymind is the practice of bringing such physical intelligence into the forefront, and, if it succeeds in its adventure, typically by defeating hidden tyrants down there so that their newly liberated fiefdoms can be free to grow and become civilized, discursive mind will be ready to engage more integrated somatically felt bodily and energetic forms. A deep masterful yogabodymind can make for truly compelling discursive expressions should the individual choose to make them. The process gets more close-up and more comprehensive with no apparent end to the subtlety and scope. At a certain point in mindbody development, discursive mind needs yogabodymind or progress will skew away from healthiness.

Going the other way, a more sophisticated intellect will allow the potential for a more sophisticated yogabodymind, though it makes yogabodymind's work more daunting. If a chess player has worked laboriously to get his rational mind way up the W-C Lattice, it means he has mastered wheels within wheels of categories, and he inherently approaches at least some aspects of existence with an eye for complexity. If he were to then take up guitar, he would need to struggle with finger coordination just like everyone else, and develop the different kind of mind that guitar playing is compared to chess playing. But eventually, all that inherent understanding of complex categorization and hard problem solving could translate its way into his music making. Something similar can occur if he chose to pursue yoga. However, the intellectual or analytic-type person coming to yoga practice unfortunately often has to struggle mightily with the fact that his highly developed discursive mind will initially likely be a nearly impossible-to-tame bastard, and it will keep reasserting itself. But if it learns to acquiesce, his yogabodymind will have a rich field to explore.

Again, the yogabodymind I'm referring to here is not absence of cognition. It is

rather *yoga cognition*, or alchemical cognition (alchemical in the Jungian sense of implying precise inner experience of elemental interactions, as well as applying the "chemical" that catalyzes the desired transformation, all done without utilizing outward measuring devices; the "chemical" catalyst in yoga is bare attention itself. Jung himself was unfortunately a bit clueless about yogabodymind, but he was the great wizard when it comes to emotions entangled with the complex involuntary imaginative forms found in dreams and spontaneous imagination.)

Yoga cognition is a preliminary stage in yogic endeavor. It will be conducted along the contours of internal background "maps" that have been established in our bodyminds partly by certain facts of how nervous systems work and partly by our cultural inheritance and our own experience, maps the mind constantly updates, largely beneath our awareness, based upon ongoing experience. These maps are part of the deeper levels of mental structure that disappear into the unconscious, at the depths of which discursive mind's resources simply give out. These maps are the organizing schemes that our minds have mostly unconsciously assembled as a way of making sense out of the barrage of images, sounds, smells, tastes, felt touches and internal perceptions that we have received in our lives. They can be said to be the neurological embodiment of our truly complex personal history, and essentially, throughout they are *penetrated with veins of tension patterns*.

Using yogabodymind, we can work our way down into our cognitive roots, relaxing the tensions that permeate our inner maps down there. By following immediately felt veins of tension, we can eventually arrive at territory containing older, cruder, more instinctual vestigial map elements that tend to disrupt and limit our ability to function from our more sophisticated and adequate-to-reality maps. Hovering yogabodymind can finally dissolve the bonds and free up the trapped energy even in these. But this entire process remains within *active yogabodymind* cognition. By contrast, the attainments usually considered the greatest in yoga are either immersed in, or have access to, states of mind completely devoid of either discursive or yogabodymind cognition, and which register wave forms on the EEG machine close to a flat line. The gradualist yoga paths would have us get there by "clearing out our karma": working our way through our inner maps. We can steadily transform them at greater depths, in a discursive/yogabodymind, struggle/harmony, separation/higher-integration process, that specifically in the work of inward yogabodymind seeks to understand the topography of our tension patterns and release the trapped energy within them. This is essential because these tension events have us in their unconscious grip and represent pockets of non-freedom within us. The yogabodymind method of enlightenment is to stay at this work until, of its own mysterious accord, the fact of causal cessation or Brahman takes us. This level of samadhi may happen at different degrees of unconscious clearing, the more and the deeper the release of the tension patterns, the greater the likelihood, and the better the stability, of the samadhi. In this causal state, we have moved our identity over to a place where the work and struggle ceases, at least temporarily.

When Patanjali delineates yoga in the almighty second verse of the first pada of the Yoga Sutras: "Yogas Chitta Vrtti Nirodhaha", ("yoga is the cessation of fluctuations in the consciousness") we can see this at three levels at least: 1. freedom from distraction,

2. freedom from discursive mind, 3. freedom from any manifestation at all: realization of Brahman.

This is given a little more detail later in the Sutras, in the progression from 1:42 to 1:43, where a subtler version of what I am calling discursive mind is referred to by Patanjali as savitarka samadhi, "concentration mixed with awareness of name, quality and knowledge", and since this is a kind of samadhi, it must be taken to imply spiritual cognition in its finer states, near the end of the game. And an accomplished version of yogabodymind is the next step, nirvitarka samadhi, "concentration so that the object alone remains", pretty low down the processing ladder, (and high up the spiritual ladder) but still with some cognition.

So, taking the idea of yogabodymind as the internal process itself occurring in the practicing yogi, we can look again at the question of what happens if we keep doing hatha yoga, and how material/vertical development might lead to spiritual development.

Let's return to our aspiring yogi who begins her first of many Ashtanga classes. Let's call her an American 35 year old professional mother of two working in an office, both the job and the family going along pretty good. Just that puts her well into the territory of the subtle realm. She is likely spending most her time working through different dimensions of her discursive mind, solving work problems, which would be largely analytic, as well as home, kids and husband stuff, which would lean more into emotional and associative minds. Success at these endeavors implies an ability to deploy her attention to the matter at hand, wielding her rational witness effectively. Let's say she has always been allured to yoga but hasn't really understood exactly how to meditate, isn't quite sure how to "do nothing". That would mean she has barely spent any deliberate time in yogabodymind, if at all. Let's also say that she's aesthetically inclined, and has spent time applying focus toward enjoying music and natural beauty for brief stretches with little discursive interruption; we could allow such stretches to qualify as glimpses of deliberate outer yogabodymind.

How can she already be in the subtle realm? Isn't that an achievement for yogis, requiring practice time? The subtle realm is not a sharply defined territory because it blends into the gross on one side and the causal on the other, but its main zone is the primary area that gets marked up by discursive mind. Our internal discourse, from its inception at a young age, functions at the subtle level of reality. What the accomplished yogi discovers by freeing herself from discursive mind is the way that the inner discourse leaves traces on this "body". If one of her kids hits her in the leg with a baseball, it leaves its trace on the gross physiology of her leg. If she carefully thinks her way through which school to send him to, that analysis will leave a complex of traces on her subtle body, which is made up by both her subtle physiology and her subtle mind, one not reducible to the other.

So, from the perspective of yogabodymind, she's heavily marking up her subtle

body by exercising her subtle organs (i.e: her thinking mind), and she is occasionally engaging an aesthetic version of yogabodymind. At some level, she knows the way various discursive traces make her feel and let's say after eight hours working and thinking she knows quite well that she's ready to relax with maybe kids and being silly and a movie.

Let's make that a rough sketch of what she brings to her first class. Let's say its a serious class without music or much rah-rah-rah from the teacher, and she is instructed to try to stay focused on feeling the sensations in her body and breath and quieting her mind while she does the asanas. She also notices that there is already a community of people in the room clearly “in the zone” and after a while she picks up the collective resonation and finds it somewhat easy to get into a flow where her discursive mind quiets down. (Not all yoga classes are like this. I recommend finding one that is.)

This situation gets her into the basic triumvirate suggested by yoga literature which is participation in 1. the practice with 2. a teacher and 3. a community. What begins to happen to her? Well, she has been significantly dunked into a collectively embodied yogabodymind setting and, depending on the degree to which the teacher is able to establish his own yogabodymind, and the students are able to state it themselves, she may make great strides toward getting started on the initial work of teasing the two minds apart, at least while she is in class. Maybe she still enjoys the glow while walking home, noticing that her mind is calm and steady.

So, the subtle realm: she's lucky to have found a good class and community. Whether she knows it or not, yogabodymind is taking root, and she's even having good fun doing it. She can only get to class three times a week, so eventually she decides she's going to do one practice a week at home, by herself. Oh man, what happened? It's hard. Her discursive mind is all over the place. She keeps looking at the clock and thinking about this other thing she wants to do. She gets up, checks her texts, sends a few, tries to get back on the mat. Ughhh.

She's entered the “burning pit” of yoga, the one-to-one wrestling match with herself. This happens in class sometimes, and she sees other students doing the wool-gathering pose, sitting there scratching their heads. But in class with others you can always just jump back into the flow. Here by herself she's having a terrible time getting anywhere with yogabodymind. But let's say this particular lady doesn't give up. She loves class and drinks it up, but the part of her that rises to challenges takes an interest in this solo struggle as well. She also senses another thing: she begins to take notice when her mind is going in unfortunate directions and she has an actual felt sense that she might be able to do something about that. So, she doesn't give up. She's taking the first steps of the path of the master.

The subtle realm: her mind was already quite developed before she ever came to class. This is what she must contend with now. Achievement in the subtle realm is the fact of being able to closely notice what this well-developed discursive mind does, to feel the complex of traces that it leaves, and to witness the fact of those traces as a long history which has been carved into our subtle body. Before this, she was *operating* at the subtle level but not yet stable at the ability to *witness* at that level. And my idea of

yogabodymind practice isn't merely a witnessing of whatever passes through her mind, but a deliberate sustained effort towards quieting the discourse so that she can view the traces as they are, without having lots of new traces simultaneously being laid down. This practice will allow her to register these traces as they are presented by her subtle sensing, particularly her internal subtle feeling. An accomplished hatha yogi will be getting better at this as she gets better at the outward project of the asanas.

It can be useful here to draw an analogy between the mind and a computer. All of us have experienced times where the computer doesn't respond quickly because it is “running programs in the background”. The yoga process can allow us great clarity about how something similar happens in our minds. The first existential stage for pretty much all of us is to simply live in the world generated by discursive mind. As results from yoga training begin to settle in, we will steadily gain perspective from within yogabodymind which, if we continue to pursue it, will steadily gain perspective from pure witnessing itself. This standpoint will make two insights possible: one, that there are layers of “programs already running”. If we divide these programs into three, we can call the first layer overt discursive mind which resists control but is actually the easiest to quiet. The second can be characterized as a more murky cloud where discursive mind and emotions are entangled, where thoughts are less logical, emotions less mature. The third layer would be the felt tensions patterns themselves which comprise the bones of all discursive emotional process, and can rightly be seen as an energetically encoded history of our experience. This overall tension pattern consists along a gradient from recently laid-down tensions, most of which will resolve fairly efficiently under yogabodymind pressure, to big deep old ones, which can stubbornly persist even after years of yogic relaxation efforts. These tensions are active events, active “programs running in the background”, which give rise to and shape discursive events, and can be seen as limitations within which our life force is fated to flow until they are relaxed and the energy within them released, with the impact from the experience which caused the tension finally accepted. These aren't all just “bad” experiences; some of these tensions are merely the traces left by being conceived and born and undergoing the unfolding process of life development, even in one who has lived an idyllic life. In his little 8th century book, *Aparokshanubhuti*, Shankara claims that with adequate application, the yogi can get through all of these tension patterns in this lifetime. The big thick ones are slow but the work steadily progresses until even they eventually can let go.

Hatha yoga itself has undergone an evolution through Indian history. It can be roughly followed from alchemical roots, some from the fabled Nagarjuna himself, through tantra, into canonical hatha yoga, of which the 15th century text *Hatha Yoga Pradipika* is representative. The form that is currently seen in most yoga studios or online, largely carried on by Westerners, has been dubbed “postural practice” by a gang known as *modern yoga researchers*, and some fine studies have been done tracing its historical context in the early 20th century. Krishnamacharya stands tall among that group; he was the guru to both B.K.S. Iyengar and Pattabhi Jois, two extremely influential teachers on what hatha yoga is now. These contemporary academic researchers challenge the spiritual dimension of modern postural practice but I believe that issue was settled in Pattabhi Jois' room, upon the crucible of whose floor I logged two years of my life, where Shankara's picture was displayed front and center, and who clearly urged us to study

Patanjali and Bhagavad Gita, and who chanted Isa Upanishad under his breath while he walked around adjusting.

So, how to approach “postural practice” in such a way that spiritual attainment happens? As sketched out above, the physical mastery, 10,000 hour stuff, will progress if the yogi applies herself steadily over years. All those physiologic benefits, strengthening and stretching from muscles to tendons to ligaments to bones, can clearly enlarge the body's capacity to gracefully bear the slings and arrows of physical existence. Each asana presents a different group of muscles, tendons, ligaments and bones, to be strengthened, stretched and coordinated. The Ashtanga system is quite complex, and at times working on each distinct asana will seem to be spreading the mastery project too thin, although skills gained in one asana will often contribute significantly to others. After 10,000 hours though, she will be quite advanced at a large number of them, and her body will be radically changed from when she began.

But there is a problem here. It's called suffering from O.L.D. I've placed peak asana ability at an older age than, for example, peak basketball or pitching, somewhere around 42. This is because the strength required for elite asana performance is not just raw athletic but also *shtira*, a Sanskrit term indicating mental/physical steadiness. Pattabhi Jois once looked right at me and said “When your mind becomes quiet, your body will become strong.” Then later he said “When your body becomes strong, your mind will become quiet”. This kind of mental strength can grow into old age. I put 42 as the rough age where the downward arc of athletic strength and the upward arc of *shtira* meet.

The 20th century revival of hatha yoga, as spearheaded by Krishnamacharya, where it integrated “physical culture”, some of it certainly from the West, was an incredible evolution of the hatha yoga tradition, and one whose rapid grasp by much of the world and basis for an entire industry and spiritual movement, embraced in particular by Western women, many of whom are clearly embodying a front-edge version in history of what a woman can become, speaks for itself in terms of value for humanity. In “postural practice”, this outward systematic fitness project can turn into a complex but potent focus point for vedana practice, which is the “continual return” to felt sensation in the moment. The alter to return to each time we have caught ourselves under the spell of discursive mind. The focus point which draws us back again and again, offering an entirely new dimension of being, intimately connected to the mental process we brought “to the mat”, revealing a previously unconscious aspect of that mind. And offering grounded stability for that mind. Opening the possibility of turning the experience of mind into that of bodymind. This is the larger mastery project offered by contemporary postural hatha yoga.

Each asana presents a different somatic field to be witnessed. We can get good at this witnessing the same way we can emulate musicians and carefully hear as much of a song on headphones as possible, meaning penetrating into all the instruments and sounds in the stereo mix. That can be extended to sitting where you are and experiencing the surrounding sounds in the world, how they play out in your 3-dimensional audio mix. Or

emulate Monet and see as much of an outdoor field (or Vermeer an indoor field) as possible, just looking and noticing detail.

The somatic field presented by each asana is every bit as complex as outward sights and sounds (or smells, tastes, touches), but it adds a crucial dynamic: it can get into the trace fund left by the experience which our bodies and senses have lived through. Outward sensory experiences can certainly revealed traces of various depths but it's the work with the body that can transform them most fully.

Again, internal feeling can be seen as a continuum, gross-to-subtle. Gross could be the hamstring stretch in a forward fold. A big thick muscle, and the nerves in it. But I believe the right way to view vedana practice as applied to hatha yoga is that it never is just that big thick muscle, right from the outset (often especially so); that hamstring stretch will be part of a somatic field that includes subtle traces left by discursive mind. It will be on the lower, thicker end of it. We can attempt to make it the object of our focus, and we can get better at that in a way similar to how we can get better at listening to music and focusing, for example, on just that one guitar from the left channel. Doing so gives us a chance to get out of merely being with discursive mind and its somatic traces. But in a vedana based seated meditation, that zone between discursive mind and the traces it leaves on our subtle body may often be the main zone where practice operates.

Using asanas to get into the denser regions of the body, in comparison to other yogas that just involve sitting, can not only allow us far greater perspective within ourselves, but also offer often essential grounding to a process that otherwise may unfold largely in our head regions. This grounding can realize the intentions of tantra, that of using material forms for spiritual benefit, in this case, a response to the recognition that head-region-heavy meditation can actually be deranging if pursued too intensely for too long, as our finer physiology up there tries to grapple with overly strong charge.

