

## 9. Who is OC?

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...this led people to say that the psychiatrist's concept of madness included practically everybody.<sup>1</sup>

In 1882, a short novel was published by the Brazilian writer, Joaquim Machado de Assis, called The Psychiatrist (O Alienista). The psychiatrist was Bacamarte, a man of science and one of the most prominent physicians in Europe. In spite of the entreaties of the King himself, Bacamarte returned to his home town in Brazil, Itaguaí. There he resolved to devote himself to the study of mental disease.

Bacamarte, with the soul of a true man of science, was exact in every corner of his life. He chose Evarista to be his wife; she was homely, but he determined, scientifically, that she would be fit to bear his children. His expectations were disappointed because he and Evarista never had children. Unchastened, he redoubled his efforts in the study of insanity.

In Itaguaí, he opened an asylum, the Green House, for people who were insane. An asylum of this sort represented all that was modern and good in medical science, and Bacamarte had studied with the masters in Coimbra and Padua. His assiduity at discovering mental conditions astonished the townspeople as did his resolve to treat the afflicted in his modern asylum. Before very long he had populated the asylum with the larger part of the population of the town, including his wife, Dona Evarista, the priest, Father Lopes and his best friend, the pharmacist, Soares. He said: *Till now, madness has been thought a small island in an ocean of sanity. I am beginning to suspect that it is not an island at all but a continent.*

It wasn't long, however, before civil disorder broke out in the town. The uprising was led by the town barber, Porfirio, who said: *I know nothing about science, but if so many men whom we considered sane are locked up as madmen, how do we know that the real madman is not the psychiatrist himself?*

Bacamarte ultimately concluded that if the majority of the population were diagnosed with mental illness, perhaps he ought to revise his approach. He reasoned that it must be the remaining citizens of Itaguaí, the ones who seemed to be balanced, temperate and lucid, who were insane.

The psychiatrist informed the Council, first, that he had checked the statistics and had found that four-fifths of the population of Itaguaí was in the Green House; second, that this disproportionately large number of patients had led him to reexamine his fundamental theory of mental illness, a theory that classified as sick all people who were mentally unbalanced; third, that as a consequence of the reexamination in the light of the statistics, he had concluded not only that his theory was unsound but also that the exactly contrary doctrine was true – that is, that normality lay in a lack of equilibrium and that the abnormal, the really sick, were the well balanced, the thoroughly rational.

He released the inmates of the Green House to wide celebration, and set about committing the others. Yet, applying his new criterion, he couldn't find anyone suitable for commitment and scientific study. Finally, he decided there was only one man in Itaguaí who was well-balanced and perfectly rational.

He entered the Green House, shut the door behind him, and set about the business of curing himself. The chroniclers state, however, that he died seventeen months later, as insane as ever.

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<sup>1</sup> Macado de Assis, the Psychiatrist

Call me the Bacamarte of OC. I see it everywhere. In the clinics where I work, we have a new one come to visit every day. They come in because they think they are ADD, or because they're depressed, or they think their bodies are infected by yeast or toxic mold. *Ever since I had my brain injury, Dr Gualtieri, I haven't been the same.* The brain injury in question was a bump on the head three years ago.

The clinics are busy places, and we see many new patients every day. OC traits are so common among them, though, I've even stopped asking after them. *It must be the others who are really insane.* Today, for example, there was a fellow who worked as a political consultant; he ran campaigns for senatorial and gubernatorial candidates all over the country. He was as ADD as the day is long, but he thrived in the brouhaha of campaigning, keeping up with ten things at once, meeting the inexorable deadlines and working in a war-room with a dozen TV's, each tuned to a different station. He had been ADD when he was in school; he wasn't one of those professorial types who complains *But I always had to work harder than everybody else* when I point out that a High School GPA of 4.6 is not typical of an ADD kid. We tested him, and his cognitive profile was typically ADD.

His only problem was a desire for a Master's degree, which he felt would bolster his credentials and convince more aspiring Senators and Governors to contract his services. In contrast to his day job, getting a Master's was dull, boring work, and he just couldn't get it done. Likely, with a small dose of Ritalin® or Adderall® he would find the Masters requirements, if not less dull or boring, at least more do-able. In our clinics, we give prospective ADD patients a "test dose" of Ritalin® or Adderall® to see how the drug might change their cognitive profile. We gave him a test dose, and his cognitive profile normalized.

It was all pretty straightforward and I was giving him directions about how to compare a couple of different medications over the next month. Then he laid it on me. *I want to ask you something. When I was young I used to do this. If there was something wrong in my room, something out of place, I would go to school with the feeling that it was going to be a bad day and something awful was going to happen. It still happens. I was at a meeting and there was a wrapper on the floor. It was right under one of the interns and I couldn't just reach down under her a pick it up. But the whole meeting I couldn't get it out of my mind. I couldn't concentrate on what was going on. The wrapper just stayed with me the whole time.*

I looked at the student who was there with us and she looked at me. We both rolled our eyes. She knew what to say: *About half of the patients who come to clinics for ADD are, in fact, a bit OC. Sometimes we treat their ADD with a stimulant and their ADD gets better. Sometimes we treat their OC with Zoloft® or Lexapro® and their ADD gets better. At one time or another, you will get a chance to try both. It doesn't matter where we start but how well we communicate and how well we can evaluate how the drugs affect you, objectively.* I couldn't have said it better.

Yes, I do see OC everywhere, but I don't make a fuss about it. I just drink it all in and try to make sense of it later. *What does it all mean?* I run home, kiss F and pet the dog, and look for the girls. *How was school?* *Fine. Did you learn anything?* *No. Did anything interesting happen today?* Scowl. I am dismissed; blessed relief from my familial obligations for the day. Then an ounce of shag, sanctuary in the library and back to this stupid book. *What does it all mean?*

I am haunted by Bacamarte and that fellow who thinks that just because he's a bowl of Jell-O, he doesn't have a mental problem. I think, *A theory that accounts for everything explains nothing.* But then I think of Sherlock

Holmes, and am encouraged to forge ahead. He said, *One's ideas must be as broad as Nature if they are to interpret Nature.*<sup>2</sup>

Today I had a sudden revelation that resolved the dilemma without the requirement of cultivating ideas as broad as Nature. It was a normal day in the clinic and there were a variety of new patients to share with the students. Here is A, and he has social anxiety disorder. B had a bad concussion after a dog ran into his car, head on! – when does a dog ever do that? – and his car rolled several times down the embankment. And C, the poor fellow, who left school for a while, worked in a bar, and started doing drugs. D brought her husband back to see us after a week; he was getting better from his conversion disorder, which began when he woke up and discovered he couldn't speak at all.

Ah, the variety of the flowers that bloom in the garden of our clinic, I thought. But before I could escape, every one of them, even D, the patient's wife, wanted to tell me about a symptom they had. *You know, Doc, I always thought I was a little OCD.* A liked to count to 100. B would chew his food ten times on the left and ten times on the right. C used hand sanitizer after he touched a doorknob or a button on the elevator. D was convinced that she had narcolepsy. I didn't get out of the examining-room soon enough, I told the student.

