

### WE ARE ALL ANDROIDS???

Are we all really androids? Were we intelligently designed with readable bar codes in our biometric patterns? Then what are hand readers, iridologists, face readers, and now neurologists, computer hardware and software experts and DNA researchers proving?

Recently, a youthful middle age lady came to me for a hand reading. I had never met her or seen her before. Out of curiosity, I asked her if she had played soccer and she said yes. I then looked at her hands and said: "You were a striker." She said yes. There are eleven players on a soccer team. I said: "You played center forward." She again said yes as her eyes widened. I then said: "But you were never team captain." And she replied: "I never wanted to be team captain." I only looked at three fingerprints. I had never spoken to anyone about her before. I have been doing this for over forty years, throughout the United States, Western Canada, and in Europe and Asia.

Some behavioral biometric examples have been recognized as legitimate examples of psychological expressions for ages; the smile, laugh in many forms, hand gestures, like waves, clinched fists and more recently the middle finger. Our finger, palm and plantar dermatoglyphic prints provide more of our permanent behavioral correspondence codes.

I am promoting comprehensive proof of concept studies to confirm this. I believe such studies will confirm many of the observations in the field. Thus Behavioral Biometrics will be opened to really serious and very necessary western academic study as well as further medical, psychological, security, human resources, educational and commercial research and uses and even in the application of the law.

Many behavioral patterns related to dermatoglyphic biological patterns appear to be hardwired into each individual from before birth and last for life or as long as they can be expressed. Studies of the human body and behavioral correspondences have a history from the distant past in Vedic literature and Chinese traditions as well as western studies from the renaissance, studies in middle ages and later in continental European universities.

While this article concerns more of the relations of behavior to the features of the hands, other parts of the body have been studied for behavioral correspondences. Examples may be found in the eye's iris in the work of Denny Ray Johnson "What the Eye Reveals" (1997),<sup>[1]</sup> the facial correspondences found in works like that of Naomi Tickle: "You Can Read a Face Like a Book" (2003)<sup>[2]</sup> and even the shapes of the lips as pioneered by Jilly Eddy<sup>3</sup>

This paper relates to a branch of human biometrics, dermatoglyphics. Dermatoglyphics refers to the skin patterns of the dermal ridges in the palmar and plantar surfaces of the hands and feet. The basic patterns are completed in the womb by the end of the second trimester.<sup>[4]</sup> They exist for life, absent trauma and weakening in the case of health influences and certain drug reactions.<sup>[5]</sup> Such behavioral studies, in the west, date back to the 1930s and the work of Noel Jaquin, beginning with "The Hand of Man."<sup>[6]</sup> A more comprehensive list of references to area

studies can be seen in my web page “History of Dermatoglyphics, Palmistry & Character Identity [7] (1996); in Chapter 1, “Where We Are and How We Got There.” of my book “The Encyclopedia of Palmistry” (1996)[8] and in “Fingerprints and Behavior” (2012).[9] Other early pioneers in hand analysis who studied dermatoglyphics included Beryl B. Hutchinson, (1967),[10] Fred Gettings (1974)[11] and Bevy C. Jaegers (1974).[12]

The term dermatoglyphics was first used in 1926 by Harold Cummins at the annual meeting of the American Association of Anatomists. Dr. Cummins, a some time professor of Microscopic Anatomy at Tulane University, in collaboration with Charles Midlo, M.D., published their pioneering work in 1943: “Finger Prints, Palms and Soles. an Introduction to Dermatoglyphics.”[13] Early academic psychological study of the dermatoglyphic relations to behavior was mentioned by Charlote Wolff in 1951.[14]

Serious prior statistical studies of the relationship of the fingerprints to behavior can be traced back to the Chinese published work of Professor Ziwan Shao (1989) in her studies of the prints of Olympian and world class athletes compared to ordinary sports participants.[15] She found a statistical distinction in ordinary people’s fingerprints to those of world class and Olympian athletes. The latter had higher incidences of composite prints. Unfortunately she had no background in studying hand analysis and thus did not report which fingers were involved. Athletic studies were more recently published in 2018 in Brazil.[16]

Another study was reported to me in 2010 as being published in Russian and performed by Lt. Col., Retired, Oleg Avdeychik of the Soviet police, He wrote to me that he studied the fingerprints and criminal records of 60,000 criminals including 1,400 convicted murderers and found a higher incidence of whorl patterns on the second (index) third (middle) and fifth (little) fingers than might statistically be expected. Unfortunately, he did not share with me the type of murders involved with each of those related print patterns.[17]

Behavioral hand biometrics, so far, have identified each finger and print with different behavioral correspondences. In 2012, I was able to identify at least 28 hand analyst authors who were making some correspondences of behavior to dermatoglyphic details.[18] That should amount to at least one hundred thousand to half a million examinations and interviews by keen eyed observers. Even different finger and hand morphologies can affect these correspondences. I have determined there is a difference in which hand the patterns are formed; left dealing more with family and more personal matters while right seems to concern more generally the world, such as general survival traits at work or in school. Others mentioned above have found similar traits.

