

# Reading the Signs

## The Sciences of the Head: Physiognomy, Phrenology and Early Psychiatry

“We are irredeemably programmed to work from [human, facial] appearance at the deepest biological level.” (Kemp and Wallace).

During the middle ages and into the renaissance, there persisted the belief that the quality of the soul could be expressed in the body or facial features/expressions. In the middle ages, there was a strong belief that sickness, deformity, or mental illnesses expressed either God’s curse on a family, or a tainted soul.

This began with Aristotle (or an Aristotelian author) in the treatise, *De Physiognomia*. “The basic idea is that the face serves as a field of ‘signs’, which rightly read could be used to determine the inner nature of the soul behind the façade.” (Kemp and Wallace)

The eyes as “window of the soul” is an adage that points to this philosophy. That the eyes served as a conduit for one to see into the soul, from the beginning of the scientific era around the 16<sup>th</sup> century well into the 19<sup>th</sup> century.

In this lecture, we’ll look at how science and philosophy addressed the head as an expressive feature of the soul, mind and intellect.

**Physiognomy:** (1) *The practice of trying to judge character and mental qualities by observation of bodily, especially facial, features.* (2) *the face; facial features and expressions – especially those indicative of character.*

**Pathognomy:** *the study of signs by which human passions are indicated.*

We’ll look at these studies by addressing the work of thinkers interested in the link between the head, face and human character, and images that documented their observations.

### **Renaissance: The Humoral Theory**

In the middle ages and into the renaissance, the humoral theory (theory of the humours of the body) was the foundation for understanding the human body and the natural world.

The theory dictated that the body contained four ‘humours’ or fluids:

<u>Humor</u>	<u>Disposition</u>	<u>Outward expression</u>
Blood	sanguine	content/happy
Yellow bile (urine)	choleric	impulsive/angry/volatile
Black bile (feces)	melancholy	depressed/sad
Phlegm	phlegmatic	lethargic/slothful

[thus much of medieval medicine aimed to balance these humors; for example bleeding a person who had ‘too much’ blood relative to the other humours]

Another of the founding principles of physiognomy (and later much of physical anthropology) was the belief in an infinite, and hierarchical, scale of physiognomic variations from the classical ideal to animality or the brute.

[One might, with hindsight, see how this foundation might, much later in time, be linked to Darwin’s theory of evolution and to racial and ethnic biases perpetuated in the name of science among anthropologists.]

In 1586, Giovan Battista della Porta published his book, *De humana physiognomia* – a book that would continue to be published well into the 19<sup>th</sup> century and used by artists and scientists alike as a primary source on the subject.

### ***Head of a Man, da Vinci, 1503, chalk drawing***

Da Vinci also wrote a draft manuscript on physiognomy that was never published.

This is an image of a choleric person (strong yellow bile content). His fiery disposition is evident in his curly hair (which looks like flame), his strong teeth and his piercing eyes.

The lion in the lower corner of the image is not a separate sketch, but linked to the choleric portrait. Medieval thought applied the same concepts across the natural world – so animals were often symbolic of qualities possessed by humans. Choleric people, being active and fiery, were linked with lions. Phlegmatic people who were slow-moving, were linked with oxes.

### ***Melancholia I, Durer, 1514, engraving***

Here, the artist or muse is portrayed as melancholic (strong black bile content) and is sad, depressed and this is depicted in the body position of the figure who is slumped, head in hand.

Artists and musicians in the middle ages were generally considered melancholic. More recently, Vincent Van Gogh and many of the New York Abstract Expressionists might be considered melancholic by medieval standards.

### **Baroque: Faces in extremis**

The baroque era, which we’ve glanced at in the fall, was an era in which artists exhibited virtuoso artistic abilities: They had a detailed understanding of human anatomy, optics, perspective, and employed this knowledge to great effect in their images.

Remember Caravaggio’s dramatic, expressive compositions utilizing high contrast lighting and strong angular compositions, in addition to an excellent knowledge of anatomy.

### ***Anima Dannata (Condemned Soul), Gianlorenzo Bernini, 17<sup>th</sup> c., marble***

During the Baroque era (1600-1700), artists became interested in extreme facial expressions. During the renaissance and earlier, strong facial expressions were rare in painting. Most often faces were stylized or generalized. Figures often appeared stoic with unexpressive gazes.

## **The Royal Academy**

Charles Le Brun, president of the French Royal Academy (and artistic heir to Poussin's theories about great art) lectured on (1) the fixed signs of the head and (2) the communicative features of passing emotions at the academy.