If you want to install an electric stove in your kitchen, you'll need to hire an electrician to significantly beef up the wires going from the circuit box to the plug you hope to use. The copper gauge wire to a normal outlet can't handle the amount of current that a stove needs, the wires will melt. The parallel to our own bodies is the concept of *nadis*, which roughly corresponds to nerves but are better defined as channels for prana within our bodies. Like muscles that upregulate with exercise, yogis have discovered that nadis can grow with practice to handle stronger current. The big nadi is shushumna, the spine. A keen familiarity with the deeper body, below the neck, the nerves of which all originate from the spine, can become the seemingly endless font of stability and vitality needed for when discursive mind and subtle head regions have taken all they can. The wires in the head are meant for finer subtler currents. The spine is for heavy voltage.

Now, I've mentioned two distinct factors here, which on the surface may seem incompatible, one being the tension patterns of varying stubbornness which are a living

record within our bodymind of our experiences in life, and which resist “free-flow”; and the other being our ability to bear forces within us akin to electric currents. These two can be integrated by viewing the tensions as fusions, each one corresponding to a lived experience, wherein we simply don't know how to bear the energy contained within the tension...yet. If we keep relaxing until we run into the thing that we don't know how to relax yet, and then hover over and within that area with attention, if we live in our bodies in such a way that we willingly face challenging internal sensations and situations while remaining with feeling in the moment, that tension place can eventually let go, signaling that our bodymind is ready to take the charge. Before that, we were a limited ego trying to fend off threats to what we thought we wanted to be our way of being and knowing. The tension area is not going to let go until the bodymind is ready. As the fusion-event relaxes, it differentiates into multitude possibilities in that region that weren't previously available.

So we can start the hatha yoga internal journey by doing the asana and noticing the places in our physiology where sensation gets generated as a result of doing the asana. We then try to rest our minds in the act of witnessing just that. This is often not easy to do, partly because discursive mind wants to have her say and partly because the act of deeply feeling the body will soon fire off emotional associations from our past. There will be a percentage of these, depending on the person's history, that will not be comfortable or nice. Just staying with the sensation of the hamstring stretch isn't always easy to do. This is why witness stability is usually a long-term project that must be engaged regularly: actually staying with the internal situation aroused by the act of sequential systematic thorough exploration of the somatic sensations throughout the body will at times reach subtle intensities beyond what we can handle. Subtle intensities will typically make us react to get out of the situation before we realize that that is what we've just done. Our wires aren't big enough to take the charge yet. Humanity's tried and true protection from these uncomfortable feelings is to take refuge in discursive mind. Such refuge may never give us a chance to grow our nadis' ability to conduct strong current.

Our mental process will want to simply carry on with business as usual. Younger people often lack the mental stability to regularly apply themselves to yogabodymind and older people have many years of habitual reliance on discursive flow, regardless of how good that flow has been. Longer term habits are harder to break, minds that have already laid down vast labyrinths of structure in discursive ways will regularly balk when encountering a directly confrontational different way of being. And yet the second half of life is often where spiritual development happens. This can partly be explained by the fact that many developmental urges have already been satisfied by the time a person reaches 50. Such satisfaction lays a solid foundation for a spiritual turn in the adventure of what comes next. The majority of human developmental models place the quest for meaning and spirituality as the most mature of human endeavors. Older people are often primed to recruit sufficient motivation to get through these remnant habits.

A huge leap of faith into the pool of yoga where we let go of discursive mind can

be made less daunting when we begin to trust the self-organizing powers of our bodymind. The happy side of the difficult internally felt situation is the dawning intuition that the yogabodymind which faces such perceived difficulty is actually a catalyst for an intelligence which, once it engages the tension-pattern landscape, can exert organizational pressure on our thoughts, with a clear mandate for often organizing them *better* than discursive mind alone can. Think again of sleep research and the resting of the mind. This intelligence also heals our body. It also matures our emotions and brings forth authenticity. A recognition awakens within us that we don't have to mentally figure everything out. We can take refuge in yogabodymind. And doing so doesn't mean that our life will disintegrate and we'll have to fall in with the cave yogis who've completely given up on material life.

So, two possible options here. One is to take refuge in discursive mind every time the internal charge becomes too uncomfortable, and to try to work things out with just the mind. The other could be putting effort into staying with yogabodymind and continuing to feel the feeling, gradually building up the subtle physiology that can bear the charge. The strength gained here is the subtle body's response to subtle exercise. The subtle exercise is the fact of subjecting ourselves to the charge.

This kind of development, the kind we engage when we begin to learn to stay with the difficult internal sensations and situations aroused by subtle somatic feeling, is the anti-opiate. Instead of numbing the pain, we're asking to feel it. "If you feel it you can heal it" (eventually). When Buddhists tell us to "take refuge" in the sadhana (practice), sangha (community) and guru (teacher), these three comprise the structure that we can lean into that makes it easier for us to bear this discomfort and see it through to a wholesome conclusion. After a successful yoga class or practice, including one where she might have struggled mightily to stay present, the mind stream she walked in with will be clearer, its themes a little further along, less wacky, less tortured. If she goes through an hour and half class where she tries and at times succeeds in focusing on her body and surrendering to her breath, this will be the beneficial cumulative effect, to greater or lesser degrees, pretty much guaranteed.

Mindbody integration allows the discursive mind to draw upon the inherent evolved intelligence of the body and enter that data into the computations it makes, not just farming out heavier charge to the lower denser regions but recruiting discursive mind's unique resources to work out a mental angle on bodily kinds of information: an intellect crunching somatic data. I believe this tends to ease anxiety and doubt, bringing the mind closer to the sturdiness of the body without losing any of its brilliance. Vice versa, we can also look at it as the body reformatting itself towards a greater capability to embrace and contain the stream of the mind. This follows from the fact that difficult charge is not entirely old body-stored stuff but that much of it arises as a result of the on-going current activity of the bodymind as it engages outward reality; some of this isn't old patterns but struggles to enact front edge novel resolutions, where discursive mind can really use the body's help.

As we engage current environments and situations, we draw the resources for our

sense-making from along a continuum of body to mind. Many of us lean overly heavily on the mind. There is a constant flux of tension patterns within each of us moment to moment, akin to the constant “mental map indexing” described by Paul Churchland in his exceptionally valuable book *Plato's Camera*. Briefly: as we grow from childhood we lay down a large number of extremely high dimensional maps encoded in our brains, “slowly sculpted” through a biologically inherent response to our lived sensory experience. Much of this is in place by our late teens although it continues throughout life. These are the maps, mentioned above, that the gradualist yogi attempts to reveal and transcend as much as possible on the path to enlightenment. When our senses deliver to us the synthesis of colored patches which is a tree, that completed synthesis “indexes” the regions in our maps concerned with trees. We now know what we are encountering. We go through life needing to know what is happening, and our maps are hopefully adequate to provide this. One example to which we can all relate is that of driving along and seeing a misshapen lump in the road where we urgently want to know what it is but can't conclude anything until closer inspection. At first the category is “thing in the road about the size of a dog”, so we've indexed that far. Four seconds later we've added enough detail to realize a commitment to “old black coat”, the idea of “commitment” reflecting the fact that once the focus is adequate, our brain will present to us “coat” without any ambiguity, without really any choice. This also happens in galleries of modern art: the category “painting on a wall” is committed. But what's on the canvas? “Windows is working on it”, aghast map indexer staggering around.

My contention is that the same thing is happening with the somatic end of our bodymind, which responds both to where the “big 5” outward senses have indexed on their respective mental maps as well as to its own vast set of maps sculpted by our experiences throughout life with outward and inward internal felt sensation from gross-to-subtle (see the Psi-net section). This inner sensing gives rise to the flux of tension patterns which is with us always at varying degrees of intensity. This flux happens whether we are conscious of it or not. You see the woman you love and a series of somatic events occur on their own. Less pleasantly, that lump in the road happened to be your dog recently hit by a truck: a series of somatic events happen on their own. Both of these situations can be said to be current engagements which carry charge. If this woman broke the hell out of your heart at the tender age of 20, that group of internal events may well concatenate into “old thick charge” that you could potentially carry with you the rest of your life with varying degrees of consciousness. Likewise the trauma around the dog.

But the particular dimension I want to point out here concerns what I'll call “integration tension”. This is the process of engaging the “front edge novel resolutions” mentioned above: as we bring our somatic and mental maps to bear on the environments and situations before us, sometimes it will be easy, other times less so. Either way, we are constantly squaring our current map infrastructure with the facts on the ground and there will be some tension until they are effectively integrated. That cliché in education circles which has the “light bulb switching on in our heads” when we “get it” can be seen as the resolution of this tension fact, tensions which happen as the result of maps encountering current sensed conditions. Really tough or alien conditions can make for heavy tensions, and typically the heavier the tension, the more likely that similar category thick ossified

stuff will get dredged up from the unresolved somatic maps of our past. But the distinction I'm trying to make here is between old somatic tensions and newly created ones. For example: you're the guy whose heart was shattered age 20. Five years later you are ready to try again and find yourself a challenging lady. The whole concept of "challenging" brings with it the fact of strong charge in the integration tension between existing maps and the situation in front of us. If all goes relatively well, the current tension integration projects will give way to a series of "light bulbs" as tensions transform into "free-flow". In addition, this particular endeavor will certainly bring up the old tensions from the previous break-up because we're in the romantic section of your inner library. They may remain unconscious but they will be there. There will be some of us who will choose to also make attempts towards resolution of these old tensions that never were allowed to reach the free-flow stage. (Why didn't they reach it? Likely they hurt too much, so we just pushed them down.)

There's a related implication here: time spent in yogabodymind will improve the health and intelligence within the flow of discursive mind as the old charges that create mental bumps in the road are untangled and developed. This essentially means that our charged history of difficult experiences that we've been fending off are allowed in and interwoven into the fabric of who we are, in a healthy way. With the achievement of degrees of stability in the body and with yogabodymind, which would imply the ability to enact yogabodymind at will and center oneself in either calm observation of outward or inward senses, we are also establishing an internal refuge we can take when discursive mind goes off the rails. "Bodymind" is a word coined within the culture of emerging holistic circles to address the fact that many people are "stuck in their heads" with inadequate access to emotions or somatic experience. Stuck in your head means you can't get out of the discursive stream, you simply need to take the ride wherever it happens to go.

Bodily sensation, from gross-to-subtle, becomes the object of meditation. One of the basic changes that make up "what happens to us if we keep doing this" is that this becomes habitual and we become fluent at reading what's going on. Hatha yoga's gross-to-subtle moves will gradually become stably established and routine. (A gross move could be stretching a shoulder when our neck feels tense. A subtle move could be recognizing and relaxing a pattern of tension in our facial physiology. A very subtle move would be recognizing unhappy chemistry in our brain and, without ingesting anything, using yoga techniques to change it.) Good habits will become ingrained by living in the experienced-in-the-moment body to benefit the life and health of the mind. This is why I consider vedana based meditations to be superior among the yogic choices of where to put our meditative attention because it serves both as an object of meditation towards witness stability, as well as radically helping evolve our personal mental and physical health. It can be compared to, say, staring at a candle, or listening to the inner ringing in our ears, which will mostly benefit the witness part, and may actually, depending on the tradition, coax us away from the body.

There has been a clear debate in the history of yoga in India as to whether we should involve the body or try to get away from it. Ramana Maharshi recommended not

doing body-centered practices because they would prevent freedom of the soul after death. Although studying Maharshi himself can offer fabulous things to an aspiring yogi, I strongly disagree with that approach. (And yet... I haven't died yet. Maybe he's right. His teachings certainly are benevolent. But looking into the history of Christianity we see a turn against the body and against benevolence: commandments keeping us in the role of good sheep towards the promise of a happy afterlife, which are set up to help those in power keep us down. This included lethal penalties against those who drew upon the wisdom of the body and even the soul [the word *occult* means "within"] or followed critical thinking skills to their appropriate conclusions, such as the roundness of the earth. But hey, no one gets out of here alive, and I haven't died yet, maybe Jesus will, um, send me straight to hell. I'm taking my chances.)

So, if we stay with yoga, moving towards mastery, there is the possibility to eventually maintain witness stability at all levels, from gross to incredibly subtle, allowing landscapes to form within ourselves which can potentially contain any and all existential dilemmas; difficult things we run into we can eventually understand (including the one final big one, more on that in a moment.) Trying to keep the mind quiet while we practice, continually returning our attention to the work of the asana and noticing how eventually the mind floats away. Bringing it back. Noticing that it is not always thoughts that pull us away from our gross level focus region but sometimes it is the unspoken, authentic subtle environment behind the thoughts once the discursive part has been quieted. When we explore this region we begin registering phenomena that we didn't notice before because they were hidden beneath discursive mind. Very interesting phenomena. These are the subtle currents, nakedly sensed, and they will begin to beckon. And when we are ready we will willingly go, there is something inherently attractive about them. And if we are properly positioned, there is also the chance that they will suddenly show up surprisingly well formed, in a process that has been called grace. They are the "stairway to heaven". Navigating these new realms needs learning time, the bodymind needs time to lay down subtle maps just like with grosser level skills. We won't lose what we had, but we will be integrating something more. My experience with the subtle realm has 10,000 hours as just the beginning.

If she's put in the 10,000 hours of focused hatha yoga, she will no longer view the practice simply as physical fitness (unless she's a truly committed hacker). Depending on her inclination, she will have varying degrees of achievement in the *yogabodymind dimension* of the subtler spheres of existence by then. Again, the *discursive dimension* of the subtle spheres is the one that all of us already operate within, at varying degrees of consciousness. If one does Ashtanga, and settles year after year into pose after pose, staying in each one for at least five breaths, focusing, noticing, there will be some results from the universal human need to remain on our *evolutionary edge*, our creative edge, our interested curious alive edge, playing out within the realm of yogabodymind. One would have to actively fight to stay down to avoid this. The contemporary global allure of hatha yoga reflects a turn in humanity's cultural and personal evolutionary quest, going beyond the typical discursive and dialogic inquiry process and applying this curiosity towards yogabodymind.

Incidentally, I'm not advocating for a yoga practice where we float off into the ether as we go along. I hold the sensation field generated by each asana to be the primary kosmic location onto which we place our meditative focus. But every asana experience presents two dimensions, one: the gradient of somatic sensations made available by doing it, denser being for example big hamstring stretches, subtler being light-headedness after returning to standing upright from being upside-down; and two: the marks that have been left on our mental physiology by the activities of the discursive mind which we are struggling to quiet. These discursive traces, when made the locus of our attention, can sublimate into a grounded access to higher subtle currents which may present themselves.

So I would put the hatha yoga master- different than the chess master- in this category: someone who can navigate the subtler spheres of existence while firmly and powerfully grounded in the gross realm. Whereas the chess master has been gaining a primarily intellectual ability to interpret chess board configurations into predictions and actions, the hatha yogi has been attempting to bring the body with her as she ascends the gradations of spiritual states and has done this not by detaching from the body but by mastering it from within.

The gross realm is what our senses see, hear, smell, taste, touch in the concrete outside world, not an illusion, very real, right there. In turn, a spectrum expressing the realm of finer-stuff-than-the-gross, is sometimes labeled psychic on one end of the spectrum and subtle on the other, with subtle disappearing into the ether in its endlessly increasing subtle-ness. I've been calling this entire area "subtle", that which isn't registered by our gross outward five senses. Again, common spiritual wisdom points to this realm as the same place we go when we dream at night. Like dreams, it can be quite vivid, unbelievably beautiful- more so than the gross realm- deliciously exciting, terrifying like a nightmare, full of resonant meaning, totally absorbing, weird. It can feel awful but it often feels really really good, as if things are falling into place and healing, which I contend they are. Occasional peak experiences of the subtle are one thing, but to live from there, one needs a very strong yogabodymind, which I would call a body that has capacities from the gross to the subtle.

The subtle end of this yogabodymind is like a retractable antenna. It is not easy to keep our consciousness up there. Initial glimpses, giving rise to a steady practice which is open to the subtle, will lay down yoga-structure over time. A strong teacher and community of fellow practitioners helps immensely. Nevertheless, as we get stronger and manage to sustain the subtle life for a while, we will unavoidably- even regularly- run into situations over our heads, with hints of feeling overwhelmed, either as a result of what is happening in our lives or due to the potency of what is coming in. Even if we've done the 10,000. At which point, the antenna will retract, and we will keep our awareness and identity closer to the gross body and normal discursive mind. But as yoga practice continues, we will be able to stay out in the subtle regions longer, eventually centering our gravity at a higher state, ready to get curious about the country beyond it. The subtle life brings with it tensions that are different than the tensions of gross-level world exposure and my belief is that the impetus behind hatha yoga's historical rise from the basis of meditation-only raja yoga, bringing in physical exercise and exquisite concern for bodily regions, the spine in particular, was the search for a way of building a strength that

allows these subtle tensions to relax. The weaker yogabodymind is tense, the stronger one relaxed, or more accurately, able to return to relaxed free-flow relatively efficiently.