Then my sudden revelation. An epiphany, a sudden burst of insight. It was *me!*

I told the student that what was wrong was this: I was dead, and my purgatory was to work in a clinic where *every patient* was OC. It was my punishment for intellectual presumption, or maybe for having been, in my youth, a controlling, wrathful man, before my spiritual conversion, my semi-annual week-ends at drumming circle and massive doses of antidepressant and mood-stabilizing drugs. I shared my insight with the student, then with my wife and the girls, but none of them were impressed. I resolved to re-examine the theory. An ounce of shag, sanctuary in the library and back to this stupid book; maybe *this* is my purgatory.

The psychiatrist decides that if the majority of people are OC, then perhaps he ought to reexamine his theory. He reasons that it must be the remaining citizens of Itaguaí who are insane. *What's so bad about OC, anyway?*

One of the questions I ask a patient is whether he or she flushes a public toilet with his or her foot. A related question is whether he or she opens the rest-room door with his or her elbow. Such behavior used to be deemed an OC trait, but apparently, no longer. Yesterday, in fact, when I posed the question to a patient, he, his wife and the student who was there with us looked at me as if I were an atavistic throwback. The wife and the student both remarked to this effect: *Aren't you supposed to? Doesn't everybody? Don't you?*

*What's so bad about OC?,* you say. Do I really have to tell you? You may think it is only a small island in the ocean of madness but, to me, it looks to be a continent. You say, *Cleanliness is next to Godliness.* Not necessarily, I say.

## CLEANLINESS IS NEXT TO GODLINESS

Certain hormones are expressed during pregnancy in large amounts. They affect the brain and cultivate a woman's pro-social and altruistic behavior. Less well-known is that these same hormones lead to re-organization of the language centers of the left hemisphere. Certain stereotyped messages are cultivated that mothers utter

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<sup>2</sup> A Study in Scarlet

not only with authority but with circadian regularity. The neuro-psycho-linguists refer to these as “motherisms.”<sup>3</sup> They are usually conveyed in the common language, but among some tribes the emitting organism may employ her language of origin, most commonly Yiddish or Italian, but seldom Oxbridge English or Esperanto. Examples are:

*Don't scratch like that.*

*Don't chew with your mouth open.*

*You're not wearing that to \_\_\_\_\_ (school, temple, Grandpa's wake, etc).*

*I'm not angry, child, I'm disappointed, that's all.*

*Don't touch your face!*

*Did you wash your hands?*

The last appears to have had an enduring effect on the psychology of many youngsters, not to mention the public-health authorities, the restaurant industry and most OCs. Nothing, to them, feels quite so good as a nice, clean pair of hands. If a sink isn't readily available, for example, after one has pressed the button on an elevator, one can buy a small bottle of hand-sanitizer with a plastic hook to hold it on one's belt, bra strap or whatever. *What is wrong with cleanliness?*, you ask. Only this: it exposes one to the risk of chronic disease.

The epidemic of cleanliness that has swept the land has only recently been evaluated in terms of its ecological impact on what is called the “biome,” the universe of all living things, including germs. The latter may be low on the food-chain but they possess more biodiversity and more genes than all the other organisms put together. If they are there, there must be a reason, and excluding them from one's life may not be a good idea.

The dubious reader is referred to the **hygiene hypothesis**, an idea that originated with an English epidemiologist, David Strachan, who reminded readers that hay fever was a “post-industrial revolution epidemic,” its prevalence increasing with every passing decade in modern societies. He based his theory on data from more than 17 000 British children born in 1958; he discovered an inverse correlation between hay fever and the number of older siblings they grew up with. Strachan suggested that allergic diseases were prevented if a child had frequent infections, which were likely to be transmitted by unhygienic contact with older siblings or acquired prenatally by a mother infected by contact with to her children.(Strachan, 1989)

In 1998, about one in five children in industrialized countries suffered from allergic diseases such as asthma, allergic rhinitis or atopic dermatitis [3]. This proportion has tended to increase over the last 10 years, asthma becoming an ‘epidemic’ phenomenon [4]. The increasing prevalence of asthma is important in developed countries (more than 15% in United Kingdom, New Zealand and Australia) but also in developing countries, as illustrated by a prevalence greater than 10% in Peru, Costa Rica and Brazil. In Africa, South Africa is the country with the highest incidence of asthma (8%). The prevalence of atopic dermatitis has doubled or tripled in industrialized countries during the past three decades, affecting 15–30% of children and 2–10% of adults. In parallel, there is also an increase in the prevalence of autoimmune diseases such as T1D, which now occurs earlier in life than in the past, becoming a serious public health problem in some European countries, especially Finland, where an increasing number of cases in children of 0–4 years of age has been reported. The incidence of inflammatory bowel diseases (IBD), such as Crohn's disease or ulcerative colitis and primary biliary cirrhosis is also rising. Part of the increased incidence of these diseases may be attributed to better diagnosis or improved access to medical facilities in economically developed countries. However, this cannot explain the marked increase in immunological disorder prevalence that has occurred over such a short period of time in those countries, particularly for diseases which can be diagnosed easily, such as T1D or MS.

Public health measures were taken after the industrial revolution by western countries to limit the spread of infections. These measures comprised decontamination of the water supply, pasteurization and sterilization of milk and other food products, respect of the cold chain procedure, vaccination against common childhood infections and

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<sup>3</sup> In fact, Jean Shepherd did.

the wide use of antibiotics. The decline is particularly clear for hepatitis A (HAV), childhood diarrhea and perhaps even more spectacular for parasitic diseases such as filariasis, onchocercosis, schistosomiasis or other soil-transmitted helminthiasis. In countries where good health standards do not exist, people are chronically infected by those various pathogens. In those countries, the prevalence of allergic diseases remains low. Interestingly, several countries that have eradicated those common infections see the emergence of allergic and autoimmune diseases...The incidence of diabetes is sixfold higher in Finland compared to the adjacent Karelian republic of Russia, although the genetic background is the same.

Additionally, migration studies have shown that offspring of immigrants coming from a country with a low incidence acquire the same incidence as the host country, as rapidly as the first generation for T1D [18] and MS. This is well illustrated by the increasing frequency of diabetes in families of immigrants from Pakistan to the United Kingdom or the increasing risk of MS in Asian immigrants moving to the United States. The prevalence of systemic lupus erythematosus (SLE) is also much higher in African Americans compared to West Africans. (Okada, Kuhn, Feillet, & Bach, 2010)

Germs, therefore, are good for you but within reason, of course. As we have learned from recent, deadly epidemics, it's not a good idea to eat bats or to have sex with monkeys, and one anticipates that before very long such wholesome advice will join the lexicon of motherisms.

*Don't eat that bat!*

*I never want to see you having sex with that monkey again!*

## EATING CAN BE DANGEROUS

The human gut is the natural niche for more than  $10^{14}$  bacteria of more than 1000 different species. Immediately after birth, the human gut is colonized with different strains of bacteria. This commensal microbiota is important in shaping the immune system, for other basic physiological functions [65] as well as for the integrity of the intestinal barrier. Interestingly, the intestinal flora was different in a small group of allergic Estonian and Swedish children compared to the control group, with a higher count of aerobic bacteria such as coliforms and *Staphylococcus aureus* and a decreased proportion of *Lactobacilli*, or anaerobes such as *Bifidobacterium* or *Bacteroides*. (Okada et al., 2010)

Is it possible that many of the unexplained somatic syndromes that we shall consider in chapter XX are the results of Modern Society and its War Against Germs (*Aren't you glad you use Dial? Don't you wish everybody did?*). For example, the Morning Telegraph reported the story of Samantha Brown, a 27 year-old English artist, who suffered from one of those strange clinical events, fibromyalgia. She also thought that food was going to poison her and her weight fell to 77 pounds. (Samantha was 5'8" tall.) Ms. Brown suspected that her paranoia about food harming her was made worse by the fact that she had fibromyalgia, which causes chronic fatigue. The article informs that Ms. Brown was "eventually diagnosed with an unusual form of obsessive compulsive disorder."

