

Goethe: A Science Which Does Not Eat the Other

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*In this essay I hope to demonstrate that Goethe's delicate empiricism is a science of life in all of its forms. To gain a full understanding of life, Goethe's method requires that the scientist respect and treasure life. I argue that to accomplish this goal one must become an apprentice to life. Becoming an apprentice to life requires that one refuses to eat the Other. This implies that Goethe's method can be fruitfully employed by anyone who seeks social justice. First, I elaborate on bell hooks' idea of eating the Other using several African American social critics. Then, I explain Goethe's delicate empiricism by contrasting it to the science of his day which was grounded in Bacon and Descartes and elaborated by Kant. Finally, by expanding upon Elizabeth Spelman's discussion of apprenticeship, I develop the idea of a Goethean apprentice who is a practitioner of a science of life based on a morality which opposes eating the Other.**

I

The African American feminist and cultural critic bell hooks deploys the idea of “Eating The Other”¹ to describe the way in which mainstream white consumer culture in the United States commodifies African American culture and experience. In the process of commodification those aspects of African American life which are unpalatable to white culture or consciousness—for example, all manner of present and past injustices and the continuing racism in the United States and the pain it causes—are discarded or romanticized to create a meal which is unusually delightful, intense and satisfying. As hooks says, “Within commodity culture, ethnicity becomes spice, seasoning that can liven up the dull dish that is mainstream white culture.”² There will be no end to the commodification of the Other and thus to the Other's oppression until ignorance and romanticization are replaced by a full recognition of all aspects of the Other's culture, experience and history.

[S]imply by expressing their desire for “intimate” contact with black people, white people do not eradicate the politics of racial domination as they are made manifest in personal interaction. Mutual recognition of racism, its impact both on those who are dominated and those who dominate, is the only standpoint that makes possible an encounter

between races that is not based on denial and fantasy. For it is the ever present reality of racist domination, of white supremacy, that renders problematic the desire of white people to have contact with the Other.³

Since hooks introduced her analysis of eating the Other in the early 1990s, the philosopher Charles Mills has enlarged her theme in terms of what he calls “an epistemology of ignorance.”⁴ Mills argues that an epistemology of ignorance is at the foundation of worldwide white supremacy. Beginning in at least the Sixteenth Century (and probably earlier) a “racial contract” with a global reach has been crafted and maintained by powerful Western interests. In describing the epistemological dimension of the racial contract, Mills, like hooks, argues that white supremacy requires of whites a deep misunderstanding of racial realities.

One could say then, as a general rule, that *white misunderstanding, misrepresentation, evasion, and self-deception on matters related to race* are among the most pervasive mental phenomena of the past few hundred years, a cognitive and moral economy psychically required for conquest, colonization, and enslavement. And, these phenomena are in no way *accidental*, but *prescribed* by the terms of the Racial Contract, which requires a certain schedule of structural blindnesses and opacities in order to establish and maintain the white polity.⁵

Barbara Christian’s essay “The Crime of Innocence” was published in 2001.⁶ According to Christian, the crime of innocence is neglecting or refusing to know in situations where knowledge would bring with it ethical dilemmas which require people “to take direct action that might disrupt their sense of themselves and those to whom they are related.”⁷ In her essay Christian lists 13 examples of the crime of innocence as it appears in the contemporary United States. Here are two of her examples:

4. This is a nation which pays homage to its children as its future. ... Yet this is also a nation which cares little about poor children, finds it difficult to support educational institutions, and generally characterizes young people, not adults, as being the cause of many of the evils of the society. ...

6. This is a nation that proclaims itself the champion of women’s

rights and reviles other nations for their backwardness, yet practices an unprecedented rate of violence against women. ...⁸

Christian argues that innocence is unethical in a democracy because the practice of innocence makes equality impossible. Equality in the United States will not be possible until, as a multicultural society, every one recognizes that we are all, in complex ways, touched by and participate in the crime of innocence. Only then does social justice become possible. Charles Mills makes this same point with respect to global white supremacy. The epistemology of ignorance, together with the other elements of the racial contract, points to a global crime of innocence—of a refusal by whites and those who support or mimic whites to engage in global social justice.

The phenomenon which Christian, Mills and hooks so eloquently describe has been a topic of discussion within the black community in the United States for over 175 years. In 1829 David Walker in his *Appeal to the Colored Citizens of the World* asked a simple question—Why is it that white people are unable to recognize the humanity of black people?⁹ Walker's answer to the question was that white people (in the United States, at least) were unable to recognize the humanity of black people because their "secret monitor," which God has placed in every human and which gives us the capacity to recognize other humans, has been ruined by the avarice and greed of white Americans.