Another clarification is needed here. In the history of spiritual literature and teachings, we encounter both “heights” and “depths”. This has created some confusion in the West as to where spiritual value is rightly to be found. Wilber has addressed this issue with what he calls the “pre/trans” fallacy. Simply, Western psychological and spiritual circles have often, in his view, made a mistake around the valid need to intentionally dig down into our more emotional, primitive early experiences as part of the therapeutic project of completing unfinished or repressed developmental business. Wilber is not challenging psychoanalysis' emphasis on this (think Freud, Jung), but he wants to make sure we don't confuse “getting in touch with our feelings” or “watering our roots” with the higher spiritual states. The debate can look like this:

Carl Jung: “Hey there, shiny yogi! Shimmering along in your subtle bliss, you've completely lost touch with your needy manipulative shadow. You probably don't even think that you have one. But the rest of us can see it in you quite clearly!”

High Yogi: “What are you mytho-poetics doing mucking around in the mud? You're stuck in your discursive mind goofing around with old artifacts, while meanwhile the heights of bliss are all around you!”

The quick resolution of this debate is that they are both right. Jung's work especially cultivated powerful witnessing awareness of the unconscious mind, mainly in a “pointing-out” way, by encouraging various methods for noticing the contents of dreams and waking fantasy. I'm calling this the “depth” end, and indeed, yogis have long equated dreaming sleep with the subtle realm. Jung's approach concerned the discursive aspect of the subtle; I'm placing “dreaming mind” as a category of discursive mind because it fills up the space of the subtle realm which would otherwise be nakedly sensed in yogabodymind.

On the yogabodymind end, which is non-discursive, I have above sketched out now the process by which tension patterns become unearthed through applied yogabodymind practice, and how the subtler states with nakedly felt subtler phenomena present themselves with time in yoga practice. The spectrum of the tension patterns, which hold the energy of resisted or not-yet-integrated traces from our experience in the world, goes from “deep” to “high”. Deep could be the tensions felt by a yogi who has noticed old thick patterns around his spine and jaw which have pretty much always been there as limiting factors to his options in life. For many people, such tensions will always remain “beneath the surface”, they will go to their grave having barely released them, if at all, and often making them worse. I place such tensions in the subtle realm because to resolve them all the way, one needs some subtle level application. They can be contrasted to, say, a teacher pointing out to you the fact that you habitually slouch, which would be a *gross* adjustment if you chose to make it, although it is likely the result of subtle forces beneath the surface. So, these deep spinal tensions are thick and old (meaning they took root when we were young, and likely a la Jung are related to archetypal drive in some way stymied by outward life), but they are accessed by penetrating the subtle realm with yogabodymind.

The other end of the spectrum is “high”, characterized by currents less thick, less obviously locatable in the body, more ethereal. With practice we will notice that the bodily regions engaged with these energies are the “higher chakras” : the eyes, the top of the head. Tensions exist here too, and it has been noted that these regions tire easily and can get deranged if overly emphasized. Think again of REM sleep: there's nothing relaxed about those eyes! My contention is that recruiting the lower thicker spinal regions as support for the more delicate higher regions was the observed historic need, in India in particular, in giving rise to the proliferations of hatha yoga.

One of the main reasons we have laid down an internal pattern of subtle tensions is because of the problem of sensitivity: think “bleeding heart liberal”: this world we live in has some basic structural challenges that prod us toward emotional and personal protection, beginning with the basis that life feeds on life. Civilization has afforded people and the animals we need and love some refuge from this, but we all have painful memories. Indeed, the first tenet of Buddhism is “life is suffering” and practices have been generated to address just that. At the time of this writing, Vladimir Putin has set up a situation where slaughtering large numbers of soldiers seems to him a good idea. Will it ever end? But even those who have lived the entirety of their lives in peaceful prosperity with healthy habits have plenty of pain inside. The tensions are actually effective at keeping this sensitivity at bay, and can be seen as ways to prevent the psyche and ego from being overwhelmed. But they impinge upon our internal freedom, and those who are ready want to get them cleared out.

The spiritual path that I'm claiming will arise with 10,000 hours of hatha yoga will include both depths and heights, and “horizontal' progress on the W-C Lattice entails and requires both. (I'll get into whether it needs psychoanalysis' depths in a moment.) Movement along this path is not a new found discovery. The sages have been clearly or mysteriously talking about it for millennia. Some have been yelling about it. And it has been universally described as not just a path of increasing scope but also of increasing bliss. Just in case you as reader had any questions why one would want to go there. It arises inevitably and authentically and irresistibly from the matrix of our regular practice which already brought good things in the way of physical fitness and mind-body integration. Proliferate awareness of the subtle currents in subtle territory, as well as recognition and acceptance of the depths of our resistance to freedom, is only more good things. Taking this path will put many of our previous dreadful crises into perspective, they will loose their awful teeth. Delights will be felt more delightfully, meaning will resonate powerfully, humor begins to lurk around every corner, the grim drama turns to heartfelt sorrow expressed by healing tears.

I mentioned above the "one final big one" and it is this: the great sages in history have merged their identity with what Patanjali calls the "drashtuh", the seer. Like it or not, he is already onto this eleven words into his sutras. One need not get all the way through the subtle realms to reach this state. Several traditions bypass a percentage of "all this yogi stuff" and through variation on inquiry and perspective altering techniques, get the practitioners to realize that the awareness behind the eyes by which you see these words right now is that very drashtu, you are already there as we speak, it can't be generated with practice because it's already in place, always was...yes the language of the

ultimate perspective sounds like that. Anything less than that solution brings about issues of division. If you can survive the first 200 pages of Aurobindo's *Life Divine*, you will understand something of division (it will be pounded into your head, really), and I won't agonize over it here, so much as to say that the entire gross-realm-into-the-subtle-realm project which I've been belaboring, all of it is initially experienced in a divided manner. Doesn't matter how subtle it is, it's still divided. This brings a paradox that the deepest sages have felt a need to resolve. For these saints, and zen masters, and yogis, this incompleteness was unbearable, and it spurred them on to the *non-dual*, which is another story and not one which I will go into much further in this book beyond the following issue.

Again, hatha yoga is a *gradualist* practice, which can be contrasted with what we'll call an *inquiry* or *go-straight-to-non-dual-do-not-pass-go* practice. Hatha yoga is actually even more gradual than many gradualist meditation approaches because it brings the whole body with us. And it clears psychic stuff out as its method, clearing the internal field in a way that can be likened to a light bulb covered in mud. The mud is our karma, our mindstuff, the unresolved traces left by our experiences, our attachment to unexamined desire-driven egoic ways of seeing and acting. The light bulb is the pure seer, the jivatman, the witness, and as the karmic mud covering it is gradually removed, its light begins to shine forth. The idea is that actions in the present that come from further along either axis of the WC Lattice will leave subtler traces that are easy to clear and can have effects that will clear up older thicker heavy mud traces; and we see in the literature claims that enlightened acts can leave no trace at all. Through practice, as old drives toward thought and action are transcended and replaced by subtler and more sophisticated forms of themselves, the "worldly" issues and nags that once tormented us begin to lose their bite. This work will require an evolution of our personhood, which will include variations on the following: working beyond old emotional patterns, integrating incongruous aspects of ourselves, telling the truth to ourselves, laying down deeper emotional resources that can handle the diminishment of ego, delving deep into the tension patterns throughout our bodymind and in so doing growing the nadis that can bear the charge contained in them, acting in the world with greater consciousness, gaining conscious access to and appreciation of psycho-emotional depths of the bodymind which were previously accessed only in dreams.

Ken Wilber speaks (hilariously) of "non-dual schmucks", characters who, through one of the straight-to-non-dual practices, have realized an identity with the witness without having gone through much of the trial of internal transformation mentioned above. They didn't clear everything out to gain the light from the lightbulb, they simply skipped right to the light, leaving the bulb covered with varying degrees of mud. All gradualists have mud still, but the gradualist process intentionally removes it to reveal the light. Non-dualists often stress that not very much of this is needed and many yogis consider these approaches to be the cream of the crop among the globally available sadhanas. This quest may be accompanied by a strong urge to evolve the whole person, but it also may not. For example, let's say that I, Steve, have attained a stable identification with awareness itself and that I have no identification with this Steve guy who walks around and does Steve stuff. He's there, doing what he does, acting out his internal drives, and I can observe this process with very little sense that he is who I am.

From this perspective, I may choose to go through the evolutionary trials of hard karma-dredging practice or I may not. Such trials and efforts lead to "vertical" development and from a causally identified yogic perspective *can* be pursued with an intensity that is likely impossible from closer-to-ego identification perspectives. But if I'm a non-dual schmuck, I may watch Steve NOT go through the internal trials required to reformat the way he acts, and merely observe him as he gets drunk, starts fights, and has sex with porn stars. (See Adi Da for an example of a guru who by all accounts had achieved great degrees of yogic freedom and yet indulged a lifestyle quite close to- and in some ways worse than- the failings just described. The gurus gave themselves the "crazy wisdom" pass. You're not enlightened so you won't be able to comprehend why I'm screwing your wife). As Wilber has insisted in his book *Integral Spirituality*, identification altering yoga practices do not necessarily lead to a full maturity of the person *by themselves*. Specifically, non-dual practices may not have sufficient transformative traction on psychosomatic material to effect the kind of change that psychotherapy can have, or a well-intentioned householder life requires. On the other hand, gradualist practice requires *essential development of the person* as the way to get to the light.

Personally, I have serious doubts about some sectors of the "spiritual bypass" community who tell you to ignore all that yogi stuff and just "come home". This is partly because a big source of it, Poonjaji, disavowed much of it later in his life. Other teachers in this ilk, like Ramana Maharshi, hold up far better, but Maharshi himself was a practitioner of severe sadhana in his younger years; it would be ridiculous to say that nothing happened within him during those years. Likewise, the paradox between the pointing-out nature of Dzogchen and the fact that your friendly neighborhood Tibetan monastery will offer among their professional services the 3 year retreat, with practices from 4:30 am to 10:30 pm every day, no days off, sleep six hours *sitting upright in a box*. That doesn't do anything?! But there is another problem.

Concerning one of the highest states of consciousness, the causal realm, Sri Aurobindo says *"the mind when it passes those gates suddenly...receives a sense of the unreality of the world and the sole reality of the Silence which is one of the most powerful and convincing experiences of which the human mind is capable."* (*Life Divine*, p.28)

And as a result- for him an unfortunate result- the history of renunciated East and West includes many individuals who have decided that as long as they have the ability to consciously hang out in these higher spaces, then typical waking human life has little draw for them. Aurobindo was a deliberately transformational figure within Indian spirituality and he had a bone to pick with the rishis who preceded him: *"through many centuries a great army of shining witnesses, saints and teachers, names sacred to Indian memory and dominant in Indian imagination, have borne always the same witness and swelled always the same lofty and distant appeal- renunciation the sole path of knowledge, acceptance of physical life the act of the ignorant, cessation from birth the right use of human birth, the call of the Spirit, the recoil from matter."* (*Life Divine*, p. 29) He helped found the city of Auroville in an attempt to realize the physical in harmony with the spiritual. And we can contrast that quote with Joseph Campbell's statement that "spiritual life is the bouquet of nature", where he urged committing oneself from one's deepest passions and bliss, and doing it wholeheartedly, for and in the world.

I want to affirm a yoga which does not in any way negate either the subtle currents nor the gross currents. The gross mind opening up to the subtle mind is a way of following the path from waking to dreaming while still awake. The dream realm is the way the sleeping mind prepares itself to go into deep sleep. A tiny percentage of those who center themselves at the subtle level will want to press on, and will succeed at it, largely through an act of grace. Others, having centered at the nidra state- deep sleep while still wide awake- will then move into sahaja, the no-taste where all states are integrated, without needing to get the subtle realm worked out too much. My proposition is that a stably grounded residence in the subtle realm is a good idea in and of itself, as well as for those who have the guts to go onward, partly because, I contend, to remain there on a consistent basis one has to both clean oneself out and get through one's stuff, shadows and all, as well as building up a kind of strength which presents itself in an inspirational way to others, in the world. Also, it is the most likely place from which to realize non-dual reality. And also...because it is such a wonderful place; the muse lives there, the gods and goddesses, they periodically peek through in bliss hints which have stirred sensitive artists throughout history. The perennial poet's longing instincts through the ages haven't been wrong- it is a place of haunting beauty and awesome aliveness.

On the incredible journey of hatha yoga, 10,000 hours is just the beginning. And the adventure into bliss that awaits is very real. If I were your teacher, I would try to help you get out there stably first, with deep strength. From there, the divine may claim you. At which point, we will become one, you and I.

There's a mystery in the process of falling asleep: at some point as we lie down at night, we get *taken* by the dreaming mind. If we have any will in the switch from waking to dreaming it is in our will to relax. Those who are good sleepers have the gift or acquired skill of getting themselves into the place where the dreams can take them. And likewise the move to deep sleep: it follows on its own once we've hit the layers of the dreaming state, it claims us. You can't force this. And thus it goes with the spiritual life, and those who have attained to the mysterious and elusive causal or yoga nidra state: having brought themselves by their skill at the yogic/meditative/contemplative/inquiry arts to the place where subtle phenomena present themselves, at some point of penetration into this subtle state- and this expression of it seems to be universal- they get surprised, grabbed, engulfed, claimed, taken, submerged, *as an act of grace*, by a profound stillness and quietude which presents itself as *more real* than normal waking reality, indeed, which appears to present the matrix from which normal waking reality originates, the womb of the whole thing. A reticence and reluctance to return to daily life can be a by-product of this realization. Spiritual people become less material because they have found something... better. (How many of us enjoy being awakened from deep sleep?)

Adept yogis can get themselves to these higher states at will and sometimes quite rapidly, once the state territory, the horizontal axis, has been objectified and traversed several/many times. There is a very interesting implication here toward healing: if the

yogi can maximize her command of the subtle and/or causal realms while still awake and functioning to varying degrees in the gross realm, she will have *access to the organizational and healing powers of sleep while still awake*. Without sleep, body and mind begin falling apart. Death from complete insomnia occurs anywhere from eleven days to a few months. Again, research has shown extensive aspects of how dreaming and deep sleep promote mental organization in the waking state, as well as the fact that the body releases the most growth hormone during deep sleep. Long term yogis (including meditators) exhibit various well-developed brain regions and have shown improvement on several stress related health indicators, demonstrating that conscious relaxation does more than just free one of tension but also generates positive, healing, evolutionary metabolism. Sleep researchers have often commented on how sleep is not a low energy, conservation state but actually a time when the brain burns through calories with heavy neuron firing; it's a relaxing state but it's far from death-like. Studies on meditators show that they frequently move in and out of light sleep states while practicing, which can be interpreted as a conscious cultivation of the states of sleep, as an illuminating of the transition between awakeness and sleep.

And herein lies a vindication of hatha yoga and the beauty of the W-C lattice. My position is that Hatha yoga is the path par excellence for integrating gross and subtle states, which allows the subtle planes of existence to co-exist in the yogi's consciousness with the gross realm, as well as opening a pathway which allows gross psychic phenomena to differentiate up to the subtle. By witnessing our gross level projects, and recognizing the importance of that witnessing process itself, we can make any activity into a hatha yoga- doing the dishes, playing basketball, having sex- holding as many horizontal depths as we have access to while we go about our lives, completely in the world and yet evolving beyond typical worldly concerns through our very participation in that world. By deliberately making the world into an object, our subject, our witness, can make that very objectification process a means of differentiating itself from the material.

How else does worldly participation help spirituality? Why not just renounce it all and go into a cave and ignore the body? When considering such a cave yogi, we see a person who has radically limited his inputs and, if successful in the long line of cave-yogidom, has thereby managed to sit in his cave and enact non-dual mental perspective. But what if real estate guys develop the land where his cave is and he needs to go into the city? How will he do with attractive women walking around, with the need to have money, etc.? Surrounded by these things he may well discover that his samskaras begin flying, his limited experience has left him clueless to many of them, and his non-dual perspective vanishes. Conscious engagement with the body and life, placing value on calm observation and mental quietude, can be the tortoise to the cave yogi's hare: slower spiritual progress, but bringing the whole thing with you, and durable.