Le Brun made strong connections between animals and facial expressions.

### ***Two human heads, resembling lions, Charles Le Brun, 1660-70***

Le Brun was also a proponent of Rene Descartes (the French philosopher, "I think therefore I am") who argued that the seat of the soul was the pineal gland, as it was central in the brain and was the only non-bilateral structure within the cranium.

*[The pineal gland actually is a small endocrine gland. It is located near the center of the brain, between the two hemispheres at the center of the brain/near the top of the spinal cord, anterior to the cerebellum.*

*Current science suggests that the pineal gland plays a major role in sexual development, hibernation in animals, sleep patterns, metabolism, and seasonal breeding.]*

Le Brun described emotions as emanating from this gland/seat of the soul as the central controller. This theory had an enormous impact on the students and artists affiliated with the school at the Academy.

## **Pathognomic Self Portraits**

Owing to the Baroque interest in facial expression and the Academic focus on physiognomy, many artists undertook self portraits as studies of facial expressions. These artists are working in a vein initiated by da Vinci and sustained by Rembrandt who often made self-portrait studies of himself with extreme expressions of surprise, anger, or confusion.

### **Expressive Self Portrait, Wilhelm von Kaulbach, 1828**

#### **Physiognomic Head, Franz Xaver Messerschmidt, 1775**

This work was created by Franz Xaver Messerschmidt, a lesser known Viennese court sculptor. He made a series of physiognomic self portraits in his later reclusive years, when he was described as suffering from 'confusion in his head'.

Messerschmidt held mystical ideas about his own body, which was subject to 'pinching' by malicious 'invisible spirits.' These busts immortalized expressions induced when Messerschmidt "pinched" specific parts of his own body to appease the assaulting 'powers'.

## **19<sup>th</sup> Century Scientific Developments**

Charles Bell developed and provided to artists, a detailed analysis of the facial muscles that facilitate facial expressions.

Guillaum-Benjamin Duchenne de Boulogne built a device that used two electrodes to isolate individual muscles of the communicative system. (This has links to the article we're reading by Malcolm Gladwell on the Facial Action Code System or FACS)

### **Johann Caspar Lavater**

Best known today for his *Essay on Physiognomy*, the Swiss-born Lavater was both admired and detested in his time for his unconventional approach to theology and his views on the human character as expressed in facial and cranial features.

### **Portrait of Judas Iscariot after Holbein, Johann Caspar Lavater, 1789-98**

Lavater's theories and methods concerning physiognomy included a mishmash of traditional ideas, empirical observation, studies of art, mathematical theory, opinions and arbitrary judgements. Thus his science would not be persuasive to us today.

### **Linear analyses of profiles, J. Caspar Lavater, from *Essays on physiognomy*, 1789-98**

Lavater's goal was to create a system of proportional and linear signs (features) based on particular silhouettes that would enable one to "calculate and determine the forms of heads according to the principle of Physics and Mathematics."

"The illustration below [by artist Jean-Gerard Grandville] is part of a long tradition of compelling and influential images showing the morphological transformation, or evolution, from frog to Apollo. The source for Grandville's illustration was probably one of the many editions of Johann Caspar Lavater's *Physiognomy*. Variations of such zoomorphism did appear in Giacomo della Porta's book on physiognomy and Charles Le Brun's work, but it was Lavater's early nineteenth-century editions that popularized this image which stands as a summary of the Enlightenment idea of a "Great Chain of Being" and a precursor to Darwin's later publications on evolution and human expression."  
(text from Newcastle.edu; image below from U Penn.edu)



The links between the animal world and the human world continue to appear in studies of physiognomy here in the 18<sup>th</sup>/ century.

## Phrenology

### Franz Joseph Gall and Johann Gaspar Spurzheim: Phrenology Founders

Gall and his student, Spurzheim, working with more 'serious' science studied the intellect and moral disposition with respect to the nervous system and the brain.

They believed that by examining the shape and unevenness of a head or skull, one could discover the development of the particular cerebral "organs" [bumps in the brain that 'telegraphed' through the bone of the skull and could be digitally probed].

These organs/bumps were responsible for different intellectual aptitudes and character traits. For example, a prominent protuberance in the forehead at the position attributed to the organ of benevolence was meant to indicate that the individual had a "well developed" organ of benevolence and would therefore be expected to exhibit benevolent behavior.