For Walker the ignorance of whites rests on the white desire to dominate and control all of the world with which whites have contact. In Mills' analysis, too, the racial contract contains not only an epistemological subcontract but also an "exploitation contract" which allows Western consumer culture to dominate, control and destroy other cultures and their people while refusing to recognize the value of these cultures or the full humanity of their peoples. Mills refers to these refusals as the "political subcontract" and the "moral subcontract," respectively.

This wealth of analysis and argument, whose highlights I have only briefly presented, has to give pause to anyone such as myself—white male academics who are primarily theorists—and to all men and women both academics and nonacademics who are working within the Western traditions of the human sciences. We must pause to ask to what extent are our practices implicated in the crime of innocence and the epistemology of ignorance; to what extent implicated in the exploitation, political or moral contracts which support white supremacy. Assuming with Christian, Mills, hooks and Walker that we are implicated, we must pause, too, to wonder

how we might be able to free ourselves. Before I turn to a discussion of what guidance Goethe can give us with our practice, I would like to point out that the epistemology of ignorance is not limited to the human sciences. It is to be found in Western natural science as well.

II

Western science was never immune to the social forces which hooks, Mills and Walker describe. When a traditional Hau De No Sau Nee Native American asks why it is that whites cannot see that “all living things are spiritual beings,” that humans are “a part of creation, and that [their] duty is to support Life in conjunction with the other beings,” and that humans should give thanks for “the corn, beans, squash, the winds, the sun. When people cease to respect and express gratitude for these many things, then all life will be destroyed and human life on this planet will come to an end,”¹⁰ Walker has a ready answer. Mills can point to the exploitation contract which has been applied as equally to the lands and resources of nonwhites as to their cultures and lives. Modern science developed in the same context as the racial contract.

In the early Seventeenth Century Francis Bacon and Rene Descartes set foundations for Western science which contain the same passion to dominate, consume and control nature as Mills has described in the case of the racial contract. Carolyn Merchant in her now classic book *The Death of Nature*¹¹ makes clear how both Bacon’s empiricism and Descartes’ rationalism yield an understanding of nature which turns it into a resource—an Other—which the West can dominate and consume, deploying the same vision of the world which is to be found at the root of hooks’ eating of the other.

Bacon urged that we penetrate to the “bowels of nature” in search of its most fundamental causes. His inductive empiricism employs a series of experiments which by “vexing nature” allows scientists, working in collaboration, to discover the laws by which nature works. Knowledge is attained when science can reproduce the actions of nature so that control over nature is achieved. Thus, Bacon established what Antonio Perez-Ramos has called “the epoch-making equation between knowledge and power.”¹² Merchant makes a close examination of the implications of Bacon’s link between knowledge and power by highlighting Bacon’s view that nature must be “bound into service” and made a “slave” through the use of experiments which will force nature to give up “her” secrets. According to Merchant, in

Bacon's thinking the inquisition and torture of witches and the experiments of scientists were both modeled on the interrogation of witnesses in a court of law. They both exhibit the power of men over nature.

On the other hand, Descartes' rationalism based truth on intuition, that is, on the pure light of reason which reveals to us, most fundamentally, that we exist, that we are thinking beings, that there is an absolute difference between thinking substance and physical substance and that the best knowledge is not derived from the senses but should be modeled on the basis of geometry and mathematics of whose first principles there can be no doubt. From these beginnings Descartes concluded that our bodies, animals, indeed the world as a whole, are all machines. The world machine works on the basis of the push-and-pull, raise-and-lower physical causality which Descartes observed in the windmills, watermills and clocks which were in wide use at the beginning of the Seventeenth Century.

In spite of the fact that Bacon's empiricism and Descartes' rationalism utterly disagree on the source of our best knowledge, they have been formed into the (albeit unstable) alliance we loosely call the scientific method. They meet comfortably in their aggressive approach to nature. For Descartes a proper understanding of machine-nature requires it to be disassembled into its parts to thus penetrate into nature's bowels, nooks and crannies, as Bacon recommended. The empiricist interest in having the observed data speak for themselves rested less comfortably with Descartes' interest in turning all observations into numbers and all relationships into equations which could be plotted on his coordinates.

To save the powerful usefulness of Cartesian mathematics empiricist thinkers introduced the distinction between primary and secondary qualities. The qualities presented to us by our senses of sight, touch, taste, smell and hearing are secondary qualities. They are said to be the result of the actions of objects on us. Qualities which could be mathematicized such as motion and mass were said to be primary. They reside in the objects themselves. Thus, the nature which empiricism studies does not contain the secondary qualities. It contains only quantifiable properties. The epistemology at the basis of this method is an epistemology of ignorance for it guarantees that all we can know is what can be turned into numbers by the very mathematics devised for the natural sciences to do their work of domination and control. We know nothing but what our preconceived purposes allow us to know. We turn our backs to all else.