Mastering both spirit and the world will not always be easier than focusing on one or the other. But it's better. Pattabhi Jois likened this to that of a woman walking along with a bucket full of water on her head, a common sight in the Indian countryside, and one which is dauntingly difficult at first but eventually appears effortless: bringing God down to Earth, living the spiritual life in the material world. While others are merely walking along, the accomplished tantric is keeping track of a much bigger project. And is

it ironic that many of the women doing this are quite beautiful to look at? Is it ironic that the human form doing hatha yoga is often among the most beautiful incarnate sights to be found? Hatha yoga is India's great gift to the world. It is the realization of how to bring the rishis' profound dedication to the horizontal axis- to the higher yogic states- back down to the very muscles and skin of the waking state, which can in turn stimulate the bodymind up to the higher reaches of evolutionary development. It is the horizontal progress itself that allows extraordinary vertical progress to happen. We have room for both heaven and earth.

I'll say it differently: although many seekers who have achieved the further horizontal states can show an indifference to the vertical realm of material life- either because they lean in the cave yogi direction or they have actually defused some or all of the drama and wonder within themselves around worldly existence by living in it- the great gift of higher spiritual states is the beautiful elegant organization they present to the material realms, should the yogi choose to return to them. One way to express this in the yoga tradition was through the siddhis: flying around, ability to read minds and disappear, to shrink, to grow huge, to be two places at once, walk on water, that kind of thing y'know, abilities beyond the ken of typical people, said to be acquired by higher yogis because their spiritual achievements allowed them an entirely uncommon penetration into gross "mundane" matter. Many of these siddhis are somewhat, uh, fanciful; but your ability to use yogic skills to radically develop your own abilities is anything but.

...and the causal, the next step beyond the subtle? It is called "causal matrix" because from the mystical eye, from the eye of one who has experienced it, the forms that make up the world emanate originally from this place. It is the source of form, from very subtle form to gross form. Sri Aurobindo called it "massed consciousness". Those who travel the spiritual path can engage a milieu that has been seen as opening the possibility of understanding- and participating in- world creation itself. The pre-eminent techniques for causal realization seem to require relative stillness of body and mind, such as seated or lying down meditations. But the time spent mastering and continuing to master hatha yoga can get the yogi to a robustly supported place in the subtle realms where, inviting the causal in, and everything ready, ambient rapture gathering, she gets taken.

PSI- NET

The "big five": sight, sound, smell, touch, taste. These are the gross senses, the blatant senses, expressing the body's evolutionarily acquired capacity to gather essential information from: light, which is electromagnetic waves, for sight; mechanical vibrations in the air and other mediums (such as water) for sound; particles in the air for smell; solid matter for touch; and chemicals in solution for taste, respectively. And my claim in this book is that there is a sixth, which I will attempt to elaborate in this section: let's call it *Internal Subtle Feeling*, (ISF for short). It has two main dimensions: one, *inward* ISF

which allows for deep revelations of our internal landscape, and is part of yogabodymind as previously elaborated, and two, *outward* ISF, which reveals another dimension of “what’s out there” represented by the big five, receiving information from its own unique aspect of the external landscape. For example, a person may see another person in a room, and hear her, and also *feel her* from across the room. In doing so ISF typically reaches into territory which contains objects and processes that the big five can't perceive. These things exist in what we can call the *subtle realm*.

Each of the big five gross senses can potentially have an internal aspect, meaning that it can pick up occurrences from inside your body, events happening within your own skin. Internal hearing can be the sound of your jaw grinding or ears ringing; taste, that of your own blood; sight, that of the manufactured spots when you press your finger on closed lids. I'm kind of at a loss as to what internal smell might be beyond the way that olfaction contributes to the taste of our own blood or various kinds of mucous (yuck). But feeling is different. There is vast amounts of data coming into our brains on a constant basis from internal feeling, and individuals vary in the degree to which this is conscious. It serves an essential function, in addition to outward touch. This is the gross, blatant component of internal feeling and it can be roughly divided into two terms: *proprioception*, which physiology tells us comes from muscle placement and movement, and *interoception*, which covers pain, pleasure and internal organ sensation. Perhaps we can call this region gross sense number five and a half, because only part of what it registers is information from the outside world and yet it is not really esoteric in its basic forms, i.e. the normal experience of having sore arm muscles is neither subtle nor esoteric.

But if one maintains attention over time on the information from interior sensation, that sensation capacity will begin to consciously register subtler phenomena which don't so clearly have a determined location in normal space and time, and we may realize that we've been engaging this territory at some level our entire life. This is where we get into what I'm calling the sixth sense. A truly vast terrain containing subtler things begins to present its contours when we make such sensing into a conscious practice. In addition to everything I've already belabored in this book on the subject, in this section I want to sketch out my claim that the subtle realm is, among other things, the medium by which subtle communication happens, which is distinct from big five sensing, and includes such things as “ESP”. (Regarding “extra sensory perception”, I prefer “sixth sense”, because I believe it can be treated as a normal part of human sensing, it's not really “extra sensory”.)

So, right here at the outset, we have a primary philosophical/scientific issue: does ISF merely feel internal workings of our physiology at a highly sensitive level, or is it sensing signals from “out there”? The big five all indisputably sense the world “outside” of us. Internal gross sensation, namely proprioception and interoception, which primarily sense fields “inside” of us, are universally accepted in the scientific world. And no hard positivist would deny that we can have highly fine grained versions of these. The question rests on this: does ISF include within its incoming information some kind of subtle transmission from “out there” different from light, sound wave or the physical chemistry of solids, fluids, and minute particles?

For those willing to go down the rabbit hole of old analytic philosophy, one will encounter Bertrand Russell's definition of reality which insists on the difference between Hamlet, who only exists in the imaginations of Shakespeare and his audience, and Napoleon who will "see to it" that you recognize him as real. What we have here is the distinction between on one hand, something creatively generated within our minds and on the other, a representation that has been unconsciously constructed beneath choice by our brains in a direct chain from our senses. For an example we can break the reality of a book into three levels. First: pieces of paper with ink on them. Second: words, which those who can read and understand English can use to generate a process of meaning in their minds. And third: based on Shakespeare's cues, a fictional set of characters that come to life through the imaginative powers of the reader. Of these three, my contention here is that a mature outward ISF is firmly operating at the first level of reality, sensing things as real as the paper and ink.

This distinction can then be applied to internal experience, by discerning between imagination and internal reality, according to Russell's above criteria for reality. This differentiation would follow from the fact that a mature ISF perceives something internally empirical, distinguishing that which it senses in a stable yogabodymind from the peregrinations of discursive mind, which may refer to real things or may refer to things generated by the imagination. I say mature ISF because, for the most part, there needs to be a strong arduous weeding out process conducted over time to separate ISF from the emotional and discursive clouds from which it is birthed. The sensing of ourselves and who we are, emotions, nuttiness and all, is an essential part of yogic development, but the ISF aspect of yogabodymind is not so much a witness of our personality or of the processes of our discursive mind, but rather, it can be characterized in two aspects. One: as an observer of the somatic fact of our residual tension patterns, usually with "tonal" qualities, accumulated during our life history, which are usually beneath our control but can be brought to a degree of awareness and relaxation with practice; those who choose to engage the yogic arts can begin to grapple with them. And two: its capacity to receive information from "out there", just like vision does.

So, the first issue that arises here is the need to get a sturdy yogabodymind in place before a mature ISF can happen. As we've seen, this can take a while. Discursive mind can be seen as a function whereby outward and inward sensing, and potentially ISF, are typically only briefly consciously engaged and otherwise taken from a gradient that ranges between fairly conscious to entirely unconscious, and then woven into the discursive flow which is the center of identity and energy. This is far different than just being with our senses as low down the processing ladder as possible and deliberately trying to sustain such a mode of sensing over time.

Next, when we bring in the distinction between imagination and actual sensing, we need to recognize that all actual sensing is partly a construction of our sensory machinery. Considering vision, this has been expressed in neurobiology as V1, V2 etc., rungs on the visual neural pathways which construct the image which is eventually made available to our minds. (We can compare "mind" here to "brain"; I'll call "mind" the arena whereby already-prepared objects and processes are entered into a flow of mentalese, which can have varying degrees of language likeness. "Brain" is the beneath-

willpower biological functions which take sensory inputs and synthesize them into objects and processes, preparing them in such a way that mind can work with them.) These visual constructions can be confused in a way exemplified by the example used by Shankara in the 8th century: as we're walking along we see a snake, but wait, now it's a stick. Then it's a snake again. As new data comes in, the visual system beneath our control delivers conflicting messages to our minds. We can then imagine a boy who grew up centuries ago in a tribe living where snakes are almost never seen and can presume that he will land heavily on the side of the stick in terms of what is presented to his mind by his visual system, which is based on the memories he already has.

So, the next issue is that of the “myth of the given”, which roughly translates to materialistically minded thinkers who haven't understood Immanuel Kant. It boils down to this: all of our experience is “in here”, we actually don't and can't really know what's “out there” or what Kant calls “things in themselves”. Ultimately we are bound by our senses, even if they are the extremely sophisticated technological extensions of our senses currently used by the sciences. What our minds (I'll add, bodyminds) draw from at root are the representations of whatever's out there which are created by our senses and given to our bodyminds to work with. There's no way around this. At best we can agree with Paul Churchland that we are “up to our ears in things-in-themselves” or that we have a very very very stable and durable and repeatable set of things we know about some things-in-themselves, but ultimately there's a hard limit here. The Kantian divide between senses and the actual outer world can't be crossed. We're not navigating through things in time and space, we're navigating through the sensory representations generated by our minds and formatted by various mental categories, as a result of contact with whatever's out there.

Which then brings us to this: all our gross sensing is an internal response to something from “out there” contacting our sense organs. For inner gross sensing, such as proprioception and enteroception, it becomes more complicated, because then it becomes a sensing of something within our bodies but still received as information for our bodyminds just like the outward senses. The event happened inside my body but, finally, what I have with this too is just sensing; we don't have our bodies, we have our sensing of our bodies. Some kind of witness is observing both outer and inner sensing.

Now, what we usually call imagination is a few rungs further up the ladder from basic sensing, where we begin to engage items in memory with the creative and dream-making realm of our minds. This can be unconscious, as it usually is in sleep, or part of waking inventiveness, such as that which a fantasy novelist draws off as she writes. As we grow through childhood, at some point the rational mind rises up out of the “magical” and “mythic” minds. Our novelist is coming from a rational perspective (or higher) and intentionally dipping into myth and magic for the recreative fun of it. For those of us way further up the worldview ladder, the magic and mythic realms serve so well as entertainment because there is something restorative and healing about them, they water the roots in a variation of they way dreams do. But kids have no choice; younger minds use an imaginative creative discursive process to weave together a world-view “out of whole cloth” based on their experiences and the fact that childhood runs the “software” of an often dream-like mind with a “computer” not yet capable of consistent rational

analysis. Human development has been described as progressive manifestations of ever more-adequate-to-reality styles and levels of complexity of cognition, for which rationality, in this day and age, is essential. Explaining thunder as an expression of Zeus' anger eventually runs into problems. Next, a frequent experience of those attempting to establish yogabodymind is the slipping in and out of sleep during meditation: an example of an aspiring yogi who cannot be in the subtle realm yet with witness stability. There's something about the charge of those higher subtle contents that the yogically untrained mind would really prefer to deal with during sleep. This can be seen as a parallel to the rise of a person's rational mind- it becomes a "rational stability" that can hang with difficult paradoxes and opposites without collapsing into magical or mythic solutions. And my main point here: distinguishing between actual subtle sensing and the clouds of emotion, imagination and dreams takes practice, y'know like 10,000 hours. Or more.

This is the problem of how to be empirical with ISF. So the next distinction becomes: was this sensory event picking up something from outside my body or inside of it? This is even further complicated by the following: let's say I see and hear a cyclist having a dramatic wipe-out on the street in front of me. My vision and hearing deliver the event to my bodymind and, as one result, several internal events are triggered, such as a twist in my guts, an increase in my heart rate, and the release of several hormones. These are perceivable internal events and are certainly in large part a secondary cascade of responses drawing off the visual and audio information from the outward event. And they present additional information to my bodymind beyond the outward five, such as an inkling of the severity of what just happened to the poor guy. So this experience we can put in the category of: the big five outward senses experience something and our gross or subtle internal senses consequently pick up various internal events that happened within our bodymind as a response to the outward sensing. Something happened out there and, in addition to the normal physiologic process initiated in our visual and auditory machinery, we also have gut and heart events and potentially complex emotional events *caused* by the audio-visual sensing. This internally felt experience will be working off data that has come in through the big five and will be part of educating our response to that data, an additional dimension of information contributing to our understanding of what just happened out there. Many people draw heavily from their emotional and hormonal response to events, and the wise among them trust this as a kind of indirect sense organ to be subsequently rationally assessed and integrated. This has in some circles been called "women's ways of knowing". But this would be explained simply as perceiving an event through the big five and then allowing for and giving space to sophisticated and nuanced emotional/hormonal responses.

But the idea I'm presenting in this book is a different category: that I may also have received information about the bicycle wipe-out from a sixth sense that works as a receiver of some other kind of phenomenon. Not just an internal secondary response to information from the big five but an actual sixth sense. From my knowledge quest in this area, I place this capacity primarily in the range of internal feeling that is far more subtle than typical proprioception and enteroception. It is akin to a trace left in the somatic body from experience, but it is not a tension laid down as a result of the unconscious attempt to filter big five sensing. Rather, it is a varying pattern of subtle tensions in different locations of the body but primarily in the higher chakras, accompanied by a vast range of

feeling tones. This is the form that our interface with the psi-net takes, just as a visual field is the form of our interface with reflected light. Often times this sixth sense is recognized one step removed, by noticing a collection of familiar subtle tension patterns that occur in our physiology as a result of receiving the subtle outward signal. This is often enacted in what I call the “tri-geminal zone”: subtle tension patterns in the jaw, cheek and eye regions. These secondary tensions can be likened to unconscious squinting when our eyes are having trouble with the intensity of the primary visual signal. Secondary tensions can be relaxed with practice, but what will remain after such conscious relaxation will be the front-line reception of the subtle signal itself which, again, is also accurately characterized as a play of subtle tensions with an array of feeling tones.

These sets of subtle tensions lend themselves to, and seem to seek, resolution. And although the resolution processes are often played out within the tri-geminal region- in the eyes particularly- once the resolution has happened, the “satisfaction” feeling that follows often includes a heart surge. The heart is also the other primary center for subtle exchange. The heart's “antenna” is somewhat less sensitive to signal than those in the head, but its “wire” is fatter, and can handle stronger charge both in reception and in what it transmits out. My experience points to these resolution processes and the satisfactions that follow as being an event in exchange with others, and are a basis for the subtle relationship process.

A special situation occurs when we actually put our hands, or lean our body, into physical contact with another person's body, which is one of the primary acts in Ashtanga, practiced in a group with a teacher. This is territory well-traversed by bodyworkers: physical contact can bring a strong subtle surge typically sensed in the heart region. Physical contact makes subtle heart surge quite obvious, but it can also happen across vast space and potentially time. Which brings us to the next issue.

For those exploring this territory, there is another gate that must be crossed in addition to the jobs of trying to clear out emotion and imagination, and getting as far down the processing ladder as we can, so we can be under as much of our idiosyncratic conditioning as possible in order to get at the authentic incoming signal. This next gate is the challenge presented by the fact that outward subtle sensing can be tangled up with two things, one: traces that have already been laid down from previous experience, and two: dynamic subtle responses drawing directly off the dimensions of our current situation sensed by the big five. Distinguishing between actual incoming-in-real-time subtle signal on one hand, and the historical trace fund or current subtle tension responses to our present-moment gross situation on the other, is to make determinations along a continuum of similar phenomena and is a fairly advanced yogic art. My category of ISF includes both outward and inward, and it has the sensing of subtle traces that are already there within us, as well as new ones constantly being laid down, as a set of things and processes sensed by inward ISF. Much of what I've written in previous sections is about yogically working with traces already there, which is a practice of looking deeply into who we already are, or “I” finding out about “me”. This is different than what we usually think of as memory. Typical memory could be that of allowing images from an event that we experienced yesterday to play along in our minds today. We can call that “mental”

memory. On the other hand, tension patterns, from big and thick trunks to the tiniest filaments, are another way of storing our experience by creating corresponding structures in our bodies. We can call such tensions “somatic” memory. They can be seen as blockages which, with sufficient deployment of attention, can be transformed into “free flow”. This is the work of inward ISF and can become the highly fruitful results of a well-established yogabodymind. But it is not outward ISF.