### **phrenological head, 1850**

### **Sixty small phrenological heads, Wm. Bally, 1831**

### Phrenological Principles by Gall and Spurzheim

1. The brain is the organ of the mind.
2. The mind is composed of multiple distinct, innate faculties.
3. Because they are distinct, each faculty must have a separate seat or "organ" in the brain.
4. The size of an organ (brain), other things being equal, is a measure of its power.
5. The shape of the brain is determined by the development of the various organs.
6. As the skull takes its shape from the brain, the surface of the skull can be read as an accurate index of psychological aptitudes and tendencies.

(History of Phrenology/britishlibrary.net)

### Scientific Method (?)

"However, like so many popular 19<sup>th</sup> century sciences, Gall and the phrenologists *sought only confirmations* for their hypotheses and did not apply the same standard to contradictory evidence. Any evidence or anecdote which seemed to confirm the science was readily and vociferously accepted as "proof" of the "truth" of phrenology. Contradictory findings, such as a not very benevolent and disagreeable person having a well-developed organ of benevolence were always explained away."

(History of Phrenology, Britishlibrary.net)

### How it was practiced

Most phrenologists would run their bare finger tips (Gall recommended using the palms of the hands) over a head to distinguish any elevations or indentations. Sometimes calipers were used to measure the head and the most up-to-date charts were always consulted regarding the 35+ 'organs' [bumps] of the brain.

### Gall's Original 27 Organs (bumps)

1. impulse to propagation
2. Tenderness for the offspring, or parental love
3. friendly attachment or fidelity
4. valour, self-defense
5. murder, carnivorousness
6. sense of cunning
7. larceny, sense of property
8. pride, arrogance, love of authority
9. ambition and vanity
10. circumspection
11. aptness to receive an education, or the memoria realis
12. sense of locality
13. recollection of persons
14. faculty for words, verbal memory
15. faculty of language
16. disposition for colouring, and the delighting in colours
17. sense for sounds, musical talent
18. arithmetic, counting, time
19. mechanical skill
20. comparative perspicuity, sagacity
21. metaphysical perspicuity
22. wit, causality, sense of inference
23. poetic talent
24. Good-nature, compassion, moral sense
25. Mimic
26. Theosophy, sense of God and religion
27. Perseverance, firmness

A primary tool in Gall and Spurzheim's study was the collection of life and death masks of notable individuals both good and infamous.

### **Death Mask of JL David, 1825, anonymous, plaster cast.**

This is the death mask of Jacques Louis David, the artist who painted "The Death of Socrates" (from last quarter)

What all these systems and thinkers – Lavater, Gall & Spurzheim -- were aspiring to do, was to find a scientific basis for the intuitive reading of signs (facial expressions, personality traits, head size and shape, etc.)

### **The Science of Insanity: Early Psychiatry**

By the early 19<sup>th</sup> century, 'madhouses' or asylums had existed for centuries as repositories for the mentally ill. By the mid-18<sup>th</sup> century, with the increased study of physiognomy and phrenology, scientists began viewing asylums as places where their research could be carried out, by observing and categorizing behaviors and of course facial expressions.

In the early 19<sup>th</sup> century it was believed that “the nature of insanity could be read in precise detail from the features of afflicted persons and even more decisively that insanity resulted from physical defects.” (Kemp & Wallace)

***Madhouse, Kapar Heinrich Merz (after Wilhelm von Kaulbach), 1834, engraving***

This is an image copied from the original which was by Kaulbach (whose Expressive Self Portrait we saw earlier in the lecture).

This image catalogs mental conditions including melancholy, jealousy, delusional behaviors and religious fixations.

***Man with the “Monomania” of Child Kidnapping, 1822, Theodore Gericault***

This painting is from a series of images of inmates of the Salpetriere hospital in Paris who were diagnosed with various mental illnesses, painted between 1821 and 1824 when the artist died. The series was commissioned by Dr. Etienne Georget, a doctor and researcher at the hospital. Among the conditions he portrayed, were envy, stealing, kidnapping, military command and gambling.

“Monomania” was the 19<sup>th</sup> century term for what we might call “obsessive” disorders – a special, excessive enthusiasm or focus on a single idea or activity.

In this image, the haunted sideways glance, the asymmetrical sag of the mouth and hollow cheeks coincide with the characteristics of condition as they were then understood.