The German philosopher Immanuel Kant has given the best description of this epistemology of ignorance that I have found. The description is in the

preface to the second edition of his *The Critique of Pure Reason* published in 1787. In 1787 modern science had developed for 150 years beyond the work of Bacon and Descartes. Isaac Newton had been dead for 60 years. Kant's project was to give modern science a philosophical foundation that would guarantee that its mathematicizations accurately represent nature. He also wanted to preserve a place for the legitimacy of ethics and religious belief along side a mechanistic nature operating in terms of fixed laws. In Kant's statement we hear the echo of Bacon's call for science to dominate and hound nature while it endorses a Cartesian epistemology of ignorance:

[Students of nature] learned that reason has insight only into that which it produces after a plan of its own, and that it must not allow itself to be kept, as it were, in nature's leading-strings, but must itself show the way with principles of judgment based upon fixed laws, constraining nature to give answer to questions of reason's own determining. Accidental observations, made in obedience to no previously thought-out plan, can never be made to yield a necessary law, which alone reason is concerned to discover. Reason, holding in one hand its principles, according to which alone concordant appearances can be admitted as equivalent to laws, and in the other hand the experiment which it has devised in conformity with these principles, must approach nature in order to be taught by it. It must not, however, do so in the character of a pupil who listens to everything that the teacher chooses to say, but of an appointed judge who compels the witnesses to answer questions which he has himself formulated.¹³

Thomas Wartenberg has carefully analyzed the structure of Kant's understanding of science.¹⁴ Wartenberg's research confirms that the passage I quoted above accurately characterizes Kant's position. Wartenberg concludes that Kant claims that theoretical ideas—concepts used in science whose use is not justified by means of a reference to experience—are used in the interrogation of nature.¹⁵ The practice of science sets goals which direct these interrogations. For example, Wartenberg discusses Kant's transcendental principle of genera which he states as follows:

Inner and outer nature have such regularity that the concepts that we use to describe them must be capable of unification into a highest genus.¹⁶

Such theoretical ideas function “to provide the scientist with the focused attention toward nature that is characteristic of scientific experimentation,” Wartenberg says.¹⁷ He also observes that for Kantian science “[e]xperience without the guidance of ideas would be a rather passive affair in which the scientist merely accumulated observations made from nature.”¹⁸

I have spent this time on Kant and modern science for two reasons. The first reason is, looking forward, that this information will allow us to see the radical nature of Goethe’s delicate empiricism. The second reason, looking backward, is to demonstrate that modern science constitutes an eating of the other in that it consumes and digests only that which is compatible with its own interests, viz., the domination and control of nature. We shall see that this interest even infected the vision of human potential implicit in the Baconian-Cartesian-Kantian way of thinking which, in turn narrowed unnecessarily the vision of the transaction between humans and nature.

III

Goethe named his scientific method delicate empiricism. He described it in three aphorisms as follows:

Someday someone will write a pathology of experimental physics and bring to light all those swindles which subvert our reason, beguile our judgment and, what is worse, stand in the way of any practical progress. The phenomena must be freed once and for all from their grim torture chamber of empiricism, mechanism, and dogmatism; they must be brought before the jury of man’s common sense.

Nature will reveal nothing under torture; its frank answer to an honest question is “Yes! Yes!—No! No!” More than this comes of evil.

There is a delicate empiricism which makes itself utterly identical with the object, thereby becoming true theory. But this enhancement of our mental powers belongs to a highly evolved age.¹⁹

In 1807 Goethe wrote a short essay titled “Our Undertaking Is Defended,” which in 1817 became the introduction to his book on morphology. Here is the first paragraph of that essay:

When people of lively intellect first respond to Nature's challenge to be understood, they feel irresistibly tempted to impose their will upon the natural objects they are studying. Before long, however, these natural objects close in upon us with such force as to make us realize that we in turn must now acknowledge their might and hold in respect the authority they exert over us. Hardly are we convinced of this reciprocal influence when we become aware of the twofold infinitude: in the natural objects, of the diversity of life and growth and of vitally interlocking relationships; in ourselves, of the possibility of endless development through always keeping our minds receptive and disciplining our minds in new forms of assimilation and procedure.²⁰

In Goethean science people of lively intellect may at first want to impose their will on nature but they soon come to sense the force and authority which nature has over them. Consider the difference between the people of lively intellect and the Kantian scientists. Kantian scientists require theoretical ideas to focus their attention. Without these ideas the scientists would only passively accumulate observations. They would be collectors, not experimenters who are generating knowledge. In Kantian science there appears to be no sense of nature as an active force which may of itself focus our attention. Kantian science assumes that nature comes in unconnected bits which one could only randomly collect unless one had a theory by which to organize them. There is no recognition of "the vitally interlocking relationships" which are impressed upon people of lively intellect. Modern science with Kant as its spokesman shows itself to be blind to what the lively intellect can see. The world of people of lively intellect is a totally different world from the world of those who choose to be guided by theoretical ideas.