The attainment of a clear outward ISF also requires even another step: that of distinguishing between the subtle tension patterns laid down in our bodyminds by discursive thought and authentic incoming signal. Discursive mind is a bastard difficult to tame under the best of conditions, so we must accept that the normal mental mode, even for a strong yogi, is to be subject to an influx of constantly new subtle tension patterns generated by discursive mind. Authentic incoming signal is something different. And another sensing-through-secondary-phenomena can happen when we notice that our discursive mind is running with greater than usual impetus, which can be attributed to inward psychic forces but can also happen as a result of concentrated incoming signal.

The possibility presented here, as a product of considering all these factors is, primarily via long term practice, a perspective on our moment-to-moment internal experience akin to a three dimensional theater within which events occur, in different locations, on a spectrum from gross-to-subtle, from weak to intense, of varying kinds. One of those events will be incoming ISF from out there.

I'll sum up the discernments I just covered: outward ISF needs to become stably established through yogabodymind sustained over time in order to differentiate itself from inner imagination and emotional process; from secondary responses to big five sensing; from inward ISF's sensing of tension-patterns-from-past-experience; from secondary responses to outward ISF itself; and from the tension-patterns constantly laid down from discursive mind.

Now, outward ISF up to a certain level may be given as a gift to some people from cultural/familial heritage or genetics or historical accident, but for many of us it will need to be developed with practice over time. I will make the claim here that it is a capacity shared by humans and animals. Historical mentions of it, with legitimate signature, can be found for example in the fifth century BC debates the Buddha had with the yogis of his era, where he held the position that they were making inferences based on “ESP” that weren't adequately supported. He confirmed the fact of ESP but denied the conclusions these yogis were asserting about the larger cosmos based on ESP. Further speculations: it would serve an evolutionary purpose for animals who could feel a predator looking at them; many women claim they can feel when men look at their butts, which could serve as both a danger warning or a possible pro-creative opportunity; I hold the position that cannabis and stronger psychotropics can increase the user's access to outward ISF and in an era where these are being legalized, more people may gain the capacity; there is speculation that the wi-fi explosion can interfere with it, especially with the advent of 5G.

In the first edition of this book, I offered the position that ISF is an emergent capacity in humans that is just getting going at this point in human evolutionary history. The above speculations can present a counter-point to that, with the idea that it evolved in

human and animals along with the outward senses and that it has been pursued and developed at various times in history based on desire and need. Looking at the written record, we can already find it well underway over two thousand years ago, not just in the literature from India but also Greece. But India is definitely a hub for this and we know from that record that practitioners and thinkers there have long been pondering the processes captured by the Sanskrit term, *sukshma indriya* which means "subtle senses", and the subtle realm came to be seen in spiritual circles there as a step toward realization of higher goals in yoga. My idea of ISF is a development upon *sukshma indriya*. At this point, I don't feel sure if this is evolving in humans or not.

Now, in our contemporary situation, it is really not possible to claim that the phenomena disclosed through outward ISF can qualify as scientifically proven in the full rigorous sense of the term scientific. This is because the *confirmation* of exactly what is perceived, by checking it with and against the perception of others, is difficult to do with anything resembling the overwhelming robustness of shared experience that the big five offer to such a large percentage of our waking lives. But that doesn't make it impossible to undergo a personal and communal confirmation process, and it doesn't make it untrue, and it especially doesn't make it unempirical. In fact, I'm claiming here that the things disclosed by outward ISF, and the landscapes containing those things, and the processes involving those things, are *cognitively significant* in every way demanded by even the logical positivists at their most severe (Carnap, Hempel). And the future will very likely see the transformation of this realm from merely empiric to actually scientific. Trends such as Consciousness Hacking work with methods and instruments that show how this may play out.

Outward ISF is cognitively significant because, with gift or development, the realm can be *robustly experienced as real*, just as real as any of the big five, moment to moment. Similar to outward vision, it can become stable and present in real time, and it does not deliver information subject to whim, or present to us merely what we want to perceive. Rather, it faithfully presents data that is then turned into a dimension of our overall sensory *representation*. It also offers up a landscape whose features are *enduring* and *reidentifiable*.

Returning to Kant, in philosophy, since his *Critique of Pure Reason* appeared in 1781, it has more or less been recognized that when we see a tree, what we are really doing is taking raw data from our visual system and then applying mental categories to that data, much of it happening unconsciously. Discoveries in neuroscience which have been integrated into cognitive science lean toward affirming and building upon this aspect of Kant's view. We take raw colored patches and then *make* them into a tree with our mind, the process completed before we recognize that it has happened. Two people see the same colored patches and both call it a tree because both of their minds are using "essential facts" shared in variation by all minds to arrange those colored patches into a tree. Again, this approach to vision, and all senses, sees them as generating *a representation* which is created within our own minds. Applying this process to ISF, we can say this: we internally *feel* processes and contours and then, just as we do with the big five senses, attempt to organize that raw data into things that can be recognized. I say "attempt" because my position is that our biology, unconscious object-presenting minds,

and conscious minds are typically only at a rudimentary level in the subtle realm. Despite this, I've noticed that, especially in India, the subtle realm is taken for granted and, at least in basic ways, used as part of the daily routine in spiritual circles, and stable adaptation within the subtle realm is often seen as necessary toward realization of the next step, that of the witness or emptiness. That being said, I've been struggling to understand this subject since my late teens and I'm often at a loss as to how to interpret both the things I'm perceiving as well as the lay of the landscape in which those things reside. A bit like looking at modern art or listening to difficult jazz.

I have discovered many things however. One exceptionally interesting aspect of ISF is that it discloses a field that we can operate within and alter in a way quite different than how we alter the landscape perceived by our other gross senses. For example, if we see a shovel against a wall, we can walk over to it, pick it up and move it against a tree. When we then stand back and look, we have altered the visual landscape we see. By contrast, in both outward and inward ISF the subtle objects perceived are directly responsive to actions from what we can call the subtle body (*sukshma deha* in Sanskrit.) We can effect things in this realm, but like the shovel, we can't effect them any way we want. If you try to mold that physical shovel into a ball with your hands, you are going to run into splinters which follow laws that you cannot simply overcome or ignore. In a similar manner, the objects in the subtle realm are also governed by laws, although they can be said to have greater plasticity than gross matter. In dreams we may very well mush that shovel into a ball, and dreams are one mode of expression of the subtle realm. But even though dreams can manipulate gross data such as images in ways that can't happen in the gross waking realm, there are still forces in the dream world which are real and can only be fluently navigated once they are accepted and understood. A good pitcher in baseball has not altered physics but has found ingenious ways of working with it. Likewise an accomplished yogi or shaman with the laws of the subtle realm.

In terms of categories here, technically I put dreaming mind under the category of discursive mind. It is discursive mind in one mode of its subtler aspect. And note, whereas on a daily basis waking thinking mind eventually wears itself out, akin to the physical body with physical exercise, the dreaming mind is the body's way of recovering. Dreaming mind is healing, organizing, cleaning-up mind. However, *yogabodymind* is different in that it traverses much of the same territory as dreaming mind but it does it wide awake, engaging the forces encountered in the subtle realm with direct sensing. Shamans typically negotiate subtle forces in a dream-like way whereas yogis seek to understand the territory with "naked" awareness, which I believe allows them to discern between subtle objects/processes in a more scientific manner. In either mode, shamanic or yogic, once the subtle realm is entered, both our own history and the actual incoming signal are encountered.

So we can do two things here with this naked awareness, based on whether we are, one: engaging our historical trace-fund with inward ISF or two: are receiving incoming signal through outward ISF. One: we can enliven and initiate integrative movement in our trace-fund by deploying yogic focus on a particular region. The trace-fund is directly responsive to subtle action. Two: we can also make incoming subtly felt signal clearer by witnessing the received dynamic phenomenon in its location in our

subtle physiology, and over time we can become familiar, and more fluent and accurate, with the perception process that way. We can also transmit signal back out, from that precise phenomenon and its location within us, back out towards the entity which is sending it and, in general, out into the subtle realm at large. Here's an analogy: let's say that we are Jedi knights, and we can see an object via the light hitting our eyes, and then we can somehow send out a response which changes what we see of that object without moving outwardly. Of course, none of us has ever met an actual Jedi, and "PK" abilities in humans strike me as both rare, weak and for the most part haphazard. But, when it comes to objects identified through an ISF reception, my claim is we *can* do just that, alter them through an internal resolution process within ourselves so that they change. We can initiate cause and effect in subtly received objects without moving any outwardly visible muscles. This will in turn alter connected subtle objects "out there", primarily those contained in other people's minds.

Some have called the laws operating in this sphere aspects of a fifth fundamental force in addition to the four accepted by science, namely: gravitational, electromagnetic and strong and weak nuclear forces. Let's call this theoretical fifth force *subtle force*. Other suggested names include *pranic* or *akashic*. Another possibility places it within the electromagnetic field, suggesting that our nerves or our cells in general have an ability to be profoundly sensitive to such forces in a way that transcends normal space-time. Microtubules in the neurons have been suggested as a place where such sensitivity may occur. These point to the possibility that such a force could be explained "within casual closure", meaning that it might fit into the materialist world view without any need for an unexplained spirit behind it, especially if causal closure includes, as it must, the weird world opened by contemporary physics, which includes such spooky things as the "failure of locality"; or it could be related to quantum gravity which humans haven't figured out yet. It may involve dark matter, which makes up 26.8% of the universe, or dark energy, which makes up 68.3%, both of which we know next to nothing about. (Ordinary matter makes up 4.9%). 95% of what's out there (and in here) is still basically unknown to the sciences. Or serious researchers who are both scientist and yogi may discover that there *is* a God who conducts such channels and that this God can eventually be understood and explained...

The pre-eminent way to develop this sensing capacity is through the yogic arts which specifically teach practitioners to develop yogabodymind which is non-discursive mind. Skeptical thinking mind won't do it. We can get started by cultivating a yogabodymind which reveals the underlying internal landscape that has accompanied thinking mind all along, a landscape of which most people are only vaguely aware. This landscape is not "lingua-formal", not language based, not discursive. Conceptually, "biological" would capture it better although it is not totally biological. Our biology works in concert with the *psi-net*. (For the skeptical scientific materialists out there, my first question is: how much yoga have you done? Why do I ask? Simply due to the fact that it is difficult to get accurate with- or even consciously sense- subtle data without sustained non-discursive internal focus over time.)

My current experience, after many years in the yogic arts, is that as soon as I free myself from discursive mind in the moment, ISF presents itself plainly, clearly. With

practice over time it has gotten clearer. Like outward vision, it can be experienced as something quite amazing, but often it is just there, matter-of-fact, a source of information. So, next question, if inward ISF senses the already elaborated internal trace fund, what does outward ISF disclose?

I'm currently calling it the psi-net. It could be called the world-wide-web-before-computers. Higher Links on the Great Chain of Being could work. In this section, I'm also referring to the underlying realm in which the psi-net exists and functions as the *subtle realm*.

Each person is a node on this net, and a source of energy, actions and information out into it, as well as a receiver of energy, actions and information from it. In one solo backpack where I slept out in the open under the stars and engaged a bear in the middle of the night, and a bobcat the day before, I came to conclude, in agreement with Native American views, that animals are nodes on the net as well. The bear was somewhat crude, but two day's hike into the back country with no people anywhere near, its signal wasn't weak. I've also had an unusually clear dream where a blue whale out in the Santa Barbara channel communicated colorful psychic shapes to me. Was it "just a dream" or can there be something more to "just a dream"?

The thing about dreaming mind: dreams are the most powerful and obvious place where the psi-net presents itself to most people. Think again of the overlay of the states of sleep onto the states of spiritual development going back in India from the Upanishads pre-dating the common era. Even the least spiritually inclined person goes to both the subtle realm while dreaming and the causal realm while in deep sleep every night. Yogis and other kinds of mystics who have "woken up" can maintain increasing degrees of fully awake "witness stability" through dreaming and even deep sleep. A different yogic engagement from yogabodymind's stark sensing of the feeling aspect of subtle things, this is a stable witness observing yet not interfering while dreaming mind does its thing. Sleep has a strong feeling aspect (it usually feels quite good), but it is primarily a theater, at least for people, for the visual aspect of shukshma indriya, subtle vision conjured through dream.

In dreams we enter the subtle field, with our subtle senses operating, and undergo events with other people or animals or other entities, in subtle landscapes with subtle objects, enacting the psi-net. Those people who have been important in our life will be our primary companions in our dreams. We can draw an analogy here from neuroscience, which tells us "nerves that fire together wire together"; so, "people that hang together, dream together". We can liken the psi-net to a huge global brain, each sentient being a neuron.

We need to work things out with others in the subtle realm, where in dreams we meet them in their subtle body in subtle landscapes. An incredible development in video games, MMO, (massive multiplayer online) where various players from across the world can simultaneously come together and interact in a shared landscape, is a rough expression of what happens with all of us as we dream about others. The profound part of this is that we *need* to do this to sustain health, intelligence and even to survive. Those who don't adequately sleep and dream die before their time. And the scientific literature

on the ways that dreaming sleep contributes to the brain's abilities to organize information is extensive. My view on the process is that there is a physical component and a subtle component to dreaming, again, an interaction between biology and the psi-net. I have learned much about sleep and dreaming from scientific sleep researchers such as Matthew Walker, and I find this work exciting and exceptionally helpful. And there is another side to the sleep and dream story, which in the West has been deeply explored by Carl Jung and Joseph Campbell, that of dreams and myth-making, and meaning generation. I firmly part ways with scientists who dismiss this latter perspective as insignificant or delusional, and I also strongly disagree with theories floated by scientists who, from the perspective of meaning, see dreams as random neuron firing which is merely a by-product of the brain's housecleaning needs met by REM sleep, and from whose chaotic elements we then kluge together a story.

The further implication is that there is an inherently healing aspect to the subtle realm, and my claim, sketched out earlier in the book, is that conscious or sleeping forays into the subtle realm also *exert organizational pressure* on the bodymind. This happens to both recently gathered data, such as that which is still held in the hippocampus, as well as to more established knowledge and abilities. There is a growing body of literature on how yogic practices actually increase the size of the brain, including the thickness of cortex. Sleep literature also shows that those with chronic insomnia suffer brain shrinkage.

Dreams are an image-laden largely unconscious engagement with the psi-net. Our subtle receivers and transmitters are operating at full power here but dreams are far different than actual subtle sensing through yogic witness. The stories, characters, landscapes, images and symbols of dreams give a glorious creative life and clothing to the stark sensing-as-it-is of the yogi, and these dream features can give invaluable insight into what's going on in terms of who we are and those with whom we are engaging at the subtle level. They are also a priceless aspect of human culture to be enjoyed and contemplated, a vast experiential adventure which accumulates over the years, generating a twilight sector of our memory that often mysteriously informs and guides our waking life as well as having inherent value in and of itself. Sleep to a degree also allows a progressive relaxation and integration of our accumulated tension pattern trace-fund, although the unconscious manner in which this occurs isn't always better than waking yogic process, and can have harmful by-products, for example, in the case of someone who has ground down his teeth in his sleep from bruxism, which I consider a deeply held tension pattern that surfaces during a sleep that isn't equal to the accompanying need to relax it. But sleep does have recovery powers that at this point in my experience, I simply don't see yoga, even highly advanced yoga, able to provide. It seems to me that the smart yogi enjoys her sleep as an essential component of a life well lived. And the sophisticated yogic art of relaxing deeply held tension patterns can be a huge boost to quality sleep.

Returning to the standard materialist argument against much of what I've said so far, the typical contention claims that the higher yogic states are simply alterations in brain chemistry and in yoga we are merely experiencing they way such alterations feel and their various dynamics. Lab evidence on meditation's benefits is now convincing, so materialists need to cede the fact of brain and chemical changes resulting from practice of the yogic arts, basically deemed positive by the health sciences. But they can still argue

against the psi-net, against the idea that ISF is sensing anything outside of ourselves, against any idea that it functions as the activity of a sixth sense organ such that psychic communication becomes possible. (I get into scientific studies on psychic abilities below).