***Insane Man (Kleptomaniac), 1822, Theodore Gericault***

***Insane Woman (Envy), 1822, Theodore Gericault***

Gericault was an important artist of the Romantic era (during the waning years of the Royal Academies). He died by age 33, having created a small, but important collection of masterpieces.

It is useful to understand his role as an artist – he was a great fine artist of his era, who also took on other projects such as this one, visually chronicling a segment of the population for scientific research.

The Use of Photography for Data Collection

Dr. Hugh Diamond of the Surrey County Asylum in England began using the camera to document patients’ conditions.

**Three photographs from *Photographs of the Insane*, Hugh Welch Diamond, 1850s  
“Ophelia”, Insane Man, Insane Woman**

What is interesting about these images is their decidedly non-clinical appearance. Like the wax anatomical models we viewed in the fall, these images owe their look to artistic conventions of the 19<sup>th</sup> century – that of photographic portraiture. The sitters were dressed in their best clothes and posed as any sitter might be for a photographic portrait in the 19<sup>th</sup> century.

Thus the sense of normality of the setting and the pose is in contrast with the appearance or poses of the sitters.

Ophelia (Garlanded Woman): “The image of the sexually obsessed Ophelia had so thoroughly saturated the popular imagination that the fictional character and the real madwoman had become one, as in this photograph where the young woman has been garlanded in flowers and leaves for her portrait. "The iconography of the Romantic Ophelia" was so fixed in nineteenth-century culture that, according to Showalter, one way for a young woman to express her psychological anguish was to imitate Ophelia, and "where the women themselves did not willingly throw themselves into Ophelia-like postures, asylum superintendents, armed with the new technology of photography, imposed the costume, gesture, props, and expression of Ophelia upon them" (English Emory/edu)

Not only was Diamond a strong advocate of the use of photography over the work of painters and draftsmen, as a more accurate portrayal of the mentally ill, but he also believed that photos could facilitate treatment. One case he recounted involved a 20-year old woman who was delusional, thinking she was a queen:

*[The subjects'] subsequent amusement in seeing the portraits and her frequent conversation about them was the first decided step in her gradual improvement, and about four months ago she was discharged perfectly cured, and laughed heartily at her former imaginations—*

Arguably, the program he proposed for using a camera to treat delusional ideation is the first historical example of a psychodynamic regimen.

### Francis Galton

Another thinker and researcher in the field of faces and character, was Francis Galton – an obsessive gatherer of quantified data on, among other things, which English city was home to the most beautiful women (in numbers, not quality) He also undertook experiments that he hoped would confirm his theory about the correlation between head size and intelligence.

He was also the cousin to Charles Darwin.

### ***Narrow ovoids with regular features: tubercular type, line of 15, narrow ovoids of a lower types, line 11, Francis Galton***

This photograph is an example of the kind of quantifying Galton was engaged in around his study of beautiful British women.

### ***Head Calipers, Francis Galton, 1882***

Galton was also the founder of eugenics. Eugenics, according to Galton was “...the study of agencies under social control that may improve or impair the racial qualities of future generations, whether physically or mentally.”

Galton used photography to collect images of people from a variety of backgrounds, exhibiting a variety of dispositions, personality traits, ethnic characteristics, etc. and began classifying his findings. Combining his visual data with Darwin’s theory of evolution, Galton developed the theory that nature could be helped to progressively improve the human race by perpetuating the characteristics of some people and phasing out the lines of others; by facilitating a sort of social evolution of the human race.



*No one, I think, can doubt, from the facts and analogies I have brought forward, that, if talented men were mated with talented women, of the same mental and physical characters as themselves, generation after generation, we might produce a highly-bred human race, with no more tendency to revert to meaner ancestral types than is shown by our long-established breeds of race-horses and fox-hounds.*

A fundamental problem with Galton's ideas was that he was biased – ensuring the eugenic heritage of those like himself; those who embodied the very essence of civilization and higher mental capacities.

In this case, we can see how photography as an instrument of documentation could be useful – especially when compared to the hand-painted work of painters like Gericault. However as a scientific instrument the weakness in this particular use of photography lies in the biases and assumptions and preferences held by the scientist who believes she can read faces as exhibiting objective observable information that can be read without bias.