Understanding these distinctions could help in the design and practical application of such social engineering as now planned by Neuralink through implanted of future brain chips, now on the commercial planning stage.[19]

The idea of implants to affect life is not new, as witnessed pacemakers and very recently the success of DC digital implants designed by scientists led by Jinbo Huang, a molecular biologist at ETH Zürich, to switch on the exact genes involved in regulating doses of insulin.[20]

Many of the differences we see provide strong evidence that individual brains and typical behavioral traits are quite distinct from birth, but in ways not currently understood or identified in the brain structure.

In Behavioral Biometrics authentication programs, we find unique individual physical identity correspondences through the prints, and other dermatoglyphics of the palms and soles and through other means.<sup>[21]</sup> There we also examine examples including keystroke rhythm, gait, voice recognition, morphology, skin tone, and reflexes, at least of the hands, all which clearly indicate psychological correspondences.<sup>[22]</sup> We find common behavioral comparisons based upon distinct physical patterns. As we will examine these now accepted patterns in modern AI, security and financial software we may come to note we are observing other psychological pattern correspondences. The future of psychological Behavioral Biometrics is upon us.

In the east, one might presume that the Chinese, with their strong interest in facial recognition, and profiling persons of interest, will move to integrate such behavioral work as that of Naomi Tickle<sup>[23]</sup> with the recent discoveries of facial feature reconstruction through clues in dna.<sup>[24]</sup> Even constantly shifting brain patterns are now being recorded that “demonstrate the viability of non-invasive language brain–computer interfaces.”<sup>[25]</sup> Non invasive mind reading is upon us. Here are forms of biometric profiling, a field that I have been suggesting for many years with relation to features of the hands. Besides forensic profiling, one can use the results in human resource applications, and psychological counseling.

My experience supports that print correspondences are common in all races, sexes and ethnic groups. I do not believe that their use in such fields should be barred by current racial, ethnic or genetic discrimination laws because of their wide comparative dispersion over all such groups.

We do not say that our conclusions rule out any cultural, environmental or other unrelated influences affecting individual behavioral patterns. We cannot say that every individual may not be born or develop individual psychological tendencies totally unrelated to these naturing influences. However, these will go far in influencing the progress of nurturing influences as well as possibly raising their own unrelated individual expressions, such as competitor, team player, or loner, and broad or detailed attention oriented individuals. If we include morphology and flexibility, attention spans, reaction times, co-dependency and risk-taking or avoidance may be included.

In the early 2000's I received a call from a young lady in Southern California who wanted to use my web page on the history of dermatoglyphics<sup>[26]</sup> for some of her studies. On asking her why, she told me she was studying with Mary Lai<sup>[27]</sup> in Taiwan on educational assessments of children. She explained that Ms. Lai had owned a large kindergarten in Taipei, and had become totally dissatisfied with current educational theories and was pursuing and teaching new methods based upon her knowledge of child development. She was approaching this as an educator using studies in hand and foot dermatoglyphics. She claimed Ms. Lai could avoid problems related to slow learning if she could see the child at or before the age of two. She could tell the parent that this child would learn to read at four while that child would not learn to read until seven, for

example. Thus she could relieve parental worries over their child's development.

As a recovering reading dyslexic whose early intelligence had been questioned, my ears perked up. I said I would love to meet her. Not long after I spoke to the young lady, I was offered an opportunity to meet with Mrs Lai while she visited Southern California. We met and exchanged ideas through a translator. Mary Lai was training her new students to perform educational assessments based upon forms of patterns in the ridge lines of hands and feet, principally palm finger prints, and plantar toe prints. Impressed at our meeting, I promised to start some international conferences on the subject.

With Mary Lai's support, and the collaboration and technical assistance of Jon Miles<sup>[28]</sup> and participation of others such as Richard Unger, we organized five over the years, two in Las Vegas (2004 and 2009), and others in Shanghai (2006), Budapest (2007), and Kuala Lumpur (2011). John formerly worked with the late, and noted, Bernard Jensen<sup>[29]</sup> and is a photo camera and color expert designing camera and lighting for iris photography. I also attended and lectured at two of Ms. Lai's conferences in Taipei (2006 - 2010), and taught a seminar there on my own behavioral studies in 2010 to advanced students and other practitioners. I also attended and lectured at other international conferences upon invitation; one in Shanghai (2006), and one at Hunan University in Kunming, China (2009).

Through these conferences I met others involved in the fields of hand and skin ridge pattern analysis, principally Wang Chinxia,<sup>[30]</sup> recognized by the PRC as the expert in hand medical diagnostics, with her own school in Kunming, China; Professor Zhang Haiguo,<sup>[31]</sup> geneticist and teacher at the Medical School of Shanghai Jiaotong University and past chairman of the Chinese Dermatoglyphic Association; Dr. Arnold Holtzman, Ph.D,<sup>[32]</sup> Israeli psychologist; and Marcus Leng,<sup>[33]</sup> entrepreneur from Malaysia now working out of Vietnam, and associated with an Indian company, CFMID, Ltd.<sup>[34]</sup> providing computerized dermatoglyphic HR and educational assessment programs, and other principals of those programs.