*I began dictating to myself what I could and couldn't eat. As my behavior developed, it became an OCD, where I thought practically everything was poison. It was all rooted in my desire for control. I didn't want to be thin. I wasn't avoiding eating to stay skinny. Instead, I was convinced that unless I restricted myself to the foods I had decided were OK, I would poison myself. I drew up an "allowed" list and a "forbidden" list. Before long, the "allowed" list had just three things - Coco Pops, salt and vinegar crisps, and thin-crust pizza. Eventually, all I could manage was Coco Pops. My mum became really concerned. She would try to tempt me with new foods like macaroni cheese (sic), but all I could do was sob into the plate, pleading with her and warning her that it would kill me.*

There is reason to believe that conditions like fibromyalgia and chronic fatigue are related to an imbalance in one's intestinal flora. *What's so bad about OC?* If Ms. Brown had been less cautious about what she took in, she mightn't have had fibromyalgia and chronic fatigue to begin with.

The fear of contamination is frequently concerned with germs as if they were some kind of poison, instead of our little animalcule friends. The OCs have known that for a long time, or at least some of them have.

The OC stereotype is that Neutrogena soap thing, but it only shows the peril of trying to fit people into categories. There are OCs who answer to the opposite persuasion. *Did you wash your hands?*, mother asks. *Good. Tonight for dinner we are having a nice bit of dirt.*

Mother is not likely to say any such thing, because geophagists – dirt eaters – tend to do so in secret, abashed by the sanitary engineers who equate dirt with germs, or worse, poison. Soil contaminated with human waste can be the source of parasitic infestation; nevertheless, in undeveloped societies people routinely eat dirt, especially clay, for its medicinal qualities.

Geophagy is common among the animals. Bats visit “mineral licks,” mud, that is, to supplement their diets with calcium and protect themselves from fruit toxins. Parrots do, too and tapirs. Chimpanzees are said to eat dirt to protect against malaria. (Voigt, Capps, Dechmann, Michener, & Kunz, 2008) Among the humans, dirt-eating occurs in children and pregnant women, especially kaolinite clay, which subdues nausea and decreases hunger without fear of morning sickness. Kaolin used to be an ingredient in Kaopectate, an anti-diarrheal drug. Mahatma Gandhi believed that eating clay could detoxify the body and assist against constipation. In Haiti, people eat *bon bon des terres* made from water, salt, sugar, vegetable oil and clay-based mud, consumed to fill empty stomachs although it has little nutritional value. An assertion I discovered somewhere – there was no reference attached -- asserted that people worldwide eat up to 50 grams of dirt every day. One of those *Speak for yourself, Jack*, factoids, I think.

Nevertheless, there is a chef in Tokyo (where else?) who serves dirt in his Tokyo restaurant; a six-course meal that includes dirt soup, dirt risotto, dirt mint tea, dirt sorbet, and a dirt-covered potato ball with a truffle center that he calls “dirt surprise.”

The psychiatrists have a name for such behavior. They call it **pica**, after the Latin word for *magpie*, birds that are supposed to eat anything, though what they really do is carry stuff away to their nests. Magpies are hoarders, not geophagists. Nevertheless, according to the DSM, individuals with pica consume an eclectic variety of substances, including mud, pottery, clay, and laundry starch, paper, tissues, wood, plastic straws, soap, cloth, carpet, hair, string, wool, paint, gum, metal, pebbles, chalk, charcoal, coal, cigarette butts and ash. Persistent consumption of ice does not satisfy pica criteria, “since ice is a food,” but consuming freezer frost, “if not regarded as food within local norms” meets criteria for pica. (Hartmann, Becker, Hampton, & Bryant-Waugh, 2012)

Pica is an ugly habit, a condition ordinarily met with in patients with chronic mental illness or intellectual disability, but mild forms are really quite common, like swallowing pieces of skin or nail that one bites off while grooming. Chewing things like pencils or small pieces of plastic is also common. The appropriate observations is that *People will eat things they would never serve their guests.*

The converse is also true: *What you serve your guests might be poisonous.*

I've suffered from harm obsessions for as long as I can remember. For a long time it was fear of choking someone, but after getting married it morphed into a fear of poisoning someone. I stopped cooking and baking and avoided the kitchen and touching food as much as possible. I've gotten a little better with that now, but it's still not easy. I started going to therapy last October and it was traditional talk therapy, which helped me very little. Now I'm doing Exposure and Response Therapy with a new therapist.

With my other therapist who I was doing the talk therapy with, she just exacerbated my anxiety. She mentioned "short of putting rat poison in someone's food you wouldn't go to jail"...and that's when my obsession with insecticides and rat poison began. I was so upset with her for mentioning it. Now I'm so afraid of finding particles of it loose on the ground or on a shelf and putting it in my pocket and bringing it home and sprinkling it on food. Then having to go to jail for hurting someone. I'm constantly seeking reassurance from my dad. Asking if I'd go to jail for specific scenarios I create in my mind...for example, "would I go to jail if I found some loose pieces of rat poison on

the ground and were to sprinkle on someone's food and they got hurt?"....and it just goes on and on. My brain gets into an endless loop. (Brittany, Pure-O/Harm Obsessions)

Thank Heaven that "talk therapist" didn't tell her patient that some countries, like the United States, permit arsenic-based additives and drugs in animal feed for chickens, pigs and turkeys. Arsenicals (like roxarsone, carbarsonne, arsanilic acid, etc) improve growth, feed efficiency, pigmentation and disease prevention in poultry and swine.

The therapist might also have mentioned the Styrian arsenic eaters, Austrian peasants in the southeast of the country, who in the old days consumed 400 mg of arsenic trioxide every 2-3 days without side effects. Lethal doses of arsenic trioxide are 70-300 mgm, but the Styrians had apparently built up an immunity to the poison. They defended the practice by pointing out that arsenic enhanced female beauty, made one's hair black and sleek, increased potency, improved breathing at elevated altitudes, acted as a prophylactic against infectious disease, increased courage and was an effective digestive aid. Their habits were reported in 1851 and subsequently, arsenical health and beauty products were widely used in Britain and America.

Concern with dirt or germs
Excessive/ritualized hand washing
Other measures to prevent/remove contaminants
Concerns with bodily secretions
Cleaning household items/objects
Excessive showering, grooming
Excessive concern with animals
Bothered by sticky substances
Concern with household cleaners
Concern with environmental contaminants
Concern that one will get ill because of a contaminant
Concern about contaminants

The obsession with **contamination** and the compulsion to clean and be clean is considered one of the "main OCD dimensions," along with some others listed in the box on the left. Psychiatrists have tried to make sense of OCD by "clustering" symptoms that co-occur in patients. For this purpose, they use variants of that factor analysis technique that we learned about in chapter 4. Within the general category of OCD, there are sub-categories, or dimensions: (1) contamination and cleaning; (2) doubt and harm; (3) superstitions and rituals, including counting; (4) taboo symptoms (religious, sexual, and aggressive obsessions); and (5) hoarding and symmetry, including perfectionism. Depending on whom you believe, there are 3, 4 or 5 OCD dimensions, and some additional categories like "Body Dysmorphic Disorder," the obsession that one of one's physical features is hideous; Trichotillomania, or hair-pulling; Excoriation, or skin picking; and Hoarding, of course. The idea is that a statistical approach to OCD symptoms might guide research into the brain basis of the condition, or conditions. The approach has been as disappointing for OCD as it has been for the personality traits. OCD patients usually have symptoms from various dimensions as well as some idiosyncratic symptoms that aren't to be found in the lists of OCD dimensions. They may also have symptoms that are the precise opposite of the ones on the list. Both poles may be equally beneficial to society or equally harmful, as the case may be.