Since I believe that modern Kantian science incorporates an epistemology of ignorance, I am intrigued by the very different world of Goethean scientists who appear to be open and receptive to developing new ways of understanding. I wonder whether developing a lively intellect would be a useful tool in the struggle against Mills' racial contract or our culture-bred inclination for whites to eat the Other. People with lively intellects allow nature to pry them open and pour into them as they reach out to understand it. Goethe says: "[O]ur full attention must be focused on the task of listening to nature to overhear the secret of her process, so that we neither frighten her off with coercive imperatives, nor allow her whims to divert

us from our goal.”²¹ Suppose one’s full attention were to be focused on the task of listening to voices of Others in such a way that those voices, to quote Goethe again, “close in upon us with such force as to make us realize that we in turn must now acknowledge their might and hold in respect the authority they exert over us.” Imagine in this process becoming aware of a “twofold infinitude:” first, in the diversity of those voices and the vitality of the relationships among them; and, second, in the way in which one can undergo transformation as one stays receptive to what those voices are saying. I am very attracted to this image; to experiencing this process of understanding and change.

Lets take a closer look at the nature of the lively intellect. Goethe’s way of “listening” to nature involves a reversal of will from a posture of making demands upon nature to a posture of actively receiving what nature has to offer. This reversal has a dual effect. On one hand, nature reveals itself as “alive, active, with its efforts directed from the whole to the parts,” Goethe says. On the other hand, specific capacities of the human mind come into view. In what follows it will best serve my purpose to focus on the capacities of the lively intellect rather than on what the lively intellect discovers about nature. However, Goethe describes these capacities in terms of the lively intellect’s interaction with nature. Because Goethe regards nature as a living whole which exhibits “life and development from an unknown center toward an unknowable periphery,”²² and because he believes the life of nature is destroyed when wholes are mechanically divided into their parts,²³ I believe that it is legitimate for us to see Goethe’s nature as an Other and, thus, it is legitimate to think of human Others as we read Goethe’s descriptions of the capacities.

Three important capacities of the lively intellect which distinguish Goethean method from modern science are intuitive perception, perceptive imagination, and our ability to synthesize. Intuitive perception (Goethe’s *Anschauung*) is our capacity to grasp a whole through the study of its parts and to see the parts as a manifestation of a unified whole. Goethe describes this process as follows:

Two needs arise in us when we observe Nature: to gain complete knowledge of the phenomena themselves, and then to make them our own by reflection upon them. Completeness is a product of order, order demands method, and method makes it easier to perceive the concept. When we are able to survey an object in every detail, grasp it correctly, and reproduce it in our mind’s eye, we can say that we

have an intuitive perception of it in the truest and highest sense. We can say it belongs to us, that we have attained a certain mastery of it. And thus the particular always leads us to the general, the general to the particular. The two combine their effects in every observation, in every discourse.²⁴

When we study an organism we are presented with a *Gestalt*—“the complex of existence presented by a physical organism,”²⁵ Goethe says. *Gestalten* appear to be stable, but Goethe reminds us that if we look closely there is no fixity or rest—“everything is in a flux of eternal motion.”²⁶ From a series of *Gestalten*, we can begin to create a *Bildung* of the organism. A *Bildung* is a more complete understanding of the organism which includes its ordered changes over time and an understanding of it as an adult or mature being. It is intuitive perception that allows us to take *Gestalten* and create from them a *Bildung*. A *Bildung* comes into existence as more than the sum of the *Gestalten* which are used to form it. Our own powers of understanding and synthesis (Goethe uses *Vernunft* to capture this power) are employed in creating a *Bildung*. A *Bildung* is more than the sum of its *Gestalten* because in its creation we eliminate, by compiling more and more *Gestalten*, the accidental characteristics of individual organisms so we see more clearly each moment in the organism’s existence and the continuity of the organism develops through time. Delicate empiricism stresses both the continuity found in nature and the mirroring of this continuity in the method of delicate empiricism and as a characteristic of the lively intellect. *Bildungen* themselves can be used as *Gestalten* in a process which develops a more general *Bildung* of plant or animal. Goethe called such a very general *Bildung* an *Urphanomen*, usually translated archetypal phenomenon.

[E]mpirical categories may be further subsumed under scientific categories leading to even higher levels. In the process we become familiar with certain requisite conditions for what is manifesting itself. From this point everything gradually falls into place under higher principles and laws revealed not to our reason through words and hypotheses, but to our intuitive perception through phenomena. We call these phenomena *archetypal phenomena* because nothing higher manifests itself in the world; such phenomena, on the other hand, make it possible for us to descend, just as we ascended, by going step by step from the archetypal phenomena to the most mundane occurrence in our daily experience.²⁷