My response to that argument is this: denial of the psi-net made by those who don't understand ISF can be dismissed outright because the relevant data is not going to show up in that lab. Those taking on an ISF oriented practice, including any skeptical materialist willing to undergo a few years of yogic training, will most likely experience an internal field that grows in vividness and detail over time. Informed by this attained skill, they simply cannot with any assurance make the claim that no part of what they are experiencing is a representation of something "out there." Skepticism and a hard "positivistic glare" after the yogic experience is one thing, which I support, but flat out unnuanced denial is altogether different, and likely is a result of feeling one's materialist worldview threatened. A person devoted to scientific outlooks may shun any development in this area, thereby self-affirming his conclusion that it's bunk. If your religion is scientism, then unwanted data will find a way of arranging itself neatly to support that religion. On *abductive* questions, which are those in which most of us find ourselves most of the time, namely in situations where we have limited information and must make a decision or tentative conclusion based on what we have, scientific materialists often therefor by default will gravitate toward the bleak, valueless worldview which I detail in the next section, on the basis of a guess, not from any adequate data analysis which qualifies as *induction*.

I'm with Kant here, our senses are a representation created within our bodyminds in an attempt with varying degrees of success to grapple with whatever is out there. I've had extensive experience with ISF, daily in my work life as a yoga teacher with rooms full of people doing yoga (which is perhaps the best "lab" for ISF), to the point where I have as little doubt that what I'm feeling is as real as I have with what I'm seeing. I sense things with ISF and I apply categories to them in a way that allows subtle things and processes to slowly become items of knowledge. I can liken the gradual learning and identification of these subtle things and processes to that of an infant lying in a room looking around, and thereby conducting "training runs" on his visual system. With ISF, I'm still going through this process at age 56. However, if we consult the collective record, the resulting concept of the psi-net presented in this section is well developed, through spiritual literature and testimony, as a way of organizing ISF data- many many others have come to a similar overall concept.

So, this becomes the philosophical root of the issue: knowledge of the world must take the senses as a basis. The one realm where there can be no question is that of the senses, and I'm not talking about a presumption that the information they present can be trusted without qualifications, but rather the question of whether they exist at all. The big five exist, and all knowledge quests start from that. No serious philosopher or scientist will get very far with "does vision exist?" It needs to be taken as a starting point, and the questions are built from there. Vision obviously exists and it obviously takes in information from the outside world. But when it comes to the claim that, like the big five, ISF is also a capacity which can sense the outer world, I'm finding myself in the position

of needing to defend such a claim. This is because ISF does not obviously exist but rather, it exists either unconsciously, or instinctually, or as the result of general experience and/or deliberate cultivation which allows it to become progressively less unconscious. To get it to the place where it is even a fifth as concrete as vision, is, in my case, the result of 36 years of steady yogic practice at the time of this writing. But this merely limits it to a sense that is less dominant, such as the vision of a bear compared to its sense of smell. Just because a bear navigates primarily by his olfactory capacity doesn't mean he's not seeing anything. As I drive and walk through the city and meet people, vision and hearing are radically dominant. But when I'm in the yoga room teaching other people who are applying themselves yogically, ISF is actually my primary sensory mode. I have reason to believe that this was also the case with my teacher Pattabhi Jois as he taught, especially as his eyes began to appear cloudy with old age .

Just as I don't question that vision is a source of incoming data, neither at this point do I question whether ISF is. When I was younger I did; at this point I don't. I experience it plainly and obviously as a sense, not just of my own internal reality, but of that internal reality's reception of what is going on "out there", which is exactly the basis of the big five: they are our internal response to what is "out there". Until one has developed his own ISF capacity, he can't durably deny that outward subtle sensing exists as the result of a subtle sensing ability that we all potentially share. He's just taking refuge in his comfort zone of hard-headed and skeptical presumptions. He hasn't put in the practice needed to turn his guess into a scientific conclusion. He can neither refute *or* affirm it because he hasn't done the work.

So my philosophical argument in favor of the psi-net rests finally on my claim that there *is* a sixth sense picking up things from out there, and from that basis I'm sharing my propositions concerning the descriptions and dynamics of these things. These propositions are based on my empirical experience with ISF. They are not qualified to enter the enchanted circle of peer-reviewed scientific findings. But they don't need to. They are akin to me saying that as I've sat in my backyard, I've noticed different kinds of bees moving from flower to flower and scrub jays showing an interest in the peanuts I offer where none of the other birds do. Those are true statements that don't need scientific confirmation because pretty much the entirety of humanity is willing to accept such statements as they are: simple true observations of the natural world. Common sense. The problem with ISF is that it's *not* common in a highly conscious manner. But I'm claiming it can work in the same way.

When faith groups such as Christian churches practice prayer, they are attempting to tap into the psi-net. A percentage of people in the West in sports, business and politics take psychic communication as a given, either through prayer centered in the Judeo-Christian matrix or from more esoteric sources, or just their own gradually confirmed hunches. This doesn't necessarily mean that they are working with it at a conscious yogic level, but it does mean that they believe in it. Scientific research on the effectiveness of prayer has not panned out too well, but this has much to do with the environment in which the studies were carried out. Psychic exchange studies have been conducted with statistically significance confirmations, especially when they've been done with people who have shown subtle realm familiarity (google Russell Targ, the parapsychology lab at

Duke University, Rupert Sheldrake; ignore the blaring labels of “pseudo-science” and look to see if any statistical significance happened, even if slight). Despite this, such studies often don't hold up well in the scientific lab.

Just as sleep is susceptible to disturbance, so are subtle realm operations; dreams are often ephemeral and difficult to remember in the glaring face of waking consciousness. Likewise, achieving specific psychically transmitted data in a lab, for example, mind-reading the number on a card that a person is repeating in her mind, unfortunately often kills this more sophisticated aspect of the subtle realm. Which is to say, my claim is that there is an aspect of the subtle realm which allows transmission of actual mental discursive content such as a number or complete thoughts but I believe such transmissions are rare. The more reliable and more routine subtle exchanges are that of *feeling based* content, which is a different kind of data than labs can typically measure, and is often less about specific discursive information, and more about what one's subtle body is expressing, which can be emotions and their subtler extensions, such as feeling someone's anger or confusion. This sensing often picks up feelings that the person who is having them may not be aware of, or is in denial of. Also note, unfortunately, the Judeo-Christian tradition provides few tools to the average lay person for the practice and development of psi-net skills, and it has even violently suppressed them at times.

One good “lab” is your own home at night when you dream, when different people are spending the night. If you've been sleeping in your house alone for a while and then, say, your kid comes home from college for a week, note your sleep and dream experience, especially the first few nights he's there. More people in the house will propel dreams along with a greater fullness- and potentially more noise and less clear signal- as your subtle bodies engage each other. Then go backpacking two days out into the backcountry by yourself and notice what happens in the dream realm out there: far more spaciousness, as, with no people near, your subtle body is literally communing with the animals and even the trees and shrubs in the area. For yogis: practice by yourself for a few weeks and then take a yoga class full of people: do those two feel the same? Is it just our outward senses and pheromones? I don't think so.

The subtle realm can be used for help or harm, and communications within it can occur consciously or unconsciously. In fact, I will claim that it is a substrate to everybody's experience at all times, and, perhaps ironically, provides a fullness which contributes a robust realness to our experience of our representation of reality. The connections that we have with others contribute an underlying inter-relatedness feeling tone to our moment-to-moment conscious experience. I say "ironic" because for many people, this feeling tone barely and rarely consciously registers. Support for these claims can be drawn from a worldview that sees all matter as suffused with consciousness, with sub-atomic particles having the least and humans the most. I hold that plants which have reached the age and stature of monarch sequoias also carry something special. All entities within this world offer emanations which can be potentially received by ISF; ISF picks up consciousness, and consciousness inherently transmits itself. All entities are also subject to the transmissions that we send out. Some exchanges are not “broadcast” but specifically transmitted to a much smaller set of entities, such as person-to-person exchange, less accessible to the general psi-net public.

"Good" subtle realm engagement, helpful to others, healing, positive, is an art that can be cultivated. Again, some have a gift for it, but most of us will have to work hard at this. The yogic arts reveal capacities in this regard that can be developed within ourselves to likely an endless degree. Those skilled in this realm often hover around the healing and spiritual arts, i.e. yoga teachers, therapists, clergy, gurus, but they are also scattered around all fields of human endeavor. Many parents share this bond with their children, although this can happen in a range from helpful to non-helpful, conscious to unconscious, as can subtle exchange between any two people. The more intense and intimate the relationship, the stronger the mutual transmission; intense relating includes love as well as strife and conflict. Effects can be transmitted from afar, even across space and time, but those who are closely situated in space-time will make the strongest connections with the potential for the most transformation. A good metaphor here- which is likely more than just a metaphor- is that our exchanges with another person place in both of us a transmitter and a receiver specifically tuned to that relationship, and the more frequent and/or intense the exchange the bigger these "devices" get. Our circle of people receive what we transmit and vice-versa, like radios.

When I put my hands on someone in class, the sensed connection increases greatly compared to standing apart from her, and the contents in the field of exchange present themselves more vividly. As the years of my practice have accumulated, the ISF perception of the field between me and the person I'm engaging gets more elaborate, allowing a process of recognizing enduring subtle interpersonal landscape features. They can be likened analogously to music in that they present themselves as variations within a constant flow; assorted "instruments" and their different themes can be picked out . "Things" in this context can be likened to "notes" in music, which are always presented as isolatable elements within a musical flow; subtle things are embedded in flowing subtle processes. It has also allowed for the development of layers of subtle skills which in the "hooked-up" relationship field can transform subtle things. An intuitive set of skills begin to show up which can spontaneously "compose" this constantly flowing "music", which is the stream of our bodymind consciousness, into more mature and integrated versions of itself; that's what clear steady attention does. In a class setting, it's not just the teacher doing this, but a collaborative effort conducted at various levels of consciousness; some students seem aware that they are doing this, others less so.

Non-discursive direct field-engagement work exerts evolutionary pressure on the current states of our bodyminds and the various contents therein. Organization at the subtle level also has a trickle down effect into denser regions, for example, as discussed in the W-C lattice section above, the skills that the basketball player works at can be subjected to pressure that initiates self-organization. It also can clear the way within our bodyminds for access to even subtler work. When two or more people harmonize in this effort, it generates force multiplications.

Psychotropic drugs can offer an amped-up experience of the subtle realm which makes our subtle connection with others seem undeniable. These drugs provide an experience akin to vivid dreaming but while still awake, such that our witness becomes more isolated and notices deeper revelations of self than usual, often dramatically so. We can observe ourselves as we do the things that we do. However, one of the (many)

problems with drugs is that when they wear off we may wonder if the disclosures were real or not. On the contrary, stable consistent yoga practice offers a stable consistent access to the subtle realm which makes it as real as the gross realms shown by the big five. ISF, steadily developed with strong arduous practice, is an inherently evolutionary act, and, while contributing to material development, it has its fullest power toward gaining comprehension in the spiritual realms, where it can slowly put in place a subtle state which is as stable and enduring a bodymind state as one can have. Hard work sculpts cytoarchitecture slowly but surely and securely. On the other hand, the spiritual contribution of psychotropics is exceptionally unstable and temporary; once the drug is metabolized out, the resultant restructuring of the psyche may attain to degrees of permanence- for better or worse- but the "wire to nirvana" is gone, with the relevant subtle physiology exhausted and sometimes damaged or deranged. Compare this to the yogi, who wakes up the next morning with the higher state still there, often not dramatic or profound or mind blowing but simply, beautifully, even mundanely, present.

Stoner: Dude! I discovered a profound formula for peace and harmony on the planet.

Buddy: Oh wow! Tell me.

Stoner: Uh...what was I talking about?

5. THE MOTHER OF ALL THREATS TO MY YOGA

Sky full of rippling cliffs and chasms/That shine like signs on the road to heaven

Bruce Cockburn, *Northern Lights*

It is not uncommon for a student who has been practicing for a while to inquire about the literature behind the Ashtanga practice. I often recommend the basics that were offered by Pattabhi Jois when I asked him that question. He said Patanjali's *Yoga Sutras* were the first and most important, followed by *Bhagavad Gita*, *Hatha Yoga Pradipika* and Shankara's *Aparokshanubhuti*. When I pressed further, he suggested Shankara's *Brahma Sutra Bhashya*, and he gave me a look that this one was important. He would often chant quietly under his breath while teaching, and when I asked he told me it was the *Isha Upanishad*. In his book *Yoga Mala* he quotes from the above texts, and also references Shankara's *Yoga Taravali*, Vedanta and Ayurveda in general, various other Upanishads, and the *Rg Veda*.

When one begins to pursue this library, it quickly becomes complicated. In particular, we begin to notice that disagreements have arisen and debates have ensued on almost every topic under discussion. These debates have been part of the story from

nearly the beginning: around 500 BC, the Buddha argued and disagreed with, among others, Upanishadic thinkers, as well as materialists who were remarkably similar in their ideas to many scientists and philosophers today who argue from scientism (which is the belief that lab science has all the answers to everything). The 8th century *Brahma Sutra Bhashya* is a very long debate between Sankara the vedantin and his opponents. How do we sort through all these arguments and find the truth about yoga?

I've come up with three categories that we can see today for those pursuing the theoretical aspect of the yogic quest. First: those who put their work into mastering and even memorizing a chosen canon, and for a large part, accepting those teachings exactly as presented. This is essentially taking a perspective of faith, and especially in the older texts like the *Yoga Sutras*, it is also considered one of the main ways of gaining knowledge: resort to textual authority. If this seems quaint to you, think again: when the media presents a scientific finding, do you subject it to rigorous scrutiny or even try to replicate the experiment yourself? Most of us accept such reporting on faith; we have faith in science, and those who don't come off as crackpots, such as climate change deniers. However, this first category *is* the least critical and the most poetic, if you will, of my three categories, sinking deeply into the languages and, in particular, how the meanings therein can influence practice. And with good reason: all of the texts above, if pursued with sincerity, will reliably guide one's spiritual practice towards relative degrees of what has been considered enlightenment. I would put Pattabhi Jois in this first category. When he gets critical, it tends to be about practice guidance rather than scholarly quibbling, for example, criticizing those who consider themselves "scholars beyond compare" who nonetheless give in to lust and rage.

The second category could be exemplified by Georg Feuerstein, who took the position of a critical scholar of yogic culture and languages in addition to viewing the literature for its spiritual value. In the process, he clearly declares himself as one who follows the guidance of these texts, not just one who looks at them from a distance.

The third category can be represented by a group loosely calling themselves the Modern Yoga Researchers, who identify more as cultural and linguistic historians and critical scholars; they just so happen to be focusing on the yogic/eastern spirituality field, and as a rule, make no claims as to their own experiences. Spiritual values are less important from this perspective than truth (whether modern or post-modern), morality, analysis of historical influence, and attempts at precise determinations of the meanings of old texts. Santa Barbara's David Gordon White and his entertaining writing (such as *Sinister Yogis*) is an exemplar.

If we put aside practical debates about the best ways to practice, we are left with arguments about the ideas themselves and the world views contained within these ideas. Of the above categories, the first one values primarily spiritual ideas, the second both spiritual and materialist, and the third primarily materialist and postmodern.

What do I mean by materialist/postmodern? In academics today, almost everybody is either materialist or postmodern, or they take the spiritual angle through aesthetics, or they do some combination of the three. This is to say that by and large they belong to my third category above. They often don't agree with each other but what they

do agree on is a wariness toward actual spiritual practice-generated *spiritual data*, which I'll get into in a bit. This has been the circumstance with intelligent respected thinking; academics doesn't have a yoga and doesn't seem to want one. As Pattabhi Jois used to say, "No yoga there!"

Which leads us to the following situation: if we pursue a practice such as yoga with the intent of self-development, with perhaps a quiet or not so quiet yearning for the possibility of enlightenment, we will begin to familiarize ourselves with the history of ideas behind such a quest. Researching these ideas, we will find that although the traditional literature clearly has spiritual intent behind all the debating, this literature is often surrounded by modern scholarship, much of which is neutral towards- or even dubious of- the value of spiritual practice itself. As we try to discern our way through these different perspectives, both within the traditions and in the more recent scholarship, we come to recognize that we have undertaken a process of philosophical inquiry, and that we're going to have to weigh the evidence and come to our own conclusions. And if we follow any thread in philosophy, it will not take long before we run into a flat out declaration that the entire spiritual pursuit is...*One Big Illusion And Thus A Falsehood*. Or, at best, begrudgingly, of possible practical benefit. The entire spectrum of higher spheres of which almost the whole corpus of spiritual literature, East and West, is built upon is typically cut to ribbons and left for dead. And we will begin to note that this voice is very loud and very prominent: the voice of materialism. The biggest current version is scientific materialism. And it is a formidable opponent.