Someone who is too clean, therefore, is not only OC but also vulnerable to hay fever, asthma, atopic dermatitis, inflammatory bowel disease, biliary cirrhosis, diabetes and multiple sclerosis. Individuals with the compulsion to eat dirt, on the other hand are prone to hepatitis, childhood diarrhea, filariasis, onchocercosis, schistosomiasis and other soil-based helminthiases. They are a bit OC, too, I imagine, especially the Tokyoites who are regular diners at that restaurant. But, then, how often have *you* had the occasion to say, *This is the best dirt soup I've ever had.*

The epidemic of poliomyelitis was the last great epidemic (before AIDS) to have afflicted the United States and Canada. It was particularly troubling because it preferentially affected middle-class children, whose mothers were doubtless wont to say, *Did you wash your hands?* Dirty children were more likely to have immunized themselves against the disease by virtue of exposure to the wild-type polio virus. I told that to my student, after we had left the room, to make this point: the first responsibility of a physician is not to the individual patient but to

the public health. In the interest of the public health, therefore, I shall advise my readers not to be overly concerned with bodily secretions and to refrain from excessive showering and grooming. A dirt surprise, now and then, is probably good for you, but don't be compulsive about it. A bit of arsenic is good for worms, but then worms may be good for certain inflammatory diseases of the gut.

## HOW TO AVOID DEATH BY POISONING

Eating dirt may or may not detoxify one's body, but consuming small quantities of poison on a regular basis can protect one from poisoning at some later date, if that is something that one is afraid might happen. The exemplar of this practice was no less than Mithridates VI of Pontus (132-63 BC), an area of Anatolia on the Black Sea. M6 had reason to fear assassination by poison, since his father, M5, had been killed in just that way, perhaps by his wife, M6's mother. Assuming the throne, M6 had his mother and his brother killed, perhaps by poisoning, but he made up for it by marrying his sister.

Checking that one did not harm others
Fear that one will be responsible for something terrible happening
Fear one might harm others
Checking that nothing terrible did/will happen
Checking locks, stoves, appliances
Checking that one did not make a mistake
Fear that one might harm others because he is not careful enough
Checking that one did not harm herself
Concerned one will make others ill

Mithridates VI waged a cruel war against the Romans but was ultimately defeated. After his own troops, led by his son, turned against him, he took poison to avoid capture and fed it to his two daughters as well. The girls died right off, but M6 didn't, having inured himself against the effects of poison by consuming, every day, a concoction of low-dose poison. Wisely, he had protected himself against deliberate poisoning, which seemed to be a family thing, so why he chose to kill himself with poison is

one of those small mysteries that ancient history may never be able to answer. In the end, he was run through, at his own request, by a slave.

The way Mithridates protected himself was by means of a "universal antidote," called Mithridatium during the Renaissance, when the Borgias and other unsavory characters also were given to poisoning each other. Much to the frustration of the Borgias, the recipe for Mithridatium has been lost, but we have since learned that M6 manufactured it from the blood of Pontic ducks, who had the habit of eating poisonous plants. There were other noxious ingredients, about 50 in all. M6 was known to amuse his guests at banquets by demonstrating his immunity to poison plots, inviting the guests to sprinkle his food and drink with deadly substances, which were, apparently, readily available in Pontus at the time. Dio Cassius (*Roman History* 37.13) reports that M protected himself by taking the secret 'antidote' every day. He should have known, in the face of capture by the Romans, that an alternative exit strategy was advisable.

Appian states that Mithridates 'mixed' the poison and shared the dose with his two young daughters, then swallowed the rest. The two girls died immediately, but Mithridates only became weak. The composition of this suicide poison is unknown. The effectiveness of poison in rapidly killing Mithridates' daughters following oral ingestion suggests a nonproteic nature of the poison itself and, therefore, it is unlikely that Mithridates' tolerance was based on an immunological mechanism. He had shared the single dose with his two daughters and the remaining amount was sublethal, also due to his tolerance (Valle, Carmignani, Stanislao, Facciorusso, & Volpe, 2012)

On the basis of existing texts, we can't say that anyone in the ancient world was OC, and Mithridates' preoccupation with poison may have reasonable, considering the habits of his family, especially when compared to Samantha Brown's and Brittany's. Is someone OC, therefore, because she is afraid of poisoning her close friends and relations or is he OC if he poisons most of his first-degree relatives and can think of nothing better to do at a dinner-party than sprinkle poison on the entrée? Or both?



If you were Bacamarte, whom would you confine to the Green House? How about the herpetologist Bill Haast, who was known to inject doses of snake venom into his body, thus protecting himself from the many snake bites he received during his long career. When he was young and began working with venomous reptiles, Haast began injecting himself with minute amounts of venom at regular intervals. Having been bitten by venomous reptiles on 173 separate instances and legally pronounced dead twice, his practice saved his life on numerous occasions. At age 97, he no longer handled snakes because of the nerve and tissue damage to his hands from snakebites, but he continued injecting venom until he died at age 100. Many lives have been saved by transfusions of Haast's blood to desperate snakebite victims.

If you find your personal weaknesses portrayed unfairly in these pages, therefore, reflect on the paradox of OC: you have an evolved harm-avoidance strategy that carries the potential for harm in whichever direction you choose to pursue it. Whether you are in the first wave of admissions to the Green House or the second, consider it inevitable. If, on the other hand, you are worried that I have drawn your picture only too accurately, be assured it is entirely by accident. You know what they say about truth and fiction. Before you try to contact me directly, or your attorney, remember my compulsion to say precisely the opposite of what is true.

### A SIMPLE KISS WITH AN INFINITESIMAL EXCHANGE OF SALIVA

The fear of harming someone with poison, for example, or a sharp knife that happens to be lying there on the counter, fall in the general OCD category of **doubts**. Statistically, fears of harming oneself or others is associated with obsessive doubting (*I'm not sure that doctor is right when he recommends eating an occasional dirt-ball*) and checking (*Did I remember to wash the salad?*).

Just because your irrational fear of poisoning your loved ones over dinner is irrational doesn't mean it mightn't happen. If I were a mystery-writer, I might concoct just such a plot. Samantha feeds her husband nothing but Coco Puffs for fear that anything else will poison the poor fellow. The murderer, who seeks revenge against S's husband for a former slight, knows this. How?, you wonder. Maybe he read about her in the Morning Telegraph. So, the blackguard puts 300 mgm of arsenic trioxide in the Coco-Puffs. It is the perfect crime because S confesses right off.

In my opinion, none of the great detectives are equipped to deal with such an event. Except Lord Peter Wimsey, of course.