In his famous meeting with Schiller the description of which Goethe titled “Fortunate Encounter,” Goethe says that when he described *Bildung* and *Urphanomen* in order to suggest to Schiller “that there might be another way of considering Nature, not piecemeal and isolated but actively at work, as she proceeds from the whole to the parts,” the latter replied, “That is not an observation from experience. That is an idea.”²⁸ Goethe never accepted this Kantian characterization of his method. It is not an accurate description of our capacity of intuitive perception. It is intuitive perception which makes us “utterly identical with the object,” *via* the twofold process of taking the object into ourselves through the study of its *Gestalten* and, then, in the formation of its *Bildung*, seeing the liveliness of the object in the object itself. H. R. Stephenson describes this process as producing “a sort of stereoscopic co-ordination of two different modes of perception—embracing simultaneity and succession respectively—the insight gained has the character of solidity.”²⁹

Intuitive perception would not be possible without our capacity for what Goethe calls “perceptive imagination.” In the process Goethe calls exact sensorial imagination, the researcher incorporates into imagination each detail of a *Gestalten*, reproduces each detail from memory (usually by drawing it) and again turns to the phenomenon to check the accuracy of the memory. This process both sharpens individual memories of *Gestalten* and also begins the process of creating a *Bildung*. Goethe says imagination is first re-creative, repeating only the characteristics of *Gestalten* as in exact sensorial imagination. But, he goes on,

[f]urthermore, it is productive by animating, developing, extending, transforming the objects. In addition, we can postulate a perceptive imagination which apprehends identities and similarities . . . I do not mean an imagination that goes into the vague and imagines things that do not exist; I mean one that does not abandon the actual soil of earth, and steps to supposed and conjectured things by the standard of the real and the known. Then it may prove whether this or that supposition be possible, and whether it is not in contradiction with known laws.³⁰

As the *Gestalten* of an object are put in a series, the separate elements begin to interpenetrate in perceptive imagination. “[T]hey begin to present themselves to one’s observation as an organization manifesting an inner life of its own.”³¹ This is the heart of *delicate* empiricism. *Vernunft* brings together

the activities of our bodies and our minds into an indissoluble unity which, exhibiting continuity, utterly rejects the Cartesian split between the two. This leads Goethe to make comments such as this one on seeing:

... there is a difference between seeing and seeing; ... the eyes of the spirit have to work in perpetual living connection with those of the body, for one otherwise risks seeing and yet seeing past a thing.³²

The process of inquiry that employs intuitive perception and perceptive imagination exhibits the vital role which synthesis and continuity must play in our understanding of the world. However, *Vernunft* also exhibits a natural rhythm which brings to our attention the presence of polarity which is also required for synthesis. *Vernunft* exhibits a continuous circulation from the specific and individual (one pole) to the general and abstract (another pole) and back. Analysis and synthesis are poles. Goethe was concerned that the science of his own time had lost touch with our capacity for synthesis. "A century has taken the wrong road if it applies itself exclusively to analysis while exhibiting an apparent fear of synthesis: the sciences come alive only when the two exist side by side like exhaling and inhaling," he says.³³ Inhaling and exhaling are poles. Nature and we are poles. "Seeing and seeing" are poles. Polarity exists within synthesis and continuity. Synthesis and continuity exist only because there is polarity. Polarities are not opposing forces which can cancel one another. Their interaction is lively and complex. It always yields more than a sum of the parts.

As we draw nature into ourselves, as in taking a breath, we feel ourselves expanding, growing. Goethe likens this process to developing new organs of perception. He says, "Every new object, clearly seen, opens up a new organ of perception in us."³⁴ The use of *Vernunft* "demands a moulding (*sic*) of man's poor ego, a transformation so great that I should never have believed it possible. ... It is a synthesis of mind with the external world..."³⁵

IV

Almost twenty years ago Elizabeth Spelman made a bold suggestion to those of privilege who desire to learn from and promote social justice for those who have been marginalized. To bring about learning and justice Spelman proposed in her book *Inessential Woman* that persons of privilege become apprentices to Others.³⁶ Apprenticeship is the name which Spelman gives to the process by which people of privilege subordinate themselves to

Others. Apprenticeship teaches what the world of privilege looks like from the outside in. It teaches what it is like to be subordinated to the knowledge of another—knowledge which comes from a place which is unfamiliar—and to having one's own knowledge generating powers denigrated. It teaches the blindness of privilege and of the pain which that blindness can bring to others. It teaches of the strength which is generated by individuals and communities who live on the margins of privilege. According to Spelman,

[w]e know that racism and other forms of oppression result in (as well as require) lack of knowledge, especially a lack in the oppressors of real knowledge of the oppressed ... [T]he acquisition of such knowledge requires a kind of apprenticeship; and making oneself an apprentice to someone is at odds with having political, social and economic power over them.³⁷

Surely, there are more complications with respect to Spelman's idea of apprenticeship than I have considered. Yet, I can say that one complication is the extent to which this idea of apprenticeship is indeed incompatible with the apprentice having political or social or economic power over the master. Even the white persons of privilege who Charles Mills calls "race traitors"—those whites who "speak out and struggle against the terms of the [Racial] Contract"³⁸—will still inevitably benefit from the white supremacy which surrounds them. Spelman's apprenticeship requires an act of self restraint on the part of the apprentice based on a moral evaluation by the apprentice of the apprentice's privilege and of the social norms which surround the apprentice and the Other. Apprenticeship is not so much at odds with having social, political or economic power as it is at odds with embracing or accepting or acting on those powers. To avoid eating the Other, an apprentice must be a traitor—to one's race, class, or sex, even to science, if you are Goethe.

