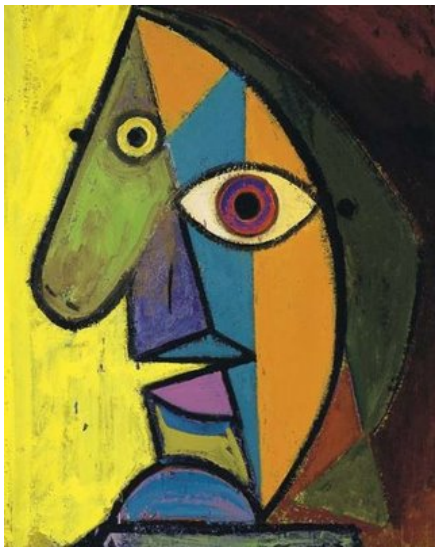
4. Is OC a Personality Trait?

One must always return to the victim. For their personality, their nature, it, it is the key.[1]



A trait is a stable, definable characteristic. Ideally, it is measurable. A person's height is a trait. His weight is not; it's measurable but it's not stable. The color of one's eyes and hair and the size of one's nose are physical traits. The resilience of one's joints, the stability of one's pulse and blood pressure and the reactivity of one's GI system are also physical traits. They are also known as somatic or visceral traits. People have social and emotional traits and different ways of thinking, which are cognitive traits. The way one's physical, social, emotional and cognitive traits come together results in what we call *personality*.

The word *trait* conveys *drawing forth* or *pulling* an element from the whole and making it knowable. Hence, one *draws* a portrait. Trait and portrait are from the Latin word *tractus*, whence also *tractor*.

When one draws a portrait, the goal is to draw forth the salient traits of a person to produce a coherent image. The choice of which traits to draw and how to assemble them, however, is not a neutral act because it depends on the perspective and intentions of the person doing the drawing-forth. The drawing-forth may result in something satisfactory to one's analytic-theoretic mind. It's meaning, however, may be obscure, as in the portrait on the right. This has been the perennial problem of psychology, which has always been about pulling forth elements of the human mind using many different kinds of tractors.

OC and SA are not traits, but two elements that I have been drawn to during my work in the clinic and my experiences in the world. OC is an assembly of different traits that have something in common, one's propensity to *disproportionate mental exertions.* SA is also a collection of traits that arise in individuals who are overly sensitive and that lead to a life-pattern of *avoidance*. That OC and SA occur together so often in the same individuals may be meaningful or just an accident that reflects how common they both are.

WHAT IS A TRAIT?

Psychologists have determined that the English language contains 17,193 adjectives which describe the qualities human beings possess. Having collected data from women and men in all the corners of Earth and applying the most clever statistical manipulations, they have reduced the number of relevant adjectives to ten, which, in an uncharacteristic burst of colloquialism they call the Big Five:

Conscientious, as opposed to careless.
Agreeable, as opposed to surly.
Neurotic, as opposed to secure.
Open to experience, as opposed to narrow-minded.
Extraverted, as opposed to introverted.

The Big Five are the five dimensions of personality, five continua or spectra. They describe the basic traits from which every personality is constructed. All of us fall somewhere in between the two poles of each dimension

[1] Agatha Christie, Halowe'en Party

and some of us are at the tips. The traits on each dimension are subject to shadings or gradations, and the combinations and permutations among the five dimensions are virtually infinite. That is about right. Individuals are different, you may have noticed, one from another, and some of us are more different than others.

Having drawn forth five dimensions of the human personality with mathematical precision, psychologists established that traits are definable and measurable. Their next challenge was to establish that they were stable and then, more important, that they are meaningful. If the Big Five are meaningful, they should relate to important events in a person's life, like where he or she came from, whether they will change, how happy they will be, whether they will get sick and, if so, whether they will recover. To that end psychologists set about looking for associations between personality traits and genetic, neurobiological, medical and social events. Are the Big Five stable, meaningful or even useful? The results have been mixed. Personality theory rose to the challenge of external validation and then stumbled.