Riddle-me-right, and riddle-me-ree," said Wimsey, imperturbably. "We've overlooked something, that's all. Probably something quite obvious. Give me the statutory dressing-gown and ounce of shag, and I will undertake to dispose of this little difficulty for you in a brace of shakes."

Yes, well, about this arsenic. As you know, it's not good for people in a general way, but there are some people—those tiresome peasants in Styria one hears so much about—who are supposed to eat it for fun. It improves their wind, so they say, and clears their complexions and makes their hair sleek, and they give it to their horses for the same reason; bar the complexion, that is, because a horse hasn't much complexion, but you know what I mean. Then there was that horrid man Maybrick—he used to take it, or so they say. Anyhow, it's well known that some people do take and manage to put away large dollops after a bit of practice—enough to kill any ordinary person. But you know all this."

"This is the first time I've heard of such a thing."

"Very interesting," said Mr. Urquhart.

Well, it occurred to me, don't you see, old horse, that if you'd had the bright idea to immunise yourself first, you could easily have shared a jolly old arsenical omelette with a friend. It would kill him and it wouldn't hurt you."

"I see." The solicitor licked his lips.

"Well, as I say, you have a nice clear complexion—except that I notice the arsenic has pigmented the skin here and there (it does sometimes), and you've got the sleek hair and so on, and I noticed you were careful not to drink at dinner, and I said to myself, 'Peter, my bright lad, what about it?' And when they found a packet of white arsenic in your cupboard—never mind how for the moment!—I said, 'Hullo, hullo, how long has this been going on?' Your handy foreign chemist has told the police two years—is that right? About the time of the Megatherium crash that would be, wouldn't it? All right, don't tell me if you don't want to. Then we got hold of some bits of your hair and nails, and lo and behold, they were bung-full of arsenic. And we said 'What-ho! So that's why I asked you to come along and have a chat with me. I thought you might like to offer some sort of suggestion, don't you know.'"

"I can only suggest," said Urquhart, with a ghastly face but a strictly professional manner, "that you should be careful before you communicate this ludicrous theory to anybody. It is quite true that I have for some time been taking a medicine which contains slight traces of arsenic—Dr. Grainger can furnish the prescription—and that may very likely have left a deposit in my skin and hair, but further than that, there is no foundation for this monstrous accusation."

"None?" "None."

"Then how is it," asked Wimsey, coolly, but with something menacing in his rigidly controlled voice, "how is it that you have this evening consumed, without apparent effect, a dose of arsenic sufficient to kill two or three ordinary people? That disgusting sweetmeat on which you have been gorging yourself in, I may say, a manner wholly unsuited to your age and position, is smothered in white arsenic. You ate it, God forgive you, an hour and a half ago. If arsenic can harm you, you should have been rolling about in agonies for the last hour."

"You devil!"<sup>4</sup>

I warned you that Lord Peter Wimsey was a bit of a ponce but you have to admit that Dorothy Sayers knew all about Mithridatism and even the Styrian peasants. She liked poison: *Ask your boyfriend with the title if he likes arsenic in his soup.*<sup>5</sup>

A better story would involve the ancient Indian practice of selecting beautiful girls and feeding them poison in small amounts until they grow up. They were called **vishakanyas** (visha = poison, kanya = maiden). Making love with a vishakanya will kill her partner. They were thus employed as secret weapons.

Paurus let go of her hair in panic while clutching at his own throat as he felt the compound of arsenic and mercury scald his lips, tongue and throat. He tried to scream but no sound emerged from his larynx -- it had already been destroyed by the sankhya poison on her lips.

In fact, Chanakya had personally supervised the creation of an entire army of such maidens. His secret service would identify young and nubile girls whose horoscopes foretold of widowhood. These beautiful damsels would be sequestered at an early age and fed a variety of poison in graduated doses, making them immune to their ruinous effects. By the time each of Chanakya's vishkanyas reached puberty, they were utterly toxic. A simple kiss with an infinitesimal exchange of saliva was lethal enough to kill the strongest bull of a man.<sup>6</sup>

## NOT ALL OF US HAVE THE SAME PERCEPTUAL APPARATUS

OC is an enduring paradox and so is life. It's replete with ambiguities, irregularities, uncertainties and blind risks. One can't blame psychiatrists, or even the brain which has only evolved to contend with the inconstancies of life. One can blame the gods, who like to play tricks on men and women. Or Nature Herself, who really likes what the Darwinists call **phenotypic diversity**. That just means that we all have DNA strands that are different from everyone else's. Those of us who have the best strands are able to rise above the doubts and irresolution that come from being in the world.

Forty-six good strands of DNA allow one to cultivate what Eric Ericson called **basic trust**. A child thus endowed appreciates that what he or she perceives has a reasonable connection to objective reality, insofar as

<sup>4</sup> Strong Poison. Dorothy L. Sayers

<sup>5</sup> Gaudy Night

<sup>6</sup> Chanakya's Chants

there is such a thing. It is reinforced by attentive parents who convey the message that the world is a peaceful, loving and safe place, although one does have to be careful, sometimes. Suppose, though, that the gods injected a bit of DNA that didn't connect one's sensory apparatus in just quite the right way. Why they would do so is a mystery, of course, but there you are.

One's home is a safe haven, a special gift from one's parents, especially Mom. She can teach her baby that *The world is loving place* without using any words at all. But when she says, *Don't cry. That's only your aunt Filomena*, the baby is understandably dubious. Even children have minds that are endowed with dubiety: *She could be Mother Theresa as far as I'm concerned, I'm not letting her touch me*, the baby would say, if she had words.

The blanket aunt Filomena brought for the new baby is the softest cotton and even the colors are gentle. Babies have such sensitive skin. It's a long time before they become inured to the rough feels, loud noises and strong tastes of the real world. Brain-injury patients are the same way especially during the unstable period when they are emerging from coma. One has to be quiet and gentle, working with them because the merest noise makes them agitated. Some mentally handicapped patients retain their infantile preference for soft textures and familiar smells or the familiar feeling of a hand or finger in their mouths. They retain their sensitive sensory detectors all their lives. So do some of the OCs.

The OCs are born with a hyperactive error detector. In very young children, it responds to unfamiliar sights or sounds or feelings. In adult life it may respond to a report poorly written, a grammatical lapse or jars in disarray in the pantry. The cingulum is a built-in conflict detector and the signal it generates, although not necessarily to one's conscious awareness, is *Something is wrong here*. He is a useful fellow to have, especially at the base of the cerebral cortex, where he can monitor just about everything that is going on in brain and body, but he has been known to go overboard. *Eat your Coco-Puffs, dear. Breakfast is the most important meal of the day*, might conflict with these cognitive data: *Not all of the constituents of coco-puffs are listed on the cereal box*. A hyperactive cingulum won't let that one get by.

The cingulum also integrates data from one's sensory apparatus. A just-right cingulum doesn't activate an additional increment of top-down control just because our hands are not nearly so clean as they were five minutes ago when we gave them a good wash or that our lips are drier now than they were a short while ago when we last gave them a good lick. The hyperactive cingulum asserts, *Just to be sure, give them another nice lick*.