Consider the situation of Goethean scientists who have at their disposal all of the modern technology which has been developed to hound nature into her nooks and crannies in order to wrest away her secrets. The practices of intuitive perception, perceptive imagination and the use of *Vernunft* all require that Goethean scientists take the time to examine the modern technologies, to interrogate these technologies about the extent to which they mislead us, about the extent to which they can really be useful in the activity of synthesis and about the extent to which they generate knowledge which proceeds from wholes to their parts. These are moral questions about the

scientists' proper relationship with nature. Given the presence of these questions and the self-restraint—even the traitorousness—which they require, I think it makes perfect sense to say that to practice delicate empiricism is to make oneself an apprentice to nature. Thus, our first finding with respect to Goethean apprenticeship is:

Apprenticeship requires an intervention into the culture of the apprentice in which, through acts of self-restraint, the apprentice refuses the terms of the “contract” offered by the society which surrounds the apprentice. Apprenticeship is traitorous.

A second complication with respect to Spelman's notion of apprenticeship is that the apprentice must have a master who refuses to be eaten. Apprenticeship is empty if the master owes allegiance to the status quo or is envious of the apprentice. The apprentice must be confronted so that all of the apprentice's capacity for traitorous self-restraint is called into use and expanded. Apprentices must want this for themselves, for ultimately they alone will have to resist the inclination to turn away from masters who call for their best efforts. Depending on their level of intuitive perception and perceptive imagination, apprentices will struggle to understand what Frederick Douglass means when he says that not knowing his birthday left him with no intelligible beginning in the world; what Martin Luther King Jr. means when he says that African Americans occupy the moral high ground in the United States with a vision of justice that is necessarily more profound than the visions which white Americans can produce; what Malcolm X means when to him they are the blue eyed devil, or to David Walker who 130 years earlier suspected as much; or what Aime Cesaire means when he says that inside every white man there is a Hitler. To become an apprentice to this kind of knowledge is to face some of the most difficult learning there can be. It is the kind of learning which rocks a white person's foundations.

The teachings of their masters give apprentices opportunities to open new organs of perception as apprentices collect one *Gestalt* at a time, placing them side by side to develop larger ideas about the nature of their own worlds and the worlds of their masters. *Bildungen* of privilege, of oppression, of racism and sexism slowly grow as *Gestalten* are collected and then merged by the imaginative and synthesizing powers of *Vernunft*. Over time apprentices can come to understand their masters' strengths and weaknesses. It might become clear in what ways one master has been seduced by privilege while another resists the same seduction. A compilation of *Gestalten* of masters

may yield an image of an *Urmeister* totally unsuspected by privilege and fully committed to social justice. A compilation of Gestalten of apprentices may yield an image of an *Urlehrling* who has set aside all resistance to taking on the most difficult learning, who can role with the blows as new organs of perception open—our military gave Native Americans blankets deliberately infected with small pox!—who is developing an identity which does not depend on privilege but upon a vision of social justice which involves a local practice infused with a global perspective. Thus, another finding with respect to Goethean apprenticeship is:

Apprenticeship to a science which does not eat the Other requires courage, diligence, commitment and effort on the part of humanists, human scientists and natural scientists alike. Apprentices are guided by Goethe's image of the refined age when the torture chambers of empiricism have been closed and the savage inequalities between us have disappeared and our best capacities of perception and imagination have become the cultural dominant.

A third complication associated with Spelman's idea of apprenticeship is the possibility that there may be no masters; that there may be no Other who wants to have privileged people as apprentices. It is true that African Americans, Native Americans and many Others have offered themselves as masters for apprentices of privilege. Yet, none of these persons was obliged to be a master. When the privileged assume and expect that people of color will offer themselves as masters, they are acting on the basis of privilege. It is an eating of the Other to insist that it is the burden of the Other to help fix the mess which white colonization has created in the world. It is an eating of the Other to assume that Others will so organize their lives and sensibilities as to be ready at any time to respond to a white interest in learning the truth about the culture of the Other or the truth about how oppression really hurts. If this is the situation the master is enslaved to the apprentice. Apprentices must remember that there would be no call for masters if the culture of the apprentice had not already engaged in oppression and colonialism.