Today there are several organizations using Behavioral Biometrics offering various forms of educational and human resource assessments through computerized analysis of dermatoglyphics. While most choices are in Asia, there are even programs in Europe. Marianne Volonté, a Swiss financial lawyer,<sup>[35]</sup> provides a commercial human resource assessment, primarily to avoid conflicts in management of European companies and businesses through her MVMARQ ASSESSMENTTEST. In her background she has observed the advances in the field.<sup>[36]</sup> Her assessment results are computer generated as are the tests of the Indian partnership of Darpan Vyas,<sup>[37]</sup> Sundar Iyer,<sup>[38]</sup> and Marcus Leng, co-founder of the Asian Dermatoglyphics Research Center.<sup>[39]</sup> Mary Lai's work appears to be continued in Indonesia.<sup>[40]</sup> Martijn van Mensvoort has mislabeled her as a palm reader when her background is that of an educator.<sup>[41]</sup>

The field of brain - behavior is now very serious. Dr. Jag Singh, MD, PhD, expands on the current and future use of sensors, artificial intelligence and telehealth that opens futures in health care in his recent (2023) publication.<sup>[42]</sup> Well known big time investors are already on

board. Elon Musk's brain chip computer start-up, Neuralink, raised \$205 million from Google Ventures and others.[<sup>43</sup>]

But if the brain reflects the various behaviors, then such current and new enterprises as Neuralink[<sup>44</sup>] will need to consider this in their plans for mass productions of brain implant chips. Where are those behaviors imprinted? Will those chips cause the same reactions when implanted in different brains in the same spaces when behavioral dermatoglyphics might indicate different inborn or post birth fixed behavioral patterns?. Neuralink is currently advertising for about 50 employee specialties in 12 career paths from BCI Software to Surgery and Robotics.[<sup>45</sup>] This wide range of skilled personnel will have diverse engineering, scientific, and operations expertise. They will be employed along with the 300 or so currently employed, in Freemont, California and Austin, Texas. Neuralink already has some FDA authorization to conduct human tests.[<sup>46</sup>]

Recognition by some scientific authority of the potential body - mind correspondences in medicine is reflected in this 2016 excerpt from International Journal of Advanced and Integrated Medical Sciences 1(3):111-115

“The different regions of our brain are reflected by fingerprints, palm prints and foot patterns present in the 10 fingers, 10 toes, palmar and plantar surfaces respectively and these dermatoglyphics represent the various regions of brain therefore can be used in dermatoglyphics mental intelligence test (DMIT) and now a day is being used globally.”[<sup>47</sup>]

I appreciate Martijn van Mensvoort's conclusion (2010) that no such brain connection has currently been proved,[<sup>48</sup>] at least in the west, regarding IQ. But my work has to do with behavior, not intelligence. The two areas appear to have been confused. In my work, I have reviewed over 200 related texts on the subject,[<sup>49</sup>] as well as shared with leaders in the field in well over forty five years of practical experience including interviews and examinations of thousands of subjects.

I may be guilty of part of the current problem with dermatoglyphic multiple intelligence testing (DMIT) that has been subject to some fraud complaints in Asia. Early in the 2000's, in my conversations with Mary Lai, she mentioned the 1983 work of Howard Gardner on multi-intelligence[<sup>50</sup>] as a possible western theory that might be of some support for her ideas. Her ideas might be translated as multi-intelligence correspondences related to dermatoglyphics. At the time, I supported this. I now believe that we are off the mark in trying to make such a connection, at least as far as Gardner's ideas. I believe, at this time, there is no need to tie Mary Lai's work to Gardner's. This is especially so in relating IQ intelligence to particular behavior or even brain lobes. I no longer believe Mrs. Lai's work needs this support. Mrs. Lai's approach appears to have validity based upon practical experience and is worthy of further study. Also her results depend upon personal assessments by trained teachers that permit direct interaction of the trained assessor with the subject. This mitigates against the possibility of misunderstandings, denials and other negative reactions to a bare IT test, as well as charlatans selling such tests. Furthermore it is a very complicated area and we still have much to learn, just like medicine for

example.

I have met and talked with both students and teachers of Mary Lai's school, and observed the workings of her program, her dedication and have seen no signs of fraud in her work or her trained people. I base this on my experience of over 60 years as an investigator, over 50 years as a practicing lawyer including federal and state jury and non-jury litigation and appeals, sometime insurance investigator and examiner with unlimited draft authority, and my work as a palm reader.

My earliest palmistry teacher advised our class that if we wanted to learn palmistry, then we should read as many books on the subject and as many hands as we could. Very good advice. When I had practiced for over a thirty years and taught the subject for ten of those years, I wrote my second book on the subject, principally on palmar dermatoglyphics. I reviewed the writings of about 28 or more authors, comparing our experiences and findings in psychological dermatoglyphics. I would estimate that our combined knowledge at the time would include physical examinations and interviewing well over 100,000, and perhaps half a million or more, subjects.