Some children have **sensory integration disorder**. They respond quite sharply to sensory events, like the feel of certain fabrics, their hair being brushed or even being touched by one of their parents. They don't like it at all. The idea is that such children *process* sensory data in an unusual way; what ought to feel nice to you makes the child uncomfortable. Think of it as a connectivity problem: sensations that ordinarily excite pleasure centers in brain are routed, instead, to centers that excite pain or fear. Some kids react sharply to loud noises or to the hubbub in crowded room. Others are very picky eaters because the taste or texture of certain foods excite unpleasant reactions. The odor of a car's leathery interior, can be offensive to some children, like Nora.

In contrast to sensations that such children avoid, they actively seek others. Twirling, for example. The Occupation Therapists who invented sensory integration disorder maintain that the children are seeking "vestibular stimulation." A child who flaps his hands is seeking sensorimotor stimulation. Other children are given to "near-receptor preferences." They prefer to stimulate their taste, touch and smell receptors and are less

attentive to auditory and visual stimuli. Some kids prefer stimuli in their peripheral vision and others, in moments of boredom, amuse themselves by enjoying diplopia, which they can do by dysconjugating their eyes.

There is a theory, attributed to John Locke, that the organization of one's mind is based on the progressive accretion of sensory data. It's thought to have been discredited by modern neuroscience, but it can't be all wrong. If a part of it is true, then we might expect to find that children who can't integrate their sensations in a coherent manner are subject to mental aberrations in later life. That also is part-true, because sensory aberrations usually recede as a child grows up. SID in children is very common in children who have OCD, Social anxiety disorder and autism, but most kids with SID grow up to be normal, productive citizens. Normal in a manner of speaking, of course, and in the ambiguous, irregular way Nature demands. They are more likely to have the traits of OC, SA or Aspergerism.

Suppose one's sensory apparatus is designed to react to stimuli in precisely the way one's mother says it won't. *Eat your broccoli, dear. It's good for you.* Is the child in a position to respond, *No, mother, my sensory apparatus perceives the texture of broccoli in an infelicitous way?* Suppose the stimulation that satisfies one's mis-connected nervous system are behaviors of which your mother disapproves: *Don't scratch like that. Don't take such long showers. Don't chew on that plastic thing, you may swallow it.* Now, I am not about to attribute OC, social anxiety and autism to a fatal mis-match between one's mother's good advice and the data one takes in from one's five senses, but consider the dilemma of an individual who is endowed, from the very beginning, with a slightly different way of perceiving and appraising those data.

The happy ending is when the child is finally desensitized to the rough textures, the clamor and bad tastes of the adult world. Sooner or later, she will learn that broccoli is good for her and that the tight feeling of elasticized textile against her skin is liberating. If it is necessary to scratch like that, she learns to do it in the privacy of her dressing-room. As her sensory apparatus is hardened by experiences good and bad, the grown-up child will appreciate raw oysters, single malt Scotch and Spandex. And kissing with *tongues*. Yuk.

Unless her insatiable error detector has kept her hypersensitive perceptions alive. One's mind is conditioned, according to Locke, by the accretion of sensory events. Suppose those sensory events are irregularly-perceived events. The world is perceived as different from what one has been told and different from how others seem to experience it. I imagine that the accumulation of such events must exercise one's critical judgment unduly and cause one to be irretrievably dubious. I call that dubiety. *Can you prove to me, Dr Gualtieri, that any of your idle speculations are really true? You may have to reexamine your fundamental theory.*

Would you be convinced if my idle speculations were fortified by numbers?

## THE COUNTING

Count von Count is a character on Sesame Street whose penchant for counting is the opportunity to teach numbers to little children. In case you've missed the show, he wears a cape, has sleek, slicked-back black hair and two vampiric teeth. Vampires, the producers must have known, like to count and one way to keep a vampire at bay is to scatter pebbles or raisins around the room. An intruding vampire will be preoccupied with counting them while you make your getaway.

OCs, too, like to count. The motto of the OCD Association is *Every member counts!* Sherlock Holmes was also a counter:

"Quite so," he answered, lighting a cigarette, and throwing himself down into an arm-chair. "You see, but you do not observe. The distinction is clear. For example you have frequently seen the steps which lead up from the hall to this room."

"Frequently."

"How often?"

"Well, some hundreds of times."

"Then how many are there?"

"How many? I don't know."

"Quite so! You have not observed. And yet you have seen. That is just my point. Now, I know that there are seventeen steps, because I have both seen and observed."

Superstitious behaviors
Lucky/unlucky numbers
Superstitious fears
The need to repeat routine activities
Colors with special significance
Counting compulsions
Ritualized eating behaviors
Mental rituals
Measures (not checking) to prevent harm or terrible consequences

What's so bad about counting? Do *you* know many steps there are between the first and second floor of your house? While climbing the stairs, isn't it fun to turn a mundane task into an exercise of sorts? Exercise almost always involves counting. *I try to bike at least 50 miles every weekend.* The rituals of sport are simply festooned with magical numbers, like 26.4 miles for a marathon not to mention *love, 20, 30, 40, game.* Baseball has nine men on a team and nine innings, three strikes for an out and three outs for an inning, four bases and four balls for a base on balls.

Psychiatrists have determined that counting compulsions fall into the broad category of "rituals and superstitions." One's prayers have to recited in a particular order and a particular number of times. The priest walks around the altar three times with a censer of incense, swinging it precisely three times on each of three sides. Number obsessions and counting compulsions are fairly common and they are sometimes associated with fears of exacting harm. *If I look away from the clock at 1:57, my family will die; if I look away at 2:05, I will go blind.* There are magic numbers and lucky numbers and numbers that speak to the grand anthropic principle of the universe.

What is it about numbers that excites superstition? Whatever it is diminishes the idea that OC arose during prehistoric times because human beings haven't been counting that long.

A squire was determined to shoot a crow which made its nest in the watch-tower of his estate. Repeatedly he had tried to surprise the bird, but in vain: at the approach of the man the crow would leave its nest. From a distant tree it would watchfully wait until the man had left the tower and then return to its nest. One day the squire hit upon a ruse: two men entered the tower, one remained within, the other came out and went on. But the bird was not deceived: it kept away until the man within came out. The experiment was repeated on the succeeding days with two, three, then four men, yet without success. Finally, five men were sent: as before, all entered the tower, and one remained while the other four came out and went away. Here the crow lost count. Unable to distinguish between four and five it promptly returned to its nest.

That particular crow, who was probably not representative of all crows, had numerosity surpassing that of primitive humans, many of whom have not even achieved the stage of finger counting. Curr, who made an extensive study of primitive Australians, discovered that few aborigines were able to discern four, and the Bushmen of South Africa had no number words beyond one, two and many. Small children, like many animals less clever than the aforementioned crow, can readily distinguish one, two or three objects, but not four. One, two and three reflect the basic perceptual qualities that one's brains can process without counting. There is a rule of three in rhetoric and design and the brain has no difficulty with three dimensions. The four to eleven dimensions that savants assure us exist require a brain whose perceptual apparatus is wired a bit differently from yours and mine.