# Physiognomy, Phrenology, and Early Psychiatry

## Images Cited

*Head of a Man*, da Vinci, 1503, chalk drawing

*Melancholia I*, Durer, 1514, engraving

*Anima Dannata* (Condemned Soul), Gianlorenzo Bernini, 17<sup>th</sup> c., marble

*Two human heads, resembling lions*, Charles Le Brun, 1660-70

*Expressive Self Portrait*, Wilhelm von Kaulbach, 1828

*Physiognomic Head*, Franz Xaver Messerschmidt, 1775

*Portrait of Judas Iscariot after Holbein*, Johann, Caspar Lavater, 1789-98

*Linear analyses of profiles*, J. Caspar Lavater, from *Essays on physiognomy*, 1789-98



Grandville (Jean Isidore Gerard, 1803-46) "Man Descending towards the Brute" 1843, from: *Heads of Men and Animals Compared*, 1844

*Phrenological Head*, Anonymous, 1850

*Sixty small phrenological heads*, Wm. Bally, 1831

*Death Mask of JL David*, 1825, anonymous, plaster cast.

*Madhouse*, Kapar Heinrich Merz, 1834, engraving

Selected photographs from *Photographs of the Insane*, Hugh Welch Diamond, 1850s

*Man with the "Monomania" of Child Kidnapping*, 1822, Theodore Gericault

*Insane Man (Kleptomaniac)*, 1822, Theodore Gericault

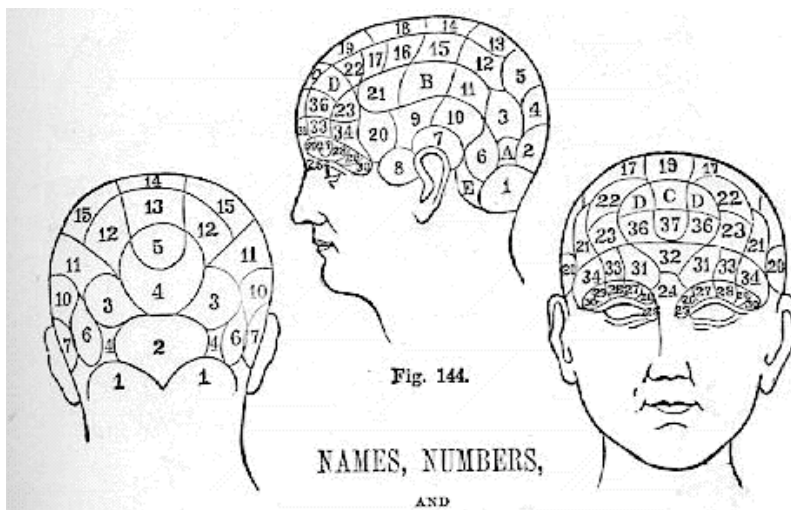
*Insane Woman (Envy)*, 1822, Theodore Gericault

*Narrow ovoids with regular features: tubercular type, line of 15, narrow ovoids of a lower types, line 11*, Francis Galton

*Head Calipers*, Francis Galton 1850

**Phrenology: Gall's Original 27 Organs (bumps)**

1. impulse to propagation
2. Tenderness for the offspring, or parental love
3. friendly attachment or fidelity
4. valour, self-defense
5. murder, carnivorousness
6. sense of cunning
7. larceny, sense of property
8. pride, arrogance, love of authority
9. ambition and vanity
10. circumspection
11. aptness to receive an education, or the memoria realis
12. sense of locality
13. recollection of persons
14. faculty for words, verbal memory
15. faculty of language
16. disposition for colouring, and the delighting in colours
17. sense for sounds, musical talent
18. arithmetic, counting, time
19. mechanical skill
20. comparative perspicuity, sagacity
21. metaphysical perspicuity
22. wit, causality, sense of inference
23. poetic talent
24. Good-nature, compassion, moral sense
25. Mimic
26. Theosophy, sense of God and religion
27. Perseverance, firmness



**LOCATIONS OF THE ORGANS.**

1. AMATIVENESS.	13. SELF-ESTEEM.	26. SIZE.
A. CONJUGAL LOVE.	14. FIRMNESS.	27. WEIGHT.
2. PARENTAL LOVE.	15. CONSCIENTIOUSNESS.	28. COLOR.
3. FRIENDSHIP.	16. HOPE.	29. ORDER.
4. INHABITIVENESS.	17. SPIRITUALITY.	30. CALCULATION.
5. CONTINUITY.	18. VENERATION.	31. LOCALITY.
E. VITATIVENESS.	19. BENEVOLENCE.	32. EVENTUALITY.
6. COMBATIVENESS.	20. CONSTRUCTIVENESS.	33. TIME.
7. DESTRUCTIVENESS.	21. LOCALITY.	34. TUNE.