This was my best attempt at the time (2012) in "scientific" proof of concept. I concluded there was serious validity in behavioral hand analysis. This should be quite enough to form a basis for AI development. But shall we explore our theories on a modern proof of concept study? Dr. Asim Roy, Ph.D. a Professor of Information Systems at Arizona State University,<sup>[51]</sup> and my AI technical advisor and past supporter, has suggested that we study 750 to 1,000 subjects. If we are considering each fingerprint as a subject, we would need 75 to 100 participants. We would seek a statistically significant sample group, so the sample number is open. They should be over the age of puberty, reached the age of consent and can be of any ethnic, sex, race or marital or partnership relationship or distinction. The behavioral characteristics we anticipate will be applicable in all groups without much regard for any distinctions based upon these characteristics. I would prefer they speak a common language as they may be asked a group of self assessment questions if my suggested study were adopted.

What print patterns shall we consider? I am constantly expanding the possible number of different patterns reflecting various behavioral traits. To understand the wide variety and number of prints that could be considered I refer the reader to pages 125 to 146 of my "Fingerprints and Behavior." Prints have commonly been broken down into basics: Arch, Loop, Whorl, and Accidental to which should be added No Print and Broken Prints. Those were primarily developed for identification purposes when the patterns were used for past categorizations. Today forensic sciences use various AFIS programs. But current behavioral analysis is largely reliant on these basic patterns.

I now differentiate between several types of loops and at least two or three types of whorls. We can also distinguish combinations for even some subtle behavioral analysis. Take the loop. It is commonly divided into the ulnar and radial loops depending on the direction of the core or the open end of the foot of the loop. Does it aim towards the thumb or little finger edge of the hand. If the direction of the core goes straight up the finger, then we would even look to

the open end of the foot indicating another class of print. I add at least five other descriptions of loops to explore behavior on a truthfulness scale. (And I am commonly successful in identifying those who cannot lie.)

I will suggest each participant answer some simple behavioral self assessment questions with multiple choice answers before taking the subject's prints. I will supply an answer for a type of print for each finger if found. This avoids any need of placing me in any Faraday Cage, or knowing the participants or their prints before they take the tests. Principal behavioral correspondents for study should include competitive versus non-competitive personalities; the fighter, lover, leader, team player or loner. On physical behavior, we might question whether the subject is more likely be a striker or a back fielder on the soccer team, a scorer, a support player or defender. In golf, we could question whether the participant would hook, slice or drive his tee shot straight. (This is immediately valuable information as clubs are now made to correct for some of these tendencies and a simple scanning device could be used in the pro shop to help sell clubs.) Other behavioral distinctions may also be observed, such as whether the subjects need to be bosses or can comfortably work for others and under what conditions they would comfortably do this. We can consider whether they can approach work or tasks with a broad brush or be inclined to be detail oriented.

In some of the findings we would possibly show distinct variations shown by mismatched prints in the two hands. Correspondences based on such observations could expose possible stresses if behavior supported in one hand is required to be conducted in the locations or situations indicated as covered by the other hand. Are they competitive at work while couch potato lovers at home and required to bring their work home? Asking for disaster.

Were we only to use a ten print fingerprint test we could aim one test question on whether the subject was a born care giver and in what areas in his or her life we might expect to see these motivations expressed: home or work for example. Were we to expand the observation to a full palm print with full fingers and prints, and observe some of the morphology of the hand, we could possibly determine this as a current desired behavioral outcome even if not apparent from birth. If the two hands do not mirror each other, a common trait, this may indicate clear stress potentials in behavior. A competitor at work would be advised to not bring his or her work home if that is the place where they are not competitors. Perhaps the student should study in a study hall rather than try to do his or her homework at home. This and the reverse are not unusual traits.

Were we to broaden the test to include hand morphology, we could explore current variations in risk taking, or length of conversations tolerated, such as time for small talk or desire for direct, to the point, communication, matters of general or auditory attention span and reaction times. We would observe signs of empathy. Were we to add in the reflexes and tone, we could observe the common stages of co-dependency. We might also see how stubborn, and opinionated, open minded or gullible our subject is.

In any of these studies, because there are two hands and ten fingers, conflicts might be readily apparent. Viewing which hand where these traits could show up can reveal potential

stress areas in life, such as at the office or school compared to the family and home. We can explore how the combinations of activities between locations and groups can lead to problems and confusion in behavior. Does the competitive employee or business owners take the edge of their competition if they work at home where they are a lover, not a fighter? This either brings conflict into the home where it is not expected, and upsets the family life, or takes off the competitive edge in trying while trying to save the family. The opposite could be expected if the signs and activity locations were reversed. Much of this could be the result of correspondences recognized by patterns set up by the end of the second trimester in the womb. Finally, we would provide psychology with easily replicable statistical studies of psychological expressions based upon physical characteristics matched with observed behavior.