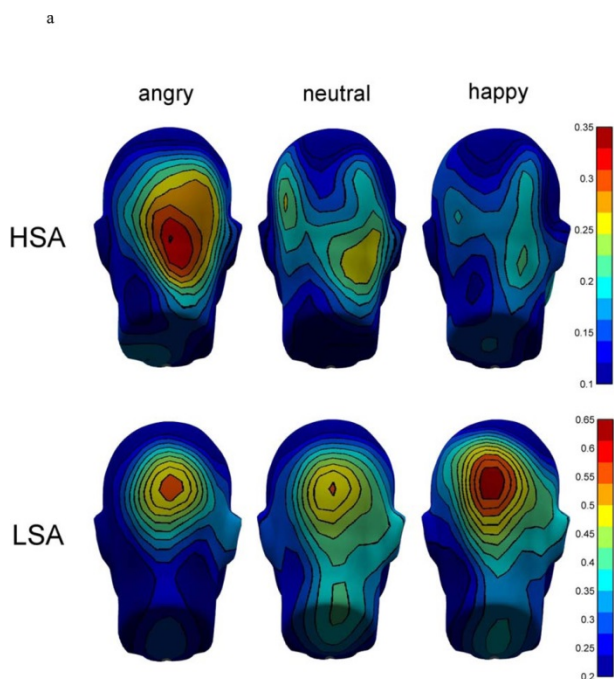
All the world languages, including the most primitive tribes, have counting words for one, two and three, but in some modern languages the word *three* is a residual of *many*, *several*, or *a lot*. (Hurford, 1987). *Troppo* in Italian means *too much* as does *trop* in French, and resemble *Tre* and *Trois*.(Ardila & Rosselli, 2002)

Numerosity is the ability to count beyond three or four, the numerical boundaries of simple perception, and it has acquired a special place in the domain of critical intelligence. When Pythagoras discovered that music was, at its root, an exercise in mathematical relationships, he was inclined to consign transcendent qualities to both: *the harmony of all creation, the music of the spheres*. I doubt that anyone is likely to assign transcendent qualities to my assertions, for example, that *The commonest mental problems associated with early sensory integration disorder are OC, social anxiety and autism*. But if I expressed the point in numerical terms, the dubious reader might be impressed. For example, *prepulse inhibition of the acoustic startle response*, which reflects abnormalities in processing and integrating sensory data.

*Post-hoc* tests revealed that OCD subjects had significantly lower percent prepulse inhibition than healthy controls at all PP intensities: 74 dB ( $t(42)=2.43$ ;  $p<0.019$ ); 78 dB ( $t(42)=2.15$ ;  $p<0.038$ ); 86 dB ( $t(42)=2.17$ ;  $p<0.036$ ). The consolidated PPI measure also demonstrated that OCD patients had significantly lower PPI than healthy controls (mean $\pm$ SEM: healthy controls=45.4 $\pm$ 4.2; OCD=30.1 $\pm$ 4.3;  $t(42)=6.48$ ;  $p<0.015$ ). (Ahmari, Risbrough, Geyer, & Simpson, 2012)

I could also show you a picture that is made from numbers. The images below represent, towards the red end of the spectrum, high electrical activity in the visual cortex of healthy undergraduates. Some were very

socially anxious and the comparison group were their classmates who weren't socially anxious at all. Looking at a picture of angry and happy faces generated different levels of electrical activity. HSA undergraduates process emotional stimuli differently from the LSA.



There are several, similar studies to this effect in the medical literature, and they reinforce my point. The relevant point, however, is how much one can do with numbers. The electrical activity in question is the height of a wave generated in the occipital cortex, averaged over 24 trials per subject per condition (angry, neutral, happy), and then averaged again among 34 HAS and LSA individuals. The averages were computed for each of 20 channels corresponding to different regions of the brain, and then converted into colors on the topographical maps that appear in the figure. (Wieser, McTeague, & Keil, 2011) Now, are you convinced?

Math is not a natural skill and as you know the development of numerical concepts requires a painstaking learning process. They are not usually found in illiterate people. Adding and subtracting numerical quantities and using computational principles begins in first–second-grade children, but kids can't manipulate the principles of multiplying and dividing until they have endured a long and painstaking training period. That many children have arithmetic disabilities is not nearly so surprising as the fact that so many don't. Numerosity is not something that comes naturally.

What does come naturally is a sense of relative quantities. See for yourself: at the next boring party you attend, ask your mate to observe a group of people chatting together. Ask her to rank them in terms of size, their height or weight. She will rank them correctly. Then ask her to guess their height, or weight, numerically. She will likely get it wrong although it may prove clumsy to establish the relevant facts.

The left and right parietal lobes participate in one's sense of oneself in space relevant to numerosity which is, at its root, an exercise in spatial reasoning. What the parietal lobes do, however, is not mathematics. They have a sense of relative quantities: which is higher, deeper, wider, longer, more massive. It is a non-verbal sense and is present in human infants and most animals. It is accurate for perceiving and estimating one, two or three objects but large numbers are beside the point. It is a system of mental magnitudes, a numerosity system that is approximate and compressed. A child can tell you which is bigger and which is biggest and a crow could, too, if he could talk. In adult humans, approximation ability is much more competent than maths.

The transition from a sense of approximate quantities to numerosity is not simply mapping the symbols of numbers onto a core parietal lobe system. It entails profound changes to cerebral networks, especially in the left hemisphere. that mediates numerosity. The ability to appreciate symbols, that is, numbers, and the ability to manipulate symbols in lawful ways are cultural acquisitions. They involve brain regions that overlap with the language areas of the left hemisphere.(Piazza & Izard, 2009)

Perceiving and understanding the relative position of continuous quantities like duration, length, area, volume, density, rate and intensity are an innate endowment. At the end of a quant's presentation, festooned with arcane symbols and inscrutable formulae, the inevitable question is, *What's the bottom line, Chao-wen?* Continuous quantities are the primitive foundation of numerical reasoning. One may count the ways, therefore, but to render the sum meaningful it has to be translated from digital to analog:

How do I love thee? Let me count the ways.  
 I love thee to the depth and breadth and height  
 My soul can reach, when feeling out of sight  
 For the ends of being and ideal grace.  
 I love thee to the level of every day's  
 Most quiet need, by sun and candle-light.  
 I love thee freely, as men strive for right.  
 I love thee purely, as they turn from praise.  
 I love thee with the passion put to use  
 In my old griefs, and with my childhood's faith.  
 I love thee with a love I seemed to lose  
 With my lost saints. I love thee with the breath,  
 Smiles, tears, of all my life; and, if God choose,  
 I shall but love thee better after death.<sup>7</sup>

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<sup>7</sup> Elizabeth Barrett Browning, Sonnet 43

Mathematical skill relies upon the discrete character of language. Solutions to exact arithmetic problems rely “on language-specific representations and . . . on a left inferior frontal circuit also used for generating associations between words.” (Dehaene, Spelke, Pinel, Stanescu, & Tsivkin, 1999) Comparative measuring, a natural function, evolved into maths, the domain of that tyrant of the analytical mind, language.

Counting is an exercise in exact measurement, beloved by vampires and OC’s, by the great detective himself and his arch-enemy, Moriarity.

His career has been an extraordinary one. He is a man of good birth and excellent education, endowed by nature with a phenomenal mathematical faculty. At the age of twenty-one he wrote a treatise upon the Binomial Theorem, which has had a European vogue. On the strength of it he won the Mathematical Chair at one of our smaller universities, and had, to all appearance, a most brilliant career before him. But the man had hereditary tendencies of the most diabolical kind... He is the Napoleon of crime, Watson. He is a genius, a philosopher, an abstract thinker.<sup>8</sup>

Having arisen, numerosity has been appropriated by the OCs for their own purposes. Counting occupies their analytical mind during its idle moments. OCs find the regularity and precision of numbers irresistible. Numbers behave predictably. They can be arranged symmetrically and even their asymmetries are rule-bound. The operations they undertake among themselves are limited in number and guarded by immutable rules, but they can be exercised in ways beyond number.