So the view we've been gaining through practice, and through familiarity with spiritual materials and literature and community, gets directly and rudely "trumped" by aggressive and sophisticated materialist negators and debunkers. In the face of this, many yogis just steer clear, carrying on with their practice and/or teaching entirely unconcerned. I did this when I was younger, but lately, for better or worse, I've found the subject impossible to ignore. As I go about my research, I've learned to recognize when my "geiger counter starts clicking" as Ken Wilber puts it, which indicates an intensification of my interest level, and this is often the loudest when I feel a *threat* to my worldview, typically when the threatening thing contains something I recognize to be true.

I've developed a taste for such threats. As a long time professional yoga teacher, I can now say that the scientific materialist negation of spirit and ultimate meaning in life had been the mother of all threats to my yogic bliss. At existential hazard, I chose to face it and it led me on a lengthy search for light in the darkness. This chapter represents one way through this maze. The argument I will engage has played itself out through history in a lengthy and dauntingly complicated process, but it can be generally simplified as that of *Materialist vs Idealist*, which I see as the main issue. (Post-modernism has its own attacks against both fields but I see this debate as now relatively peripheral, post-modernism's more powerful contribution and *extremely* lively debate currently applied more toward multiculturalism and the culture wars.)

Aggressive materialist negation of spirituality can lead us to doubt some of the more hopeful implications of our yogic experience. It certainly has in my case. This is not necessarily a bad thing. If what we are doing is real, it will be able to withstand challenges, and any serious practitioner will feel doubts coming and going as the self

inquiry process proceeds. Discernment in yoga is just as needed as it is in science. On the other hand, a common teaching in yoga is the value of some protection for our practice realizations, treating them like delicate plants which require loving care until they can get rooted more strongly. I believe this is true, and if you put yourself in this category, you may want to stop reading this now (spoiler alert: this chapter has what I take to be a happy ending). The first 15 or so years of my efforts at practicing, teaching and holding a community of yogis together were periodically marked by internal and external upheavals that could make it extremely challenging to gracefully face the room of students in front of me. To make a Mysore-based Ashtanga Yoga Shala work day by day, with the many trials of what it is to hold a higher kind of energy which manifests collectively and maintains interest month after month, one often feels he has little room for error. My first five years I would sometimes nearly get whacked right out of the room. Somewhere around that 15 year mark of teaching I must have finally put down deep enough roots, and I felt ready to drink the materialist kool-aid straight, determined to get at the truth.

One of my drives in this was to engage the larger picture behind a feeling I get after being exposed to some materialist ideas and approaches, a feeling captured by David Loye as “degraded world view”, a view also frequently referred to as “flat-land”. The strongest I’ve felt this has been after reading Stephen Pinker’s *How The Mind Works*. And when it comes to that feeling of *raw threat*, a sense that something precious and essential is being gutted and raped, the best author has been Daniel Dennett, especially his *Darwin’s Dangerous Idea*. One of the reasons that they both rattle me so effectively is that I admire them and their work, especially Dennett.

Indeed, around the 8 year mark of my teaching career I began to hear geiger counter clicks around neuroscience. I had been swimming in the yogic arts and literature, as well as psychology, both developmental and Jungian, had spent 6 years prior working in a bookstore, took epic treks in the Himalayas and played music at night. I did lots of meditation and hatha yoga. This was where my experience and research had been, this was the kind of data I had been taking in. I recognized I was fairly ignorant about science. Undaunted, I began studying the sciences, in particular the literature of the brain, as much as I could, and derived great benefit. But as Stuart Kauffman notes, virtually all neurobiologists hold the view that consciousness is entirely mechanically generated. It wasn't long before I felt the tension growing between this materialist outlook and my own view. Simultaneously, I began following the growing avalanche of data from the lab about the material benefits of spiritual practice, i.e: yoga makes your brain grow, increases the size of the insula which integrates thoughts and feelings, decreases stress markers, is good for heart health, etc. This is the current emergence of clear evidence, from the material view, that *spiritual practices have material benefit* and can be fruitfully pursued entirely from that perspective. In fact, as I was checking out the then popular current atheist group, The Four Horsemen, I pretty quickly sniffed out that Sam Harris, one of the horsemen, has legitimate yogi credentials, which is to say lots of hard practice in meditation, quite beyond just trying the hat on. Which is also to say, it is possible to pursue spiritual techniques from an entirely materialist, even nihilist, point of view. And if yoga and mysticism really are simply ways of tapping into unusual brain states, including getting good at recruiting the brain's happy chemicals, then what's the problem? Don't worry, be happy! But as Daniel Dennett hints, many scientists may not have

actually followed that materialist view all the way to its necessary conclusion, don't really want to, because it can be rough and scary, more on that below.

Back in May of 2015, there was a fairly interesting exchange that illustrates that year's model of the ongoing fracas, published in the Washington Post, between popular author Deepak Chopra and Steven Newton, who was the director for programs and policy for the National Center for Science Education. Newton began the exchange with a “tongue-in-cheek” piece that dripped with acidic sarcasm towards Chopra’s apparently obvious pseudo-scientific New Age buffoonery on the subject of evolution, Newton offering instead a perhaps humorously exaggerated grim view of eat-or-be-eaten Darwinism. It may have been tongue-in-cheek, but it was definitely not friendly. Chopra fired back in a manner that made it clear that he may not be such a clown after all, offering his case for the role of consciousness in evolution, in addition to chiding Newton for flirting with internet troll-vibe. Newton responded in turn with an altered demeanor of recognition that he had to take this debate seriously, concluding his conservative materialist outlook with a warning that Chopra is aiding and abetting fundamentalist creationists and intelligent designers because his untested ideas resemble theirs.

Now, Newton had a point as regards creationists in America: one study that year concluded that the number of Americans who believed that matter and life happened as described by the book of Genesis is at approximately 45 percent. And Newton's urgency had some justification: other surveys showed that somewhere between 25 and 50 percent of Americans didn't believe in climate change, and this view was typically accompanied by a skepticism toward science. There was also another dimension to the exchange: Newton was warning Chopra to stay out of the scientific playground unless he is willing to enter the fire of peer-reviewed discussion, which has nearly zero tolerance for speculation without lab quality evidence. In his response, he marshaled experimental findings to support his points. Chopra, in his turn, while clearly demonstrating his familiarity with the contours of the present rich and thorny debate around the mind/body problem, as well as far more sophisticated views of consciousness and evolution than perhaps Newton expected, offered his position as that of provocateur of new ideas. “I work with high-level scientists, including physicists, geneticists and others who believe, as I do, that mainstream science, like mainstream medicine, has a lot to gain from keeping the flow of ideas moving.” Presumably, it will be these scientific colleagues of his who will enter the actual scientific journal environment, their imaginations piqued by Chopra as to how to set up the experiments. And Newton also made another big mistake: Chopra is no friend of the creationists; he is a practitioner and integrator of current psycho-spiritual technology, which can be likened to creationist religion in a similar manner as string theory is to medieval alchemy. Chopra has a "substantial audience" partly because of the large number of people who are practicing yoga in some form right now; many people with spiritual inclinations have moved far beyond mythic level- or even rational level- religion.

Allow me to present two stories at this point. The first is partly indebted to Shri Aurobindo, who in turn drew from both the great corpus of Indian philosophy as well as European idealism of the early nineteenth century (Fichte, Shelling, Hegel), to help

unpack and express his own profound yoga practice. We could call this story a version of the Life Divine or the Great chain of Being. It goes like this, story number one, the Idealist story:

There was a Being. Call It any name, it could be Satchitananda, or Krishna, or Yahweh with or without Jesus, with or without the Prophet, it could be Great Spirit: God. Any name. Let's just call it Spirit for now. It had no form that we can understand, but it desired to fulfill itself by coming into being as matter, like that in our universe. So it caused a Big Bang. Hydrogen, helium and lithium suffused into space. The basic laws that governed these elements were either already there or they developed over time. Gradually gravity shaped the hydrogen, helium and lithium into clumps which heated up through fusion and became stars. The hydrogen in the stars turned into helium. As the stars ran out of hydrogen, they begin to create other elements, including oxygen, nitrogen, iron, zinc. Stars eventually began blowing up and expelled these elements out into space. Time passed. Some pieces of these blown up stars got caught in the orbits of other stars and turned into spherical planets. Some of these planets- at least ours- happened to reside in the "goldilocks zone": places in solar systems where the ratios between sun and planet and moons are such that the stage is set for the elements to begin radically arranging themselves into organized patterns. Some of these patterns became complex enough that they begin to show signs of agency: separate units acting of their own accord. Time passed. The complexity of these patterns increased. Some units developed features that others didn't have, which allowed them to proliferate better than the others, or at the expense of the others. They took on more elements and put them and their unique capacities to use, such as iron and zinc, in ways that conferred further advantage. Complexity increased. They gained more abilities. Bacteria arose, and then worms, and fishes, and then lizards, and then rodents, and then monkeys and then...people. There were other branches, such as the dolphins, but it was the monkey line that burst through first. Along the way amazing things called neurons developed and those who found themselves with larger numbers of neurons proliferated abundantly. Humans grew this "cognitive niche" to the degree that they began to outsmart all the other creatures. And they also began to think and reflect on their situation. They created civilization and culture and gained safety and leisure. From this place they slowly accrued a knowledge of the forces that operate in the universe.* Some of them also awakened within themselves a consciousness which was "sleeping" as it subtly guided the elemental play, but now was capable of being perceived. People developed psycho-spiritual technology of various types which allowed some of them- the brave pioneers at first- to go along inner "pathless paths" whereby they awakened to the fact that this Spirit is within them, and is and had been the "eyes" through which they had viewed the universe from the beginning.*

They are gradually remembering who they have been all along. The purpose of the entire "show" has been to awaken to this Spirit and to realize it within oneself, such that Matter and Spirit are united. From this perspective, humans can become agents of proliferate creation, much like Spirit before them, taking things into greater and greater complexity and beauty, the delight of the experiencing of which joins them with the ongoing Lila-divine play- which was the reason Spirit began the whole ordeal and passion in the first place. The delight of Lila allows us to see that the messy nature of evolution, the starts

and stops, mistakes and triumphs, pains and tragedies, delights occasionally giving way to steady bliss, were part of a creative process, like a work of art and a work in progress. People now can consciously assume their role in the ongoing delight, drama, passion and satisfaction of the Kosmos.

Quite an appealing story, isn't it? This is my updated edition; even since Aurobindo wrote *The Life Divine* much has been discovered- by science- to flesh it out.

OK. Now take the above story and cut out the first part all the way to the sentence about the big bang, and turn that sentence into simply: ***There was a Big Bang.*** Now, read along as it is, all the way to ***they slowly accrue a knowledge of the forces that operate in the universe.*** (See asterisks). And from there we'll proceed with the story, which becomes story number two, the materialist story:

Through this process of discovery they conclude that, unlikely as it might seem, all this beauty and complexity and design is the product of mere chance working through the physical forces and elements over time. We are what we are, consciousness and all, merely because certain organization of atoms survive better than others, and right now, the human form is among the best out there suited for continuing as an organized unit through time, up there with cockroaches and ants and rocks. None of it means anything. Organizations of elements are no better than unorganized elements just lying around. There is no purpose to life, not even survival. Urge for survival just so happens to be a trait that gives one organization of atoms a greater likelihood of continuing in that state of organization than others. Complexity often confers greater abilities to a form, allowing it to continue and reproduce. We are here in our complexity because through an accumulation of accidents a design has developed which is fairly well suited to continue in its form over time. There is no value in survival, it is just that forms which survive are the ones still here. Our form is one of the ones still here. There is no value anywhere. This being the case, we might as well take advantage of the accidental by-products of this big nervous system of ours and enjoy ourselves, maximize pleasure and minimize pain, because we seem to like pleasure, we have this personality system that has a hard time without it. But "hard time", suffering and pain are meaningless, they are just survival mechanisms and survival is meaningless. We have a life-span and if we participate in human civilization which was set up to minimize pain, we can make it easier to pass the time that our particular body will be "alive" by attempting to realize variations on pleasure. All culture, and human relations, including the spiritual pursuits, are a result of the fact that we prefer pleasure to pain and happen to accidentally have a brain that can have variations of pleasure rung from it; "meaning" and "morality" are just a subtle forms of pleasure, no better than what the rapist feels during violent sex or the pleasure that many animals feel when they kill. Civilization allows an increasing number of us to "live" until the body "dies" because said body has hit the limits of its enduring capacities over time. But pleasure and long life are meaningless. Once the organization which is our body stops surviving the personality system is no longer conjured like a movie from our neurons, and there is nothingness. The big bang happened and the elements exist, and there is nothing else to be said as to "why" they happened and why they are here.

And, in the words of Daniel Dennett, "that's all there is to it". If we faithfully

follow the implications of materialism, there can be no other conclusion.

Degraded worldview. Kinda grim.

A common materialist response to this bleak picture is "We don't necessarily want it to be like this, but, uh, this is how it is. We need to tell the truth. This is the truth that has been revealed to us by the data. The data does not support that first story. We have and must build our meanings and purposes in life on top of scientific truth. Stop worrying about it. Get over it. You can still enjoy your life. Besides, you get to be free, within and without, from all those old power trips parading as religious rules."

Such a dichotomy between these two worldviews! Here's another way it can play out: say you listen to a piece of music. You are quite touched by it, tears come to your eyes and you feel an exquisite feeling, it seems to open your heart; you've had a fabulous aesthetic experience. Straight-up materialist Stephen Pinker would render it like this: the music fan has "a mind that rises to a biologically pointless challenge: figuring out how to get at the pleasure circuits of the brain and deliver little jolts of enjoyment without the inconvenience of wringing bonafide fitness increments from the harsh world." This follows from the observance that "Some parts of the mind register the attainment of increments of fitness by giving us a sensation of pleasure." (*How the Mind Works*, p 524)

Here's a version of the other side: Eros is a force that is woven into the fabric of the universe. It is a subtle guide that beckons arrangements of matter into ever greater complexity through a force which is ceaseless new creativity and, in the case of those who have attained a sufficient level of self-consciousness, (i.e. humans, dolphins?) toward ever greater self-recognition. At the simpler levels of organization, jolts of enjoyment primarily serve the purposes a useful reward system towards self-preservation and reproduction. At the human level- and for animals that play- they grow from isolated little sparks into regular deliberate participation in the Kosmos' on-going Lila, pulled by a loving urge for ever greater complexity, and ever increasing recognition of the Spirit which lives within us. The experience of musical delight is a significant eros event, a contribution to the divine dance and an education for the listener about her true identity, which is non-different from Spirit itself. It has revealed "signs on the road to heaven".

Alright. We have these opposing cosmic views. Our first cosmic story, the updated Aurobindo-influenced variation on the great chain of being, is a variant of the predominant family of views arrived at by people who have seriously pursued spiritual practice throughout history; these often aren't necessarily the church fathers or popes or preachers or rabbis or brahmin royalty but rather the monks and mystics and nuns and yogis, the ones actively engaged in spiritual practices- which is different than just *thinking about* spirit or laws or ideas. And it is different than controlling others. There are no laws inscribed on stone tablets from this spirit- although laws such as gravity and electromagnetism are likely closer to the mark- but rather a subtle beckoning towards greater organization of ever greater complexity and towards delight in the recognition of one's larger self. On the other hand, the second story lands within a spectrum of materialist views put forth since at least the time of the Buddha.

I have argued in the psi-net section of this book that there is an additional source of empirical data, available to people either by gift or spiritual practice, from the sixth

sense, which I'm calling Internal Subtle Feeling. This adds complexity to a philosophical debate about materialism and mind and the question of how much of the basic make-up of our mind is a-priori versus how much is learned and plastic, and to whatever extent it is a-priori, is that part Kantian transcendental or Darwinistically advantage-conferring? So, for vision, sensory data at its root is just colored patches. One can't do any meaningful science from colored patches only. We need to resort to *mind moves* to organize these colored patches. The big question is this: are these mind moves, or "applications of the categories", a use of tools that have an unknown source or did they evolve with the development of the brain by offering unfair help to those lucky enough to receive and pass on the mutation? Can the forms of thought itself be seen entirely as behaviors evolved and shared with others at the neurological level on a par with those behaviors which have evolved and been shared with, for example, our hands? Or could there be a spirit-originated source of the mental categories and algorithms which we use to organize both raw sensory data as well as higher mind processes, forms that spirit has periodically through time thrown into the mental and even material fray to help elements and forces come to life? This is an angle into the mind/body philosophical problem, and I'm not going to go too deep into that black hole beyond stating this: encounters with the psi-net through spiritual practice such as yoga opens empirical experience of mindbody forms transmitted between, at minimum, people, in a way that would require a transmission medium currently not understood or accepted by materialist world views. This may be the way that spirit conveys organizing patterns and algorithms to life on Earth and categories to mind. The term "spirit" can be used for anything that comes from a dimension not currently comprehended by science.