The obvious benefits are wide, from forensic profiling, counseling, to sports, a host of military and information gathering activities, even employment and group composition as now being commercially addressed by Ms. Volonté and others. It may well be useful in picking mission participants for Mars exploration and other specialized teams. One may call this wider subject Behavioral Human Biometrics. Its time has long come.

To emphasize the strategic recognition of Behavioral Biometrics, I ask where else would I have been provided such support in my three trips to China and treated like a visiting dignitary? Why was I asked to give the opening lecture<sup>[52]</sup> to the 7th National Conference of the Chinese Dermatoglyphic Association, as part of the 2009 conference on Humanity Development and Cultural Diversity in the 16th World Conference of the International Union of Anthropological and Ethnological Sciences held in Kunming, China? This was even attended by technical experts in Chinese Public Security. Why was I provided, expense free, my own translator and guide. She was flown down from Beijing: Dr. Jun Wang, M.D., PhD? She was an expert in pharmacology and sometime co-chairperson of the Chinese Alzheimer's Association. She did her post doctorate work in one of our U.S. Ivy league universities. She and her partner were also my guides in Beijing on an earlier Shanghai visit where I extended my stay at their invitation, expense and arrangement, in the best hotel in Beijing at the time. It is long past time to take Behavioral Biometrics seriously in the west as a scientific psychological study.

We could take into consideration the works of Richard Unger's 'Lifeprints' (USA), Edward Campbell's 'Fingerprints and Behaviour' (USA), Franc C. Clifford 'Palmistry4Today' (UK), Jennifer Hirsch's 'God Given Glyphs, Decoding Fingerprints, Chirolgy'<sup>[53]</sup> (South Africa), Marianne Volonté's HandPower-Mymarq (Switzerland) as well as those from China, Taipei, India, Russia, Brasil, and Vietnam. We were not tabulae rasas at birth. Psychiatry has come to recognize some of the genetic influences of behavior.<sup>[54]</sup> We were born as the result of the mixture of two dna strands with long histories of such mixtures. It is now claimed that one can achieve a form of facial recognition from such dna's. That leads to short behavioral profiles from dna. We are born with many appetites, and not all of them congruent. It may take more than a lifetime to bring harmony to all of them.

We start with at least two minds somewhat reflected in the two sides of our bodies that provide us with many patterns that may be studied to reflect the contents of our naturally provided behavioral preferences. Inborn natural potential conflict can often be discovered by



learning the meaning of these physical signs. Through this the individual may be aided in understanding his or her challenges as well as natural gifts. Each may find methods to avoid some stress conflicts.

Neuralink, formed in 2016, is reported to have about 300 employees with Elon Musk as its CEO.<sup>[55]</sup> None of the career paths or employee specialties currently advertised by Neuralink appear to address the observations of Behavioral Biometrics. Yet their aims will surely have to address these conditions and may even find them useful. Neuralink explains its goals as:

“We believe these devices have the potential to help people with a wide range of injuries and neurological disorders, and we hope to develop treatments for many of these conditions in the coming years. We expect that as our devices continue to scale, and as we learn to communicate with more areas of the brain, we will discover new, non-medical applications for our BCIs. Neuralink's long-term vision is to create BCIs that are sufficiently safe and powerful that the general population would want to have them.”<sup>[56]</sup>

Elon Musk chose a very advantageous time to inter in this computer chip business. On July 27<sup>th</sup> 2023 a \$280 billion package, the “Chips” bill, designed to boost domestic microchip production, passed Congress. The centerpiece of the bill is \$52.7 billion in subsidies for U.S. computer chip manufacturing. Given the strong likelihood that there may be brain distinctions that reflect behavioral biometric observations, Neuralink might be producing a cyborg monster in some while improvements in health and communication ability in other subjects, with undifferentiated mass-produced chip implantations. They might, for example, also be of military value if it could increase the actual number of soldiers who could be depended upon to fire their weapons, a seriously studied field of indoctrination.<sup>[57]</sup> These possibilities must be considered.

Behavioral Biometrics is a multi-billion dollar key consideration supporting immediate testing and academic study for the future billion dollar implanted “Chips” industry. So will all of these behavioral correspondences related to physical characteristics identify us as intelligently designed androids?[] What difference does it make except to some possessing tender egos? Would Behavioral Biometrics really answer this question?<sup>58</sup>

Oh yes: The lady soccer player had whorls on both of her first fingers (thumbs) and a loop on her third (middle) finger of her right hand. Thus began a small part of her reading of her human bar codes.

AUTHOR: Edward D. Campbell. AB University of Missouri (Columbia) 1959, LLB 1963 replaced by JD in 1969. University of Missouri (Columbia). Admitted Missouri Bar 1963; Washington State Bar 1965; jury and non-jury Federal and State trial and appellate practice for over 50 years, mostly on the civil docket. Retired in good standing. Former Guild Certified Feldenkraise Practitioner (1992-93) National Iridology Research Association proficiency in Applied Iridology (1990), Hand Analyst for over 45 years with several published works on the subject and lectures throughout North America, in Asia and Europe.