STABILITY

Personality traits are said to be stable. Psychologists differ, however, on the point at which they become fixed. The psycho-analytically-inclined aver that it occurs by age 3 and William James claimed that personality was "set like plaster" at age 30.(Costa & McCrae, 1994) Be that as it may, the case for stability has probably been overstated. Although personality traits are mostly stable -- most people have similar personality traits when they are young, middle-aged and old -- they aren't fixed or immutable. Data have been accumulating that show that personality traits are prone to change, in some individuals, at least.(Small, Hertzog, Hultsch, Dixon, & Victoria Longitudinal Study, 2003) (Rantanen, Metsäpelto, Feldt, Pulkkinen, & Kokko, 2007) (Allemand, Zimprich, & Martin, 2008) (Bleidorn, Kandler, Riemann, Spinath, & Angleitner, 2009) As my grandmother used to say, *People change or they don't.*

If our traits do happen to change, research indicates that they do so in a predictable way. The definitive study in 2003 studied personality traits in no fewer than 132,515 adults from age 21 to 60; a sample that was at least a hundred times bigger than most of the studies done in this field. The results were interesting: conscientiousness improves as people get older and so does agreeableness, although people tend to get a bit grumpy after age 50, probably because their hair has started to fall out and their joints have begun to hurt. Openness to experience tends to decline slightly as people age, which may not be such a good thing but is understandable. Neuroticism gets better in women but not in men, a factoid that might inform your decision about the appropriate action step if you have (a) a neurotic wife or (b) a neurotic husband. Extraversion goes down a little as women age but extraverted men are as annoying at age 60 as they are at age 20.(Srivastava, John, Gosling, & Potter, 2003)

On a practical level, when personality dimensions are studied with something that really matters, like marital satisfaction, we find that partners with similar personality traits have higher levels of marital satisfaction and lower levels of conflict, at least in young couples. After people have been married for a while, however, "greater overall personality similarity predicted more negative slopes in marital satisfaction trajectories." In other words, the more similar people are, the more they come to hate each other. Hell is other people, especially if they are just like you.(Gaunt, 2006)

Conscientiousness and extraversion predict marital dissatisfaction in middle-aged people. The idea is that conscientious people get more rigid as they get older. Two people who are used to doing things in their own way may run into conflict during their golden years, for example, when they are both stuck at home together. Conscientious people tend to get on each other's' nerves. One loads the dishwasher in a manner that is discordant with her mate's dishwasher-loading preferences.

Extraverted couples have higher marital satisfaction when they are young. If, however, one partner is extraverted and the other is not, divorce is more likely. One presumes that the extraverted partner is out having too much fun.(Shiota & Levenson, 2007) (O'Rourke, Claxton, Chou, Smith, & Hadjistavropoulos, 2011)

Neuroticism and agreeableness are consistently related to the quality of a marriage, albeit in opposite directions.(Cundiff, Smith, & Frandsen, 2012) Neuroticism measured at the beginning of a relationship is a strong predictor of future marital discord although if you wait a bit your wife is likely to calm down.

Personality traits are kind of stable, then, more or less. The next question is, are they *meaningful*?

BRAIN ARCHITECTURE

Are personality traits related to brain architecture? The trait of openness, for example, is said to occupy the right inferior parietal lobule "which is known to be related to intellect, intellectual curiosity and creativity."(Taki et al., 2013) Extraversion is related to the volume of the medial orbitofrontal cortex, a brain region involved in processing reward information and is also part of the "social brain." Neuroticism is linked to brain regions associated with threat, punishment, and negative mood. Conscientiousness is associated with the lateral prefrontal cortex, a region involved in planning and the voluntary control of behavior. Agreeableness is said to be associated with regions that process information about the intentions and mental states of other individuals, a result that makes little sense to me. If one really knew the intentions and mental states of other individuals, it would likely make one disagreeable or frightened, even; but it makes for a good story.(DeYoung et al., 2010) (Wright, Feczko, Dickerson, & Williams, 2007) The fact that more comprehensive studies show little if any association between personality traits and brain structures or different patterns from those described should not discourage one from appreciating a nice theory.(Liu et al., 2013) (Bjørnebekk et al., 2013)

HEATH & DISEASE

Are personality traits related to health and disease? You've probably heard that they are. You may know that in any given year pessimists are twice as likely to die and four times more likely to die of heart disease.[2] You've certainly heard of "Type A" personalities, who are driven, impatient and hostile, and are prone to heart attack. "Type B" personalities are calm, patient and easygoing, and they aren't.