The brutal "flat-land" philosophers tend to honor Kant in a circumscribed way. They happily accept his own brutal take-down of the pure rationalists who preceded him, who viewed knowledge gained by empiricism as a pale shade compared to that divined by the power of pure reason. But they view the transcendent source of his a-priori categories as a joke. Now, the fact of our a-priori mental situation is currently becoming irrefutable through an avalanche of findings in neuroscience (at the time of this writing, a recent study found "bias" all the way down at the level of the retina itself). But current materialists believe mutation and selection explains this in its entirety. Kant traced the chains of cause and effect into the primordial darkness, and after reading his arguments, the question arises as to whether somewhere along that line there were injections of cause that come from a source we don't understand. One of my proposals in this book is that the yogic arts open us *not* to a reaffirmation of old-school rationalist idealism, but to an empiricism that draws its data from subtler sources which the current capacities of our labs and technological instruments cannot measure. I offer the views of prominent thinkers below who deviate from strict materialism by leaving a crack for such mystery to shine through.

Anyway, those who do yoga and mysticism well, in all its myriad forms, often eventually report a story which is a variant on story number one above, the idealist story. This story has emerged across cultures far removed. And again, these yogas, these psycho-spiritual technologies, are NOT mythic religious stories like the biblical creation myth. They are rather the "contemplative core" of the world's religions: Judaism has Kabbalah, Christianity has monastic monks and nuns, Islam has sufis, and for some

reason India just went straight for it and emerged with their yogas close to the public surface. Good yogis are just as intently focused as good scientists, just as empirical, and have equal integrity.

These yogis and mystics residing at the nucleus of the world's religions were not just thinkers and theorizers. Rather, they were primarily practitioners learning, using, experimenting with and propagating psycho-spiritual technologies, with certain features shared cross-culturally, such as intensely focused inward attention and periods of solitude. To deny their validity, one must undertake the practices themselves and then prove them false- without that, no yogi could take you seriously. It would be like a yogi walking into a science lab, looking at a few test tubes, and declaring the whole venture a big charade, which would have the scientists howling on the floor; any materialist who denies spiritual experience and reality without undertaking spiritual practices is just as foolish, and the intimidating yoga ladies would look at him askance. Add to this that many scientists and philosophers in general don't even conceive of ever going outside of or beyond discursive mind.

I'll lay out my personal position at this point, what I can report from actual experience, without any leaps into "metaphysics". This is to say, that although I am inclined toward story #1 above, I cannot claim the entire thing with much certainty, although it feels intuitively right. My current yogic experience, both individually and collectively, is that there is without a doubt a subtle realm (*sukshma sharira*) with its subtle senses (*sukshma indriya*). Subtle phenomena can be seen as less dense forms of matter/energy, for example a person's energy field. Gross phenomena are on the denser end of the spectrum, for example a football. The entire spectrum from gross to subtle to very subtle plays itself out on the stage within a spaciousness that can be likened to the theater in which a play occurs; the realization of one's identity with this spaciousness that goes beyond the gross-to-subtle play has been widely considered the opening of spiritual enlightenment. This internal spaciousness is the theater itself within which the gross-to-subtle objects do their thing, and it carries an unmistakable sense of "I-ness"; it feels as if it is our own identity, and this is where the plot thickens. I'm not *inferring* that this spacious I-ness must be there, I actually *experience* it regularly. It presents empirical data to those who experience it; this is not the usual empiricism which is solid knowledge of objects within the gross senses, but non-dual empiricism, which offers equally solid knowledge of *shifts in our perspective and identity*, durably experienced through repetition.

Just as Einstein's new physics responded to data in ways that disturbed the scientists who themselves were discovering it because of what it did to the secure Newtonian world view, so yoga practice which generates subtle data tends to do the same to materialism. This is largely because the exploration of the subtle realms is not just a "looking at things" but also brings us into engagement with a process whereby we experience an alteration in our own identity; this change includes making more space to experience consciousness itself, thereby confirming the reality of that consciousness empirically: we actually sense it; I have sensed it. And I believe that what I have sensed is my own pure identity, something which is shared with everybody else whether they are aware of it or not. Also, this shift becomes as much *an engagement of forces* as it is an

observation of them. From these somewhat dramatic perspectives and realms, degraded world views tend to lose their draw.

Keeping this in mind, if we practice yoga today, we can arrive at an understanding of the kosmos which includes every shred of good science that's been done through history right up to today, and it will still remain possible to have room for a view that recognizes Spirit. I would like to back this statement up with two approaches, one that reveals the way that a good percentage of hard scientists and rigorous philosophers themselves have viewed the debate, and the second is to offer a few suggestions that speak of data sources difficult or impossible to collect in traditional empirical scientific lab settings.

First, let me offer an extremely condensed view of the rise of materialism: although the strands disappear into the darkness of history, including the above mentioned opponents of the Buddha, the strength of the current Western view stems from the irresistible urge for human thought to liberate itself from the confines of established religion. A first big flower was in the 1500's when Copernicus presented his discovery that it was the sun at the center of things, not the earth, which rattled the Pope's metaphysicians. Copernicus was careful and savvy, and stayed mostly out of trouble, but Galileo, in furthering the ideas, nearly got on the wrong side of the inquisition, which threatened hot consequences. Nonetheless, science was not to be stopped, and it began blooming forth at every angle. By the late 1700's Kant, who himself was not a materialist, blew the candle out of traditional metaphysics, such as the classic proofs of God, unintentionally giving rise to an unfettered proliferation of materialism. 19th century notables were Karl Marx, boiling spirit down to the subject who views the products of material labor, Friedrich Nietzsche hoping that a Dionysian frenzy would compensate for the death of God, and of course, the big guy for our current materialists: Darwin, terribly sorry for the blow he was delivering to the faithful and yet delivering it with the force of Thor's hammer. Into the 20th century we find the existentialists, gleeful in their escape from Big Brother's church yet mourning the "god shaped hole in their head where god used to be" and the exceptionally influential Freud, who told us God was just a part of our subconscious, and called it the super-ego. Not long after, The Holocaust left Jews and people of faith everywhere muttering, "What the hell happened to God? There's no God here." Simultaneously, logical positivism took over large swaths of philosophy, influencing scientists and beating up idealists and theologians. By the 70's, even the post-modernists, who were whacking with all their might at science, also attacked Spirit with their assault on introspection, demanding that everybody remain on the surface, far from the depths required for any actual knowledge of Spirit. And today, as evidenced by the Newton-Chopra exchange above, materialism is still trying to carry the day and banish the spookiness in much of academia. And again, in its scientific materialism mode it is formidable; whereas the logical positivists and behaviorists at its roots crossed into the ludicrous, denying any interior life to the mind at all, which is one very efficient definition of insanity, the current crop of cognitive scientists "allow" and even practice much of the richness of life that any humanist or artist would insist upon, but couch it in strictly material causes. However, as a yogi, I still hold the position that there is more.

And the case is far from closed. Within science and academic philosophy, there

are many thinkers who have delineated limits to the materialist view, opening up the possibility of our first story above, the Life Divine. Before I get into them though, it is essential to side with Stephen Newton here that this definitely does NOT mean that we can plug our good old fashioned Christianity story, or any other myth, into the gaps in materialism noticed by such thinkers. In fact, every one of these guys below would debunk a merely mythical level religion. Rather, I find that these hard scientists and philosophers are actually closer to a mystical view that can work in today's world than most of the theologians of their times, and they present a very solid theoretical foundation which a strong yoga practice can infuse with bliss.

Beginning with the new physicists who broke open that field in the first part of the 20th century: Einstein likened his spirituality to the view of Baruch Spinoza, who held that God has *thought* and *extension*, the extension being our creation, this universe, presumably one among others. This view fits in well with updated great chain stories. It is also similar to Erwin Schroedinger's view, which has been described as vedantic. De Broglie declared that "the mechanism demands a mysticism" and Max Planck said that God is "the crown of any reasoning concerning the world-view." Arthur Eddington said "Consciousness is not sharply defined, but fades into subconsciousness; and beyond that we must postulate something indefinite but yet continuous with our mental nature". Wolfgang Pauli had the following side to his life, and Wikipedia serves us well here: "The Pauli Effect was named after the anecdotal bizarre ability of his to break experimental equipment simply by being in the vicinity. Pauli was aware of his reputation and was delighted whenever the Pauli effect manifested." This led him to work with CG Jung, no great fan of materialism, exploring the paranormal. (The Pauli Effect is a somewhat haphazard manifestation of PK, [psychokinesis] and perhaps the most common.) Werner Heisenberg held out for Platonic archetypes, and he shares variants on this view with Roger Penrose the eminent contemporary mathematician and physicist, as well as Noam Chomsky, the man who gave birth to Cognitive Science and was convinced that our language capacity cannot be explained by materialistic Darwinism. The brilliant and lauded mathematician, Kurt Godel, was quite sure that his two incompleteness theorems proved that materialism was an inadequate view of the mind.

Stuart Kauffman and Henry Stapp are two scientist's scientists, among many others, who hold a quantum view of mind, which opens the door to the same mysteries that the above pioneering physicists were inclined to fill with Spirit. But my primary interest in Kauffman stems from his other main idea, which he culled from his pioneering work in chaos and complexity theories: that of *self-organization*, which was the result of "years of muttering at Darwin" that there must be some other force at work in evolution beyond simple mindless natural selection. Stephen J. Gould also presumed some additional process in Darwinistic evolution.

Another theme that has developed among serious thinkers has been panpsychism, which views consciousness as existing in all things, the smaller the particle the lesser the consciousness, all the way down to atoms and whatever is below them. Leibniz, the creator of calculus, held this view, as did William James. The esteemed mathematical philosophers Alfred North Whitehead and Bertrand Russell supported it. Russell's view was that mental and physical aspects of existence are the same but not reducible to the

physical. More recently, philosopher David Chalmers has offered it as a possible explanation for how neurons and their firings, which is a physical process, can give rise to the experience of consciousness.

Chalmers made a big splash in the mid-nineties with his breaking up of the philosophy of mind between the easy problem and the now famous "hard problem". The hard problem takes up the challenge of how to use strictly materialist explanations for the sense of self that accompanies all of our experiences, the sense that there is an "I" looking at that tree. Many philosophers and scientists currently share his view that mere neuronal processes are insufficient to provide us with this experience, that there is something about consciousness which cannot be reduced to materialist explanation, that consciousness is an irreducible force in the universe. Daniel Dennett claims that there is no hard problem.

The issue with philosophy of mind is that either one affirms this view of irreducibility of consciousness, or has variations of skepticism about it. The skeptics such as Dennett may claim instead that consciousness is, for example, merely a projection of neural spike trains in an algorithmic process, similar to the way pits and lands in a dvd puts us under the illusion that a real scene is being projected onto our tv screen; the sense of I is a creation of algorithms in the brain.

On the other hand, if one affirms consciousness as an irreducible reality, then the gateway to a full expression of yoga has been opened. Yoga has always stated that that very consciousness within you, the entity that feels a sense that there is *someone viewing the tree*, that very someone, if pursued with rigorous focus in various ways, becomes all the god there is and ever has been, the Spirit that is dwelling within you right now and has been there all along without you knowing it. The mystics and yogis tell us that that presence is actually the witness that views the entire "show" of life, and yogic process will allow us to free ourselves from needing to keep it just to ourselves in selfish egoistic form, realizing rather that this is the self that pervades all of the "eyes of the world".

So, all of these above mentioned scientists and thinkers together- each of whom is a heavyweight in the scientific/philosophical world- offer a broadside toward the grim materialist view. Again, they don't in the least herald the triumphant return of Jesus, and they won't bring back God who will answer our prayers with interventions on our personal behalf. Rather, these are guys who bring scientific findings to the table that we cannot ignore while hoping to remain in integrity with the state of current human knowledge. But, wonderfully, they also offer a view of the cosmos into which Spirit can easily integrate. And there is also one other thing to notice about these guys, along with the strict materialist opponents who they debate. That is...they are all guys.

Which brings in the next question, into which I will tread carefully: where are the women in this story? I bring this up because of my belief that there is something about the feminine that breaks another hole in the materialist view.

In Dennett's *Darwin's Dangerous Idea*, there are exceptionally few women among the multitude of characters he draws into the argument. Why is this? Women are just as smart as men and they write just as well. What happened to their voice? Is it because academia has been and still is unfair to women who are having to fight to break down these barriers? This is certainly one part of it; in 2015, the media ran a typical story of

women trying to work their way into Astronomy at UC Berkeley and having to contend with a sexually predatory potential Nobel prize winning male professor who ruled the department. This was before the MeToo floodgates opened up following Trump's election, ushering in a cascade of such whistle-blowing events. One revelation of all this has been that the hard sciences are the academic departments most resistant to female cohabitation. They are also the ones most likely to espouse the materialist world view.

Compare this to my yoga studio where the roster is frequently 90 percent female. That number is a bit higher than Yoga Journals's report of the national average, which is 83 percent. The reasons for this gender disparity in current Western hatha yoga have been debated for a few decades; one factor can be found in hatha yoga's history, which shows it to be a far more embodied evolution of the Patanjali-style yoga which preceded it, arising during a period marked by a surge in the worship of the Goddess. Suffice to say that there is something about embodied psycho-spiritual technology that attracts women, and gets into what has been called "women's ways of knowing". I will take Carol Gilligan as a suitable and relevant feminist scholar whose research concludes that men are more inclined to "rights and justice" and women toward "care and responsibility"; another contrast has been "separate agency" for men and "connectedness" for women. Taking the broad brushstroke of these male/female differences, how can we view our opposing idealist versus materialist world views?

Quite simply, the yoga process, especially a group hatha yoga process among a community of people familiar with one another, can lead to a deep feeling of connectedness; connectedness to community, one's own body and to shared subtler forms of awareness. Yoga, often translated as "union", and spirituality in general, aside from old religious trappings and rules, is a way of connecting with physical and mental process and investing energy in these processes, thereby eventually breaking down inner barriers, out of which floods new life and *new data*, which has always been said to facilitate the capacity to *transcend the isolation* of the separate ego and open one to higher connections. Those who do this a lot frequently state that they *feel* a presence all around them, a spirit that both transcends and is infused into ordinary life and matter. And *feeling* is a valid source of empirical data, although it has been without value in the scientific lab where vision is god. In intimate relationships, research has shown that whereas men value *looks* in a woman, women place more value on *how it feels* to be with a particular man. A heartfelt feeling of connectedness is a source of information in its own right, as well as a way of being more conducive to the sixth sense and the psi-net. Under the cold hard clinical eye, this warm hearted way of being is likely to curl in on itself and wait for a better environment.

I've noticed that many women who are hard-headed scientists do not buy the materialist view; one example is Clare Pert, the discoverer of endorphins, who in her book, *Molecules of Emotion*, offers a passionate urge for both science *and* embodied real connection to this earth and the spiritual process; she's big enough to embrace them both, and I wonder why so many materialist men have such a hard time with that. And of course there are also deliberate straight-ahead materialist women, and there are also atheist women, but I believe this is partly because religion has been a dreadful misogynistic force in history; our atheist meditator friend Sam Harris notes that his fan

base is 70/30 in favor of males.

One of my big complaints here concerns the fact that in materialist views, there is frequently not merely a denial of the possibility of any kind of spirit in the creation and development of the world, but there is also a *debunking of the entire subtle realm*, which I find incredibly clueless. So finally, my position becomes the following: the materialist world view has missed two things: psycho-spiritual technology, and, the influence of strong women. It has missed the data that comes from a sustained, quality yoga practice, and it has missed the connectedness of women.

I'm a lover of science. I really look forward to what's coming out of the lab next, especially about the brain, exercise physiology and the effects of mindfulness practices. But I've done way too much yoga to ignore what I've learned by doing it. If I keep this spiritual knowledge in mind, I find that I do not love the materialist story and find it exceptionally partial, just one part of a much bigger story. Stephen Pinker has said that science, "to put it mildly", has not been kind to common sense. My response is that history has not been kind, to put it mildly, to scientists who say, in the words of Daniel Dennett, "that's all there is to it."

Experience in yoga tells us there is more.