# Comments and Suggestions

<https://behavbio.com/comments-and-suggestions/>

---

## NOTES

1. . Denny Ray Johnson: "What the Eye Reveals" (1997)  
[https://www.amazon.com/What-Eye-Reveals-Denny-Johnson/dp/0917197046/ref=sr\\_1\\_1?crd=zsd](https://www.amazon.com/What-Eye-Reveals-Denny-Johnson/dp/0917197046/ref=sr_1_1?crd=zsd), <http://rayid.com/>, <http://milesresearch.com/main/aboutrayid.htm>  
<http://milesresearch.com/main/myers-briggs.htm>
2. Naomi Tickle: "You Can Read a Face Like a Book" (2003)  
<https://www.amazon.com/Read-Face-Like-Book-Relationships/dp/0964639823>.  
[https://www.linkedin.com/in/naomitickle?original\\_referer=https%3A%2F%2Fsearch.yahoo.com%2F](https://www.linkedin.com/in/naomitickle?original_referer=https%3A%2F%2Fsearch.yahoo.com%2F), <https://www.eyesforlies.com/services/the-science-of-facial-profiling/>
3. Jilly Eddy <https://lipsology.com/home/>
4. Lee, Henry C. And Gaensslen, R.E., editors: Advances in Fingerprint Technology, 2<sup>nd</sup> Ed., CRC Press, LLC, Boca Raton, London, New York and Washington D.C. 2001 p. 25.
5. <https://pubmed.ncbi.nlm.nih.gov/26124106/>
6. Noel Jaquin: The Hand of Man, A Practical Treatise of the Science of Hand Reading Dealing in Detail with its Psychological, Sexual, Superstitious Aspects, 1933 Farber & Farber, Ltd., London, "The Hand of Man," Faber & Faber Ltd, London, (1934), pp. 44-48. "The Signature of Time," (1940), Faber & Faber, Ltd., London. pp. 85-95; "The Hand Speaks, Your Health, Your Sex, Your Life," (1942), Lindoe & Fisher, London. My copy Sagar Publications, New Delhi, India, 1973.. pp. 15, 19. "Practical Palmistry," Originally published as "The Human Hand", (1958). D. B. Taraporevala Sons & Co. Private Ltd, Bombay, India, 1964, pp. 159-161.
7. History of Dermatoglyphics, Palmistry & Character Identity (1996) Edward Campbell  
<https://www.handanalysis.co.uk/EdCampbell-PalmD-History.htm#:~:text=A%20HISTORY%20OF%20DERMATOGLYPHICS%2C%20PALMISTRY%20%26%20CHARACTER%20IDENTITY,%283%29%20Malpighius%20%284%29%20as%20long%20ago%20as%201680%27s>.
8. Edward D. Campbell,"The Encyclopedia of Palmistry" (1996) A Perigee Book, The Berkley Publishing Group, New York and Robert Hale, Ltd., London.
9. Edward D. Campbell, "Fingerprints and Behavior" 2012 Amida Biometrics, LLC
10. Beryl B. Hutchinson, "Your Life In Your Hands," (1967) Sphere Books, Ltd. London
11. Fred Gettings, "The Book of Palmistry" (1974), Triune Books, London.

12. Bevy C. Jaegers, "Hand Analysis Fingerprints and Skin Patterns - Dermatoglyphics." (1974) Aries Productions, St. Louis, Missouri.
13. Harold Cummins and Charles Midlo, "Finger Prints, Palms and soles. /an Introduction to Dermatoglyphics." (1943)) The Blackstone Company - Philadelphia.
14. Wolff, Charlotte, The Human Hand, Alfred A. Knopf, 1943; and The Hand in Psychological Diagnosis, Methuen & Co., Ltd., 1951.
15. Prof. Ziwan Shao "Selection of Athletes by Dematoglyphics," PRC 1989
16. "SCIENCE INCREASING PERFORMANCE: DERMATOGLYPHICS, SOMATOTYPE AND BASIC PHYSICAL QUALITIES PROFILE OF BRAZILIAN MILITARY ATHLETES (2018) Rafael da Cunha, N. G. Filho, +1 author Rodrigo Silva.  
<https://www.semanticscholar.org/paper/SCIENCE-INCREASING-PERFORMANCE%3A-DERMATOGLYPHICS%2C-OF-Cunha-Filho/e27742b1b525fe3d917bca9caa03dfe10af47a2f>.
17. Lt. Col. Avdeychik, Ret., his son and I corresponded furnishing me this information but unfortunately our correspondence was terminated before I could get further information and I have not been able to trace his publication.
18. End notes 72 to 93, "Fingerprints and Behavior". More recently such works as that of Magda van Dijk-Rijneke: "Standaardwerk Universal Handleeskunde"  
<https://chirologie.jouwweb.nl/artikelen-over-handlezen-door-magda-van-dijk-rijneke/jupiterstroom>.
19. Neurolink: <https://www.facebook.com/watch?v=868593657518163>
20.  
<https://www.vice.com/en/article/g5yjn/scientists-control-human-dna-with-electricity-in-leap-forward-study-reports>
21. The Future Of User Authentication: A Guide To Behavioral Biometrics, By Megan Rees Updated Mar 28, 2023 <https://expertinsights.com/insights/a-guide-to-behavioral-biometrics>
22. The Top Biometric Authentication Solutions, By Caitlin Jones Updated Apr 20, 2023  
<https://expertinsights.com/insights/the-top-biometric-authentication-solutions/>
23. Ibid n. 2.
24. Facial identification through dna  
<https://www.nature.com/articles/s41467-019-10617-y#:~:text=Facial%20recognition%20from%20DNA%20refers%20to%20the%20identification,DNA%2C%20and%20subsequently%20to%20match%20against%20facial%20images>. See also the success in software with Snapshot Facial Reconstruction: <https://snapshot.parabon-nanolabs.com/intro#reconstruction>