Type A & Type B personalities have proven to be the cardiovascular equivalent of an urban myth. When the relevant data were re-examined, and appropriate controls were made for other risk factors, the association between personality type and heart disease was not nearly so strong. When studies cast serious doubt on the salience of Type A, investigators looked at its component traits, competitive ambition, time urgency, and hostility. Again, the connection with increased risk was not consistently demonstrated.[3] [4] More recently, neuroticism and depression have been called forth as risk factors for cardiovascular morbidity, or death in general. In subsequent studies the results have been inconsistent and less than compelling.[5] [6] [7] When researchers introduce controls for levels of social and cognitive activity, the mortality differences between "extraverts" and "neurotics" virtually disappear. [8]

This pattern recurred with pitiless regularity after researchers announced that neuroticism, but not extraversion, was associated with cancer death.[9] When the appropriate adjustments were made, however, there proved to be no association at all between personality traits and the risk of cancer or cancer death.[10] [11] 3 [12]

---

[2] Arch Gen Psychiatry. 2004 Nov;61(11):1126-35. Dispositional optimism and all-cause and cardiovascular mortality in a prospective cohort of elderly dutch men and women. Giltay EJ, Geleijnse JM, Zitman FG, Hoekstra T, Schouten EG.

[3] BMJ. 2006 Jun 10;332(7554):1359. Personality, lifestyle, and risk of cardiovascular disease and cancer: follow-up of population based cohort. Stürmer T, Hasselbach P, Amelang M

[4] Psychosom Med. 2005 Sep-Oct;67(5):724-33 Domain and facet personality predictors of all-cause mortality among Medicare patients aged 65 to 100. Weiss A, Costa PT Jr

[5] Psychosom Med. 2007 Dec;69(9):923-31. Neuroticism, extraversion, and mortality in the UK Health and Lifestyle Survey: a 21-year prospective cohort study. Shipley BA, Weiss A, Der G, Taylor MD, Deary IJ

[6] Psychosom Med. 2005 Sep-Oct;67(5):724-33 Domain and facet personality predictors of all-cause mortality among Medicare patients aged 65 to 100. Weiss A, Costa PT Jr.

[7] Eur Heart J. 2003 Nov;24(22):2027-37. Depression and cardiovascular morbidity and mortality: cause or consequence? Stewart RA, North FM, West TM, Sharples KJ, Simes RJ, Colquhoun DM, White HD, Tonkin AM; Long-Term Intervention With Pravastatin in Ischaemic Disease (LIPID) Study Investigators

8 Psychosomatic Medicine 67:841-845 (2005) Neuroticism, Extraversion, and Mortality in a Defined Population of Older Persons Robert S. Wilson, PhD, Kristin R. Krueger, PhD, Liping Gu, MS, Julia L. Bienias, ScD, Carlos F. Mendes de Leon, PhD and Denis A. Evans, MD

9 Br J Cancer. 2006 Jul 17;95(2):146-52. Personality traits and cancer survival: a Danish cohort study. Nakaya N, Hansen PE, Schapiro IR, Eplov LF, Saito-Nakaya K, Uchitomi Y, Johansen C

10 J Natl Cancer Inst. 2003 Jun 4;95(11):799-805. Personality and the risk of cancer. Nakaya N, Tsubono Y, Hosokawa T, Nishino Y, Ohkubo T, Hozawa A, Shibuya D, Fukudo S, Fukao A, Tsuji I, Hisamichi S

11 Br J Cancer. 2005 Jun 6;92(11):2089-94. Personality and cancer survival: the Miyagi cohort study. Nakaya N, Tsubono Y, Nishino Y, Hosokawa T, Fukudo S, Shibuya D, Akizuki N, Yoshikawa E, Kobayakawa M, Fujimori M, Saito-Nakaya K, Uchitomi Y, Tsuji I

12 Am J Epidemiol. 2001 Apr 15;153(8):757-63. Extroversion and neuroticism and the associated risk of cancer: A Danish cohort study. Schapiro IR, Ross-Petersen L, Saelan H, Garde K, Olsen JH, Johansen C

The only one of the five personality factors that is protective in medical studies is **conscientiousness**.[13] Some of the best data in this regard are from a longitudinal study of 1,253 male and female Californians over 7 decades, begun in 1921 by the American psychologist, Lewis Terman. Terman, who was at Stanford, selected the children on the basis of high intelligence. (It is said that Richard M Nixon was one of the schoolchildren selected for this study. The work was published as Genetic Studies of Genius, in 5 volumes.) One of the results of the study is that conscientiousness, measured independently in childhood and adulthood, predicts mortality risk across the full life span.13 Consider this staggering fact for a moment. There is an element of personality, apparent during childhood, which has a bearing on the future health of the individual.