The burden rests on would-be apprentices to prepare themselves to serve a master. We have already seen that apprentices to a science which does not eat the Other must be traitorous, courageous and committed to a vision of social justice—Goethe's refined age. Apprentices also must strive for knowledge of the history of the brutality which those with privilege and power have perpetrated against Others. There are numerous accounts

of this brutality produced by its perpetrators. Apprentices need to learn their own history—not just to learn *about* its glories but to learn *from* its brutalities. *Learning from* is using delicate empiricism. *Gestalten* are not celebrated as individual events that are *learned about*, but are used to create a sense of the whole. A sense of the continuity in which *Gestalten* are immersed. A sense of the synthesis of glories and brutalities.

This learning is a fundamental foundation for, first of all, the apprentice's ability to set aside any resentment the apprentice might feel about having to accommodate to Others' ways of thinking about the apprentice. Apprenticing oneself to the Other's image of oneself is facilitated by historical knowledge that challenges one's fantasies about oneself and encourages one to abandon all fantastical rapture which might accompany contemplating Western civilization.

Second, this learning is fundamental for the apprentice's ability to resist quickly offering or insistently demanding immediate solutions to the problems or immediate corrections to the circumstances which usually create horror, revulsion or guilt in the privileged person. It is a sign of privilege and an act of eating the other that a person experiencing these feelings should be able to control how Others respond to the problems or circumstances. Just because I am upset does not give me leave to respond to my feelings by imposing a solution which might not be satisfactory to all those affected by the situation. Solutions are created by the careful collection of *Gestalten* from all who are confronted with the problem or circumstance. When privileged people take on the role of apprentice or take up problems which are introduced by Others, those people should not expect special gratitude or thanks. Beyond the fact that the existence of privilege caused the problem in the first place, an apprentice of a synthesizing science, who works from wholes to parts as well as from parts to wholes, knows that there are no problems which are "yours" and not also "ours." Thus, a third finding respect to Goethean apprenticeship is:

The apprentice is a practitioner of a science which does not eat the Other. A science which does not eat the Other is a deeply moral science as exhibited by the restraint which it requires and by the ethical considerations which ground that restraint. Thus, the role of apprentice is a role which we must all play in various ways depending on the subject of our investigations.

I have been able to expand upon Spelman's idea of apprenticeship by placing it into the context of Goethe's science. Part of that context is

Goethe's very rich idea of imagination which is the basis of our transaction with nature, including one another. In her work Spelman draws on a far less rich idea of imagination. She employs Sartre's idea of imagination which, from Goethe's point of view, is limited to the simple power of creating images which have no connection to experience. Spelman puts it this way:

Sartre claims that one of the pleasures—a suspect one, to be sure—of imagining someone or something is that there is never anything recalcitrant, resistant or unwanted about the image, for you never find anything in an image except what you put there.³⁹

Spelman and Goethe agree that Sartre's understanding of imagination is of no use to the apprentice. Spelman, not having Goethe as a guide, is forced by Sartre to contrast imagination with perception. Goethe, on the other hand, would contrast intuitive perception and perceptive imagination with Sartre's more limited understanding of imagination. I would urge that we follow Goethe so that we may retain a sense of the transaction which is involved in knowing. To use "perception" as the opposite of "imagination" perpetuates a misunderstanding of our relationship to the objects of our knowledge. It perpetuates a Kantian and mechanistic mistake which threatens to plunge the apprentice into solipsism.

V

Finally, let us return to Kant's description of scientific method. For Kant, students of nature approach the object of their study holding in one hand principles of reason or judgment, and in the other hand an experiment (devised in conformity to the principles) by which to be taught by nature. However, being taught by nature is not to become an apprentice but to be a judge who compels nature to answer questions which the judge has formulated. The questions are formed using the principles of reason, which are also the principles of mathematics and logic. In contrast to Kant, Goethe thought that a "strict separation" should be maintained between natural science and mathematics.⁴⁰ In one of his most famous essays, "The Experiment as Mediator between Object and Subject," he says:

From the mathematician we must learn the meticulous care required to connect things in unbroken succession, or rather, to derive things

step by step. Even where we do not venture to apply mathematics we must always work as though we had to satisfy the strictest of geometers.⁴¹

Goethe refused to turn *Gestalten* into numbers. For them to teach us anything *Gestalten* must be placed in temporal or developmental succession so intuitive perception and perceptive imagination, responding to the continuity and polarity of nature, can formulate general ideas about the larger complexes to which they belong. The mathematics of Goethe's age froze things into place blocking our synthesizing capacities and thus causing an apprentice to lose track of the transactions between *Gestalten* and, thus, their liveliness. Even, indeed, their willingness to speak at all.