25. Semantic reconstruction of continuous language from non-invasive brain recordings, Jerry Tang, Amanda LeBel, Shailee Jain, Alexander G. Huth, Nature Neuroscience, May 1, 2023, <https://www.nature.com/articles/s41593-023-01304-9>  
[https://www.nature.com/articles/s41593-023-01304-9.epdf?sharing\\_token=hObNvIEI8tIAEG8gR0sNVtRgN0jAjWel9jnR3ZoTv0NG3whxCLvPExlNSoYRnDSfIOgKVxuQpIpQTlvwbh56shqTwzxbL4KXiD4r8Gl-zjm1ImWA0AkBIz-CAAF9PNsBQhkUytdf543YzYEWjuG52imtay-P97GEfg8Ki8xd0EWZHDn6CzIgzIe7M8AHJY1jMEVAiKS\\_tBXHrUkqUDLxAidrsM0kbR1zDCcBrhSbUz1NPdAkc2kG3Ce-V4ogtsHYswDjaL5VgUW91XLP4OoxY0op1yo6cYcJhnTPzsX8-CfoERglaKeRIMXzcBonWgP3P3zpQbL2haDzAJkcLQEINIA14Jqbk7N5IdzPR6SJcAM%3D&tracking\\_referrer=www.theguardian.com](https://www.nature.com/articles/s41593-023-01304-9.epdf?sharing_token=hObNvIEI8tIAEG8gR0sNVtRgN0jAjWel9jnR3ZoTv0NG3whxCLvPExlNSoYRnDSfIOgKVxuQpIpQTlvwbh56shqTwzxbL4KXiD4r8Gl-zjm1ImWA0AkBIz-CAAF9PNsBQhkUytdf543YzYEWjuG52imtay-P97GEfg8Ki8xd0EWZHDn6CzIgzIe7M8AHJY1jMEVAiKS_tBXHrUkqUDLxAidrsM0kbR1zDCcBrhSbUz1NPdAkc2kG3Ce-V4ogtsHYswDjaL5VgUW91XLP4OoxY0op1yo6cYcJhnTPzsX8-CfoERglaKeRIMXzcBonWgP3P3zpQbL2haDzAJkcLQEINIA14Jqbk7N5IdzPR6SJcAM%3D&tracking_referrer=www.theguardian.com) and <https://doi.org/10.1038/s41593-023-01304-9>, see also: <https://theconversation.com/mri-scans-and-ai-technology-really-could-read-what-were-thinking-the-implications-are-terrifying-205503> “According to the researchers, the process was labour intensive and the computer only managed to get the gist of what someone was thinking. However, the findings still represent a significant breakthrough in the field of brain-machine interfaces that, up to now, have relied on invasive medical implants. Previous non-invasive devices could only decipher a handful of words or images.”
26. Ibid n. 6.
27. Mary Lai (Lai Tsa Wan) Founder and Dean of Mind Measurement Education Association, Taipei, Taiwan. She published a teaching text for her students and had carried her program from Indonesia to Northern China and even to an Asian community in Southern California. See : <http://www.mme.com.tw/index> and <http://www.mme.com.tw/contact>. I have lost touch since 2018.
28. Jon Miles: <http://milesresearch.com/>
29. Bernard Jensen: [http://www.wikichiro.org/en/index.php/Bernard\\_Jensen](http://www.wikichiro.org/en/index.php/Bernard_Jensen)
30. Author of at least two dozen books in Chinese including “Diagnostics Based Upon Observations of Palmar Lines - Chinese Palmistry in Medical Application” (1996) Shandong Friendship Publishing House, Beijing, China. One of her works was translated into English but was never authorized. I worked for a time with her daughter in editing the translation of her latest work, but my participation has been interrupted by Covide and, I believe, political considerations.
31. Professor Zhang Haiguo, geneticist and teacher at the Medial school of Shanghai Jiaotong University aand past chairman of the Chinese Dermatoglyphic Association. <https://www.researchgate.net/scientific-contributions/Hai-Guo-Zhang-15823596>.<http://www.han dresearch.com/taiwan/mary-lai.htm>
32. “Applied Handreading” (1983) The Greenwood Pres, Toronto. “The Illustrated Textbook of Psychodiagnostic Chirolgy in Analysis and Therapy” (2004) Greenwood-Chase Press. Toronto. For a while I was a supporter of his work and he and his students attended one or more of my conferences, but withdrew my endorsement upon later detailed examiation of lack of supporting studies. He has since published a further book on his subject.