Conscientiousness refers to an individual's tendency to control impulses and to be goal directed. This trait has also been referred to as will, work, and dependability, and includes the traits of competence, order, social responsibility, achievement, striving, self-discipline and deliberation. That such traits are good for you is not surprising, since they are known to be positively related to health-promoting behaviors and negatively related to health-harming behaviors.[14] That is not all there is to it, though. The Terman study found that the protective effect of conscientiousness was not primarily due to accident avoidance and could not be explained by abstinence from unhealthy substances.[15]

Conscientiousness has also been related to a reduced risk of developing Alzheimer's disease, even after all the risk factors for AD are taken into account. Conscientious individuals are not protected simply because they have fewer cardiovascular risk behaviors or lifestyle activity patterns that predispose to AD. Nor is the effect mediated by intelligence or education, although individuals with high conscientiousness do tend to have better academic and occupational performance. Even when cognitive ability is controlled, conscientiousness emerges as a protective factor.[16]

One could say that OC is an exaggerated expression of conscientiousness (work, dependability, competence, order, social responsibility, achievement, striving, self-discipline and deliberation). What makes an OC individual into an OCD patient, therefore, might be high conscientiousness coupled with high neuroticism. What makes an OC into an OCPDO might be high conscientiousness and low agreeableness. Both characters would be low in openness to experience and extraversion.

Too much of a good thing is usually a bad thing, however, so it is interesting to consider what happens to people who have an excess of conscientiousness, the **perfectionists**. In a study of middle-aged subjects exposed to an experimental stress test, the trait of perfectionism led to increased activation of certain noxious neurotransmitters, even more than anxiety or neuroticism did.[17] A number of chronic diseases have been linked to perfectionism: chronic fatigue syndrome[18], Irritable bowel syndrome[19], eating disorders[20], chronic urticaria[21] and even Parkinson's disease.[22] Perfectionism is associated with stress intolerance, maladaptive coping, and burnout[23], while

---

13 Health Psychol. 2007 Jul;26(4):428-36. Personality and mortality risk across the life span: the importance of conscientiousness as a biopsychosocial attribute. Martin LR, Friedman HS, Schwartz JE.

14 Psychosom Med. 2005 Sep-Oct;67(5):724-33 Domain and facet personality predictors of all-cause mortality among Medicare patients aged 65 to 100. Weiss A, Costa PT Jr.

15 J Pers Soc Psychol. 1995 Apr;68(4):696-703. Childhood conscientiousness and longevity: health behaviors and cause of death. Friedman HS, Tucker JS, Schwartz JE, Martin LR, Tomlinson-Keasey C, Wingard DL, Criqui MH.

16 Health Psychol. 2007 Jul;26(4):428-36. Personality and mortality risk across the life span: the importance of conscientiousness as a biopsychosocial attribute. Martin LR, Friedman HS, Schwartz JE.

17 Psychosom Med. 2007 Apr;69(3):249-55. Perfectionism and the cortisol response to psychosocial stress in men. Wirtz PH, Elsenbruch S, Emini L, Rüdisüli K, Groessbauer S, Ehlert U

18 Clin Psychol Rev. 2007 Dec;27(8):885-903. Personality and chronic fatigue syndrome: methodological and conceptual issues. van Geelen SM, Sinnema G, Hermans HJ, Kuis W

19 Postgrad Med. 1980 Oct;68(4):60-2, 64. Lower bowel disorders. 1. Irritable bowel syndrome. Davis WD

20 Clin Psychol Rev. 2007 Apr;27(3):384-405. Perfectionism and eating disorders: current status and future directions. Bardone-Cone AM, Wonderlich SA, Frost RO, Bulik CM, Mitchell JE, Uppala S, Simonich H

21 J Dermatol. 2006 Nov;33(11):765-71. Psychological status of patients with chronic urticaria. Pasaoglu G, Bavbek S, Tugcu H, Abadoglu O, Misirligil Z

22 Parkinsonism Relat Disord. 2000 Oct 1;6(4):205-214. From Wilhelm von Humboldt to Hitler-are prominent people more prone to have Parkinson's disease? Horowski R, Horowski L, Calne SM, Calne DB.

conscientiousness is related to a higher level of resilience and greater reliance on task-oriented coping. In occupational psychology, where burnout and stress are important problems, conscientiousness is usually predictive of better stress tolerance but perfectionism has the opposite effect.[24] [25] [26]