Consider what is likely to happen if a person of privilege were to approach an Other in the manner of a judge who plans to compel a witness to answer questions of the judge's own devising. Would you stay around for such an interrogation? You might, if you were being paid enough or if you were a sycophant or if the judge had incarcerated you. We can easily recognize that conditions such as these will not inspire confidence in the results of the investigation. On the other hand, it is both practical, i.e., effective for gaining knowledge, and ethical to approach another human in the attitude of an apprentice. Nor is nonhuman nature any different. Think of the apprenticeships which gorilla watchers serve. Do not plant watchers serve as well? And, microbe watchers too? Thus, a fourth finding with respect to Goethean apprenticeship is:

The science which does not eat the Other is the science of life, in all of life's forms.

We have a well-developed science of nonlife that we have been honing for several centuries. We have applied it to everything, humans included. We might be tempted to turn the tables and apply the science of life to everything, rocks included. I think Goethe would advise against this move. His tendency to see polarity and continuity everywhere in nature would have led him to find it inevitable and appropriate for someone (with a lively intellect) who was exclusively using the science of nonlife to become aware of the fact that life was pushing back, demanding to be recognized. And he would have found it inevitable and appropriate for someone who was exclusively using the science of life to become aware that nonlife was

pushing back, demanding a recognition of its own. Goethe would observe that as in his time so in our world the two sciences are way out of balance. Goethe promoted the science of life in his world. In our world as well there are hopeful signs that the science of life, and, through it, life itself, are demanding recognition.⁴²

* I am indebted to Steven Farrelly-Jackson, Jeanine Weeks Schroer and Tibor Solymosi for their helpful comments on earlier versions of this essay.

Notes

¹ hooks, b. (1992). *Eating the Other*. In *Black looks: Race and representation* (pp. 21-39). Boston: South End Press.

² Ibid, p. 21.

³ Ibid, p. 28.

⁴ Mills, C. (1997). *The racial contract* (p. 18). Ithaca: Cornell University Press.

⁵ Ibid, p. 19. Italics in the text.

⁶ Christian, B. (2001). The crime of innocence. In D. Batstone & E. Mendieta (Eds.), *The good citizen* (pp. 51-64). New York: Routledge.

⁷ Ibid, p. 57.

⁸ Ibid, p. 52, p. 53.

⁹ Walker, D. (1965). An appeal *to the* coloured citizens of the world, *but in particular, and very expressly, to those of* The United States of America. New York: Hill & Wang.

¹⁰ Akwesanne Notes (Ed.) (1981, Revised Edition). *basic call to consciousness* (pp. 71-72). Summertown, Tennessee: Book Publishing Company.

¹¹ Merchant, C. (1980). *The death of nature: Women: Ecology and the scientific revolution*. New York: Harper & Row

¹² Perez-Ramos, A. (1996). Bacon's forms and maker's knowledge tradition. In M. Peltonen (Ed.), *The Cambridge companion to Bacon* (p. 111). Cambridge: Cambridge University Press.

¹³ Smith, N.K. (1963). *Immanuel Kant's Critique of Pure Reason* (p.20). London: Macmillan & Co.

¹⁴ Wartenberg, T.E. (1992). Reason and the practice of science. In P. Guyer (Ed.), *The Cambridge companion to Kant* (pp.228-248). Cambridge: Cambridge University Press.

¹⁵ Ibid, pp. 229, 242.

¹⁶ Ibid, p. 235.

¹⁷ Ibid, pp. 243-244.

¹⁸ Ibid, p. 243.

¹⁹ Miller, D. (1995). *Goethe: The collected works, Volume 13. Scientific studies* (pp. 309 & 307). Princeton: Princeton University Press.

²⁰ Naydler, J. (1996). *Goethe on science* (pp. 86-87). Edinburgh: Floris Books.

²¹ Ibid, p. 72.

²² Miller, p. 43.

²³ Miller, p. 63.

²⁴ Miller, p. 155.

²⁵ Miller, p. 63.

²⁶ Miller, p. 63.

²⁷ Miller, pp. 194-95. Italics in the text.

²⁸ Miller, pp. 18-21.

²⁹ Stephenson, R.H. (1995). *Goethe's conception of knowledge and science* (p. 12).
Edinburgh: Edinburgh University Press.

³⁰ Naydler, p. 118.

³¹ Naydler, p. 83.

³² Ibid., p.115.

³³ Miller, p. 49.

³⁴ Ibid., p. 39.

³⁵ Naydler, p. 120.

³⁶ Spelman, E.V. (1988). *Inessential woman: Problems of exclusion in feminist thought* (pp. 178-183). Boston: Beacon Press.

³⁷ Ibid, p. 178.

³⁸ Mills, p. 107.

³⁹ Spelman, p. 108.

⁴⁰ Naydler, p. 65.

⁴¹ Miller, p. 16.

⁴² A few examples among many hopeful signs are James Lovelock's Gaia Theory, the work of Lynn Margulis and Dorion Sagan on the nature of life and evolution, the work of Brian Goodwin which explicitly appeals to Goethe's science, and the work of Eva-Maria Simms in early childhood development.

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