33. Marcus Leng: <https://cfmid.com/leadership-team/>
34. <https://cfmid.com/>
35. <https://www.amazon.com/stores/author/B07GQ56WK1>
36. Marianne Volonté, HandPower-Mymarq, [www.mymarq.com](http://www.mymarq.com). This appears on her web site:

“The connection between fingerprints and personality has been studied in depth since the middle of the 20th century (see Richard Unger's ‘Lifeprints’, Edward Campbell's ‘Fingerprints and Behaviour’, Franc C. Clifford ‘Palmistry4Today’ etc.). These pioneers analysed millions of fingerprints for the purpose of psychological profiling. Our MPT is the result of a combination and choice of the most interesting and convincing findings of these pioneers, enriched through our own findings and empirical expertise stemming from more than 100'000 fingerprints since 2012.”
37. Darpan Vyas, Director, CFMID Limited, [www.cfmid.com](http://www.cfmid.com). I am still listed as a mentor to this corporation: <https://cfmid.com/mentor/>.
38. <https://cfmid.com/leadership-team/>
39. <https://www.facebook.com/AsianDermatoglyphicsResearchCentre/>.
40. <http://www.mmeindonesia.com/#!>
41. <http://www.handresearch.com/taiwan/mary-lai.htm>
42. Dr. Jag Singh, M.D., PhD. “Future Care Sensors, Artificial Intelligence and the Reinvention of Medicine” (2023) Mayo Clinic Press.
43. <https://www.cnbc.com/2021/07/30/elon-musks-neuralink-backed-by-google-ventures-peter-thiel-sam-altman.html#:~:text=Elon%20Musk%E2%80%99s%20brain-machine%20interface%20company%2C%20Neuralink%2C%20has%20raised,Thiel%E2%80%99s%20Founders%20Fund%2C%20and%20OpenAI%20CEO%20Sam%20Altman>.
44. Neuralink: <https://neuralink.com/science/>  
<https://www.facebook.com/watch?v=868593657518163>
45. <https://neuralink.com/careers/>
46. <https://www.reuters.com/science/elon-musks-neuralink-gets-us-fda-approval-human-clinical-study-brain-implants-2023-05-25/>
47. “Dermatoglyphics: A Brief Review”, Archana Singh, Rakesh Gupta, Shh-Zaidi and Arun Singh. [https://www.researchgate.net/publication/310899107\\_Dermatoglyphics\\_A\\_Brief\\_Review](https://www.researchgate.net/publication/310899107_Dermatoglyphics_A_Brief_Review)
48. <https://robertchaen.com/2016/09/26/19189/>

49. See the references in my works “Fingerprints and Behavior” and “The Encyclopedia of Palmistry.”
50. Howard Gardner: “Frames of Mind: The Theory of Multiple Intelligences”,  
<https://www.verywellmind.com/gardners-theory-of-multiple-intelligences-2795161>
51. Prof. Asim Roy: <https://search.asu.edu/profile/9973>.
52. This lecture became chapter 5 of Prof Sudip Datta Banik, Editor “Research In Physical Anthropology: Essays in Honor of Professor L.S/ Penrose, 2010 Unasletras Industria Editorial.  
<https://dokumen.tips/documents/about-the-book-research-in-physical-anthropology-essays-2010research-in.html?page=1>
53. Jennifer Hirsch’s ‘God Given Glyphs, Decoding Fingerprints, Chirolgy’ (2009) Muse Press, Cape Town, South Africa.
54. “The Nature of Genetic Influences on Behavior: Lessons From “Simpler” Organisms”  
Kenneth S. Kendler M.D. Ralph J. Greenspan Ph.D. American Journal of Psychiatry 1 Oct 2006  
[https://ajp.psychiatryonline.org/doi/10.1176/ajp.2006.163.10.1683?url\\_ver=Z39.88-2003&rfr\\_id=ori:rid:crossref.org&rfr\\_dat=cr\\_pub%20%20pubmed](https://ajp.psychiatryonline.org/doi/10.1176/ajp.2006.163.10.1683?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%20pubmed)
55.  
<https://www.reuters.com/legal/transactional/neuralink-co-founder-departs-musk-backed-startup-sources-2022-07-19/>
56. <https://neuralink.com/applications/>
57. [https://www.reddit.com/r/history/comments/b6k528/percentage\\_of\\_soldier\\_who\\_purposely\\_missed\\_or/?rdt=33999](https://www.reddit.com/r/history/comments/b6k528/percentage_of_soldier_who_purposely_missed_or/?rdt=33999)
58.  
[https://www.reddit.com/r/history/comments/b6k528/percentage\\_of\\_soldier\\_who\\_purposely\\_missed\\_or/?rdt=33999](https://www.reddit.com/r/history/comments/b6k528/percentage_of_soldier_who_purposely_missed_or/?rdt=33999)