GENETIC BASIS

If personality traits are biologically meaningful, they should have a genetic basis. They are, in fact, heritable. The **heritability coefficient** is a measure the genetic contribution to a particular trait, and in ranges from 0.0 (no relation) to 1.0 (perfect correlation). The Big Five have a heritability coefficient around 0.5, the same as IQ.(Bouchard & McGue, 2003) (Jang, Livesley, & Vernon, 1996) A heritability coefficient of 0.5 means that 50% of the variance in the trait in question is attributable to genes. The other 50%, of course, must come from someplace else. Think of it this way: if one flips a coin, there is a 50% likelihood that it will come up heads. Therefore, the heritability of personality traits can be likened to flipping a coin. In genetics, however, 50% is an impressive result.[27]

Genetical psychologists have discovered certain genes that are statistically related to traits, but they aren't any of the Big Five traits. For example, there are two genes, DRD2 and DRD4 that affect the structure and sensitivity of the dopamine receptor. Dopamine is one of the governing neurotransmitters in brain, and is often cited in pop-brain books as one that you need more of, or less, depending on the point the author is trying to make. DRD2 is a gene that is associated with a weakness for drink. It has behavioral manifestations long before alcoholism is apparent, like novelty-seeking and impetuosity.(Fowler, Settle, & Christakis, 2011)

Another dopamine receptor gene, DRD4, is said to be associated with sexual behavior. A particular variant of the gene (an **allele**) is associated with the age at which a person first has sexual intercourse and the number of sexual partners someone has during the course of a lifetime.

DRD4 has three common alleles, D4.2, D4.4 and D 4.7. The D4.4 allele is the most common, especially among Asians, and it is said to be associated with altruistic and prosocial behavior. The D4.7 allele is not very common, although Europeans have more than Asians do, and American Indians have the most of anyone. D4.7 people also have fewer dopamine receptors and they must be a bit reward-deficient because they are also prone to sensation seeking behavior. Not, however, in the directions of drug addiction or compulsive behavior, but other forms of "novelty-seeking." These include aggression, financial risk-taking and disinhibited sexual behavior. The D4.7 allele is also found more frequently in populations who have been migratory, like the American Indians, and also in people with mixed racial ancestry. This, to geneticists, indicates a measure of adventuresomeness, referred to in genetic quarters as "penile readiness," clearly a useful trait for someone to have if he moves around a lot.(Zion et al., 2006) (Garcia et al., 2010) (Cherkas, Oelsner, Mak, Valdes, & Spector, 2004)(Guo & Tong, 2006) One might conceptualize penile readiness as an element of extraversion, openness to experience or agreeableness, depending on her point of view.

A THEORY THAT ACCOUNTS FOR EVERYTHING EXPLAINS NOTHING

Personality traits are heritable, but only about 50% heritable. They are stable but they also change. They relate to specific parts of the brain if one has a creative imagination and to marital satisfaction and/or dissatisfaction. They may or may not be associated with disease and mortality.

Having demonstrated relevance or the absence thereof to so many important associations, it is reasonable to inquire after OC, which is not only meaningful, but something that 30% of normal people carry about. The proportion is probably higher among people who read books about OC. Not to worry, reader, because OC traits may not be so bad at all. They can be the drivers of great achievement. The great savants like Einstein and Newton had OC traits. OC traits are associated with high intelligence and deep thought, with undivided concentration and single-

---

23 Anxiety Stress Coping. 2008 Jan;21(1):37-53. Perfectionism in school teachers: relations with stress appraisals, coping styles, and burnout. Stoeber J, Rennert D

24 Med Educ. 2007 Aug;41(8):781-7. Personality traits and types predict medical school stress: a six-year longitudinal and nationwide study. Tyssen R, Dolatowski FC, Røvik JO, Thorkildsen RF, Ekeberg O, Hem E, Gude T, Grønvold NT, Vaglum P

25 J Occup Health Psychol. 2007 Jan;12(1):20-33. Personality and the occupational stressor-strain relationship: the role of the Big Five. Grant S, Langan-Fox J

26 J Occup Health Psychol. 2006 Jul;11(3):281-9. The interactive effects of positive affect and conscientiousness on strain. Zellars KL, Perrewé PL, Hochwarter WA, Anderson KS

27 And for good reason. Your author is playing fast and loose with "variance."

minded pursuit of worthy goals. That is why we find them credibly attached to great writers, scientists and clever detectives. OC traits are also associated with highly desirable personality characteristics, like conscientiousness, loyalty, perseverance, self-sacrifice, endurance, honesty, and fidelity; and also with the highest goal of spiritual exercise and industrial engineering alike, continuous quality improvement. From brain science and also simple observation, we know that OC traits are characteristics of the analytical mind and contribute to what makes it effective.