Numbers occupy the minds of the OCs but not always with clarity. *The book of Nature is written in the language of mathematics.* One can plumb the mysteries with numbers, and without numbers nothing can be known. Numerosity is the essence of rational thought but their perceived power incites superstition. Sigmund Freud dabbled in numerology and Isaac Newton was committed to it. His rainbow contained seven colors (red, orange, yellow, green, blue, indigo and violet) and in antiquity, there were seven planets, or non-fixed objects in the sky (the Sun and Moon, Mercury, Mars, Jupiter, Venus, and Saturn), which also happen to be the names of the days of the week. The Hebrew Bible is replete with direct or obscure references to the number seven.

All things that can be known have number; for it is not possible that without number anything can be either conceived or known.<sup>9</sup>

The superstition persists, and to the man or woman equipped with numerosity we still attribute the most fabulous powers of insight, analysis and prediction, often in defiance of experience and common sense. The idea, from Pythagoras and perhaps the Babylonians before him, was that numbers were reflections of the Divine, perhaps because, in all Creation, only numbers behave with regularity. Such paradoxes appeal to the OC. So does their symbolic, disembodied nature, divorced from the ambiguities of real life.

## LOVE THE OBSESSION

We can go on and on, because examples of obsessions, compulsions and magical thinking are everywhere. If my purpose were only to titillate, I would dilate upon the taboo symptoms that include religious, sexual, and aggressive obsessions, but I’m not that kind of guy. When I lecture about the problem of OC someone invariably asks, *Isn’t love an obsession?* I try to say something. Is love an obsession?, I say. Well, you can call it that, if you are so inclined.

It is true that many of the peculiar elements that we think of as quite natural to love are explicable by the psychology of obsession. Romantic love is compared to an obsession because it is an emotion that one can’t

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<sup>8</sup> The Final Problem

<sup>9</sup> Philolaos of Tarentum (ca. 475 BC)



control, can't get out of one's mind and that recurs, like a tic, at the most inauspicious times. Think of young Adam, his hands folded together in prayer, walking slowly to the Lord's supper, his eyes half closed and his mind contemplating the mystery of the Eucharist. At least it looks like his mind is contemplating the sacred mysteries, but even in a moment of deep reflection, it sometimes happens that a profane mystery intrudes, the mystery of Juliet's sweet lips and when he will taste them again.

Romantic love can also be compared to a compulsion because it is associated with repetitive behaviors, the nature of which I don't have to describe.

Yes, one can call love an obsession, romantic love at least. One can compare it to an addiction or to madness, too, if you are so inclined, or to red, red rose. One could compare it to any damn thing one wants, and in all probability someone already has.

The value of such metaphors, however, is to enlighten our understanding in a meaningful way and I'm sure *Love, the obsession* does. One could cite a scientific paper written in 1999 that reported that people who have recently fallen in love had the same abnormality in platelet serotonin uptake as patients with OCD. (Marazziti, Akiskal, Rossi, & Cassano, 1999) Nice to know, I suppose, that someone has compared love to a platelet.

Shall I compare thee to a platelet?  
My heart bleeds with love for you  
And only your nearness can stanch the flow.  
Or shall I compare thee to a megakaryocyte  
Shedding little platelets with your loving gaze?

It may be true that there are "obsessed love addicts," as Susan Peabody contends.<sup>10</sup> There are people who are obsessed with love itself, like my friend Fenton, not to mention people who are stalkers, compulsive womanizers, sex addicts and erotomaniacs. (Signer, 1991) The reason why romantic love is *not* an obsession, however, is that it is a rather pleasant experience (as per Stendhal, *Half – the most beautiful half – of life is hidden from him who has not loved passionately*) and an obsession, by definition, is an unwanted, recurring thought. One might say that Romeo is obsessed with Juliet and Juliet with Romeo, but I think it is more accurate to say that they are in love or at least that they have the hots for one another.

The only experience in romantic love that reliably qualifies as an obsession is the unwanted intrusion of thoughts of a lover who has dumped you. Unrequited lovers have been known to call their ex- repeatedly, to send him notes or little gifts, to try to intercept him or her somewhere, *just to talk*. Those are compulsions as useless as drumming one's fingers on the wall or collecting little plastic frogs. Thank heaven, most of us get over it. It's a pretty awful experience, as you probably know, but it helps us understand what the OCs experience all the time. Poor things.

## WHO IS NOT OC?

There is strong evidence that a majority of people experience unpleasant intrusions that are identical to the obsessions that occur in OCD patients. About 80% of non-OCD's experience obsessions. Normal and abnormal obsessions are similar in form and content but abnormal obsessions are more frequent, more intense, of longer duration and produce more discomfort and resistance than normal obsessions do. By the same token, there is a remarkable correspondence between normal rituals and pathological compulsions. Experts are known to misclassify abnormal obsessions and rituals as normal, which only shows what it takes to qualify as an expert. For the record, washing, cleaning, and ordering are more frequent in OCD patients and magical, protective behaviors are

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<sup>10</sup> *Addiction to Love: Overcoming Obsession and Dependency in Relationships* By Susan Peabody RANDOM HOUSE, 2005

more common among the so-called normals, the ones Bacamarte hasn't yet committed. (Muris, Merckelbach, & Clavan, 1997)

Who is OC, then?

- *Everyone with OCD.* The old lady who lived at Mt Sinai hospital; Adrian Monk; Mohammed Al-Aziz; Mlle F; Samatha Brown; Brittany.
- *Everyone with the obsessive-compulsive personality disorder.* Melvin Udall; Hannibal Lecter; Captain Ahab; the Mekon, Blofeld, LeMaire and Rastapopoulos; Ivan and Dr Gilbert.
- *People with OC traits.* Jack, who answers every question with an untrue response; Nora and her father; the graduate student who thought he wasn't very smart and the medical student who had a tremor; Hercule Poirot, Miss Marple, Judge Dee, Adam Dalgliesh and Lord Peter Wimsey; Colin; Hitler, Stalin and Mao; Freud and Darwin; the campaign manager; A, B, C and D; fussy men and women.
- *The Aspergerites.* Sherlock Holmes, Newton, Einstein, Tesla, Henry Cavendish, Paul Dirac, the Curies, *mère, père et jeune fille.*
- *Not enough data to fit them into a category but OC to be sure.* The famous pop singer and the IT guy who thinks that living forever is within one's grasp; Batman; Hamlet; Kathy and Roy and their relatives; my hair-dresser's husband; Gordon Allport; Iago and Satan; Dostoyevsky; Ludwig Wittgenstein; fellows who turn off all the lights that don't have someone reading immediately beneath; the Banana-man and Superfan; Carolus Linnaeus; Bacamarte; Mithridates VI; Bill Haast; Chanakya.
- *I left these out:* People who are intense or up-tight. People who wear things on their belt. Men who wear suspenders *and* a belt. Most of the people who read books about brain and behavior. Virtually everyone who *writes* books about brain and behavior.

That should cover four fifths of the population of Itaguaí. BTW, the reader wonders, who is *not* OC?

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The psychiatrist, the man of science, is for once at a loss for words. The reader, in sympathy for the old man, changes the subject. *Tell me, Doctor. How do you know if someone is OC?*

He brightens.