Individuals with OC traits tend to have high moral standards, although they can be moralistic sometimes. However, OC traits also occur in the monsters we know: fanatics of every stripe, serial killers, pedophiles and sexual predators. The mass murderers of the 20th century, Hitler, Stalin and Mao, were controlling men.

Is it possible that so many human events, felicitous and infelicitous alike, are explicable in terms of OC? Not only all the good traits listed above, but also alcoholism, addiction, eating disorders, outbursts of rage, excessive neatness, mass murder, uncontrollable teasing, vulnerability to suggestion, all-consuming hobbies and a controlling disposition? Or going back a chapter, procrastination leading to paralysis of action, intellectualizing, vacillation and ambivalence, cannibalism, homophobia and misogyny, a preoccupation with certain numbers, a fussy nature, fear of ladybugs and a monomania for whales? Such a trait, poised to explain everything may only account for nothing in the end.

IS OC A PERSONALITY TRAIT?

Psychology no longer concerns itself with personality "types," which are static and stereotypical, but rather with traits. Considering traits rather than types describes Individual differences as they really are, that is, **dimensional** rather than **categorical**. This is as true of personality traits as it is of IQ or of physical traits. The difference between dimensional and categorical is like the difference between analog and digital. Height, for example, is a dimensional trait. Some people fall into the category of "short" and others in the category of "tall," but a great deal of information is lost by describing everyone as either tall or short. Pregnancy, on the other hand, is categorical; either one is or isn't. Pregnancy is digital, although there are better ways to get that way.

A trait is a stable, definable characteristic. Yet OC traits, as I said, come and go. I think that all of our personality traits are like OC. They are stable, to a degree, but their manifestations change as we develop, mature and then grow old.

Personality traits are related to brain but not to brain "architecture." They are the expression of complex functional systems, networks of neural cells and fibers than are distributed throughout the brain. How those functional systems, or networks, or "minds" interact is stable, to a degree, but it will change with age and with our life experiences. So also does OC.

Some personality traits, like conscientiousness, openness and agreeableness are associated with a long and active life, as we have learned from studies of long-lived individuals like centenarians. Traits like introversion and neuroticism are not so healthy. But no trait is, by itself, good or bad. It's not a matter of what traits we were born with but what we manage to make of them. This also is true for OC.

The fact that human traits are dimensional is consistent with the current gene theory of OCD and most other mental conditions. The theory is that they are **polygenic,** not consequence of a single untoward gene but of multiple genes acting in concert. Most human traits, like height and intelligence, are the function of multiple genes or **polygenes**; a really tall person will have inherited genes for height from both parents.

The polygene theory dovetails nicely with the dimensional quality of OC. If it is an exaggeration of conscientiousness, that would explain its persistence and its prevalence; it is "potentially beneficial." A few OC genes make one conscientious, and natural selection prefers those genes over careless, easygoing genes. Thus, conscientiousness genes spread. Some individuals find themselves with a higher complement of conscientiousness genes, and they are the fussy men and women. Others have a lot more, and they are OCD. The theory might also explain why OCD occurs in different countries and cultures at more or less the same rate.(Pallanti, 2008) The theory is coherent, and if it were true, it predicts that our race will only grow more conscientious, or possibly more rigid and controlling.

I am not ready to promulgate a theory of OC, let alone predictions about the future of the race, although we shall get to both before the end. That one's personality is composed of traits and that traits are dimensional rather than categorical, are not theories but sound observations. That all of the traits that comprise all people can be reduced to Five is a theory, and too reductionistic for my taste. Such theories run the risk of confining our observations.

> Last week I saw a young man who was said to have Asperger's syndrome. In fact, he was OC and SA. I asked him, What's your favorite number?
> *Four.* I asked him, Why?
> *Because every number is a function of four.* Really? What about seven?
> *Seven is five. Five is four.*
> It took me a while to figure it out. What about twenty-three?
> *Twenty three is eleven. Eleven is six. Six is three. Three is five and five is four.*
> I said, But in French, four is quatre, which is six, but that only annoyed him.

Psychology and psychiatry are observational disciplines, but great minds have always differed in what sense they draw forth from their observations. Hippocrates and Galen, for example, thought that human traits could be reduced to four, the **humors**. The balance of these four humors—blood (*sanguis*), phlegm, bile (*choler*), and black bile (*melancholer*)—determined one's **temperament**: sanguine, phlegmatic, choleric, or melancholic, respectively. It was Galen who introduced a method that is still current, to discover how temperament determined vulnerability to illness. Humoral imbalance led to physical or mental illness. Balance—and thus health— could be restored by techniques like bleeding and purging.

Hippocrates and Galen approached the matter intuitively – it made sense because people do have different temperaments and four is a convenient number. Sanguine individuals are lively and optimistic; phlegmatics, thoughtful, unemotional and calm; cholerics, extraverted, passionate and impulsive; and melancholics, introverted, cautious and prone to low moods. Neither Hippocrates nor Galen dealt with OCs, but theoretically they are in the phlegmatic/melancholic dimensions. The humors had a basis in theory but it wasn't a very good one, by modern standards at least.

The clever statistical method psychologists employed when they came up with the Big Five is called **factor analysis**. The goal is to see what general trends or "factors" arise from the a large accumulation of data, for examples, adjectives that people choose to describe their own personalities. Factor analysis allows the statistician to "rotate" the correlated matrices until the likeliest factors emerge. Rotating the results allows for a good deal of flexibility, so it's not necessarily a neutral act. It depends on the perspective and intentions of the person doing the drawing-forth. The method has led different psychologists to propose that there are two general personality traits, three, five, seven, fourteen or sixteen. Modern psychologists seem to be content, insofar as they ever are, with just five although my patient would point out that, in English at least, they all reduce to four.

I don't know how many OC traits there are, although I shall describe the ones that are interesting, at least to a physician. Nor can I say how many traits people really have, although the number probably varies. There was a girl I knew when I was a college student in New York. She had way more than five traits and most were manifest during the course of an evening. Then there was a guy I bumped into in a bar in New Mexico who had just two: he was big and mean. I wouldn't be here now if I hadn't got away from them both.

OC traits are what I've listed as the soft signs of OC in chapter 2. They are also the symptoms of OCD that are listed in the Y-BOCS, and all of the cute, silly, potentially beneficial or disagreeable habits of the characters in this book.

OC is not a trait but what psychiatrists call an **endophenotype** and psychologists a **latent underlying variable**. You will excuse me if I don't use those terms again. They mean that OC is something about the mind, how it is organized and connected, that predisposes to OC traits. What that is I don't know, but it probably has something to do with disproportionate mental exertions.

By the same token, SA is not a trait but something about the mind that predisposes individuals to social anxiety and avoidant behavior. What that is I don't know either, but it, too, is probably a consequence of connectivity

in the brain. Both OC and SA, however, are at the root of many of the problems we make for ourselves. At least that is my observation.

We shall resolve, therefore, to remain atheoretical. Like Holmes we should be astute observers of the human condition but not theoreticians. It is, therefore, my *observation* that our introductory cast of characters have something in common. My *intuition* is to call it OC because it resembles the signs and symptoms of OCD and the OCPDO. It is also my observation as well as that of neuroscientists that the analytical mind participates to an unwholesome degree in the activities of an OC mind. I have observed, as other psychiatrists have, that the traits of OC and SA often co-occur. It is my observation that OC traits are very common, not only in patients but also in their families and in everybody else, too. If you don't believe me, you can play this interesting game. During an idle moment, ask someone if she or anyone in her family has an odd quirk or an idiosyncrasy. This is what my wife's hairdresser told me last week: her husband, after a shower, dries himself with the hair-blower.

Ah yes, the old hair-blower ploy. A trivial quirk, of course. But he is fixed on it, an invariant pattern, and if there isn't a hair-blower available, he doesn't shower. He may be a nice enough fellow, but one must agree that he has a thing about towels. Or hair-blowers, maybe. *Our method will be founded upon the observation of such trifles*.[28]

We are not quite ready to promulgate a theory of OC, let alone predictions about the future of the race, although we may get to both before the end. *It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts*.[29]

[28] The Bascombe Valley Mystery
[29] A scandal in Bohemia