

**“Second Nature”: The Nature/Nurture Debate in
Enlightenment Pedagogical Thought, From Locke to Rousseau**

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ABSTRACT

By the mid eighteenth century, many French thinkers believed that education was the vehicle through which the aspirations of the Enlightenment could be realized. They saw the classroom as a laboratory in which philosophical discoveries could be applied directly to the practice of childrearing, autonomous individuals could be formed, and harmonious social relations fostered. As theorists attempted to translate philosophical ideas into educational practice, they shed light on the fundamental tensions that remain at the heart of liberal education today between nature and nurture, freedom and authority, self-interest and moral virtue, individuality and socialization.

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The problem of nature and nurture is a perennial one in modern thought. Each generation has sought to settle the case, only to find it reopened by the succeeding one. Today, as the battle is being waged by scientists and psychologists, few recognize that its origins are to be found in French Enlightenment debates about education and the learning process.

These debates were not inaugurated by Rousseau's famous treatise. *Emile* represents their culmination rather than their origin, a six hundred-page response to one hundred years of pedagogical rumination. A myriad of lesser known thinkers paved the way for Rousseau's masterpiece, establishing the powerful link between early childhood experiences and the success or failure of political and social relations, and setting the terms for the modern battle about the relative weight of nature and nurture in individual growth and collective life.ⁱ

John Locke: Habit and Nature, the Marriage

The troubled alliance between nature and nurture begins with the publication of John Locke's *Some Thoughts Concerning Education* in 1693. Locke was of course not the first philosopher to discuss the importance of education, and not the only reference for eighteenth century French thinkers. The

latter drew on a rich variety of educational and philosophical sources from antiquity, the Renaissance and the seventeenth century. However, Locke's prestige as the author of the *Essay Concerning Human Understanding* (1690) and the *Second Treatise of Government* (1690) afforded his educational work special credibility in the eyes of French thinkers, and they referred to his treatise more consistently and thoroughly than any other. Further, the English author did not merely write an educational manual, as did many of his contemporaries; in *Some Thoughts* he integrated key themes from his philosophy into an educational text, confronting questions of how liberty, individual identity, moral responsibility, and sociability could be instilled or experienced through the educational process. These were all central questions for French educational theorists, who saw the classroom as a laboratory in which new philosophical and scientific discoveries could be applied directly to the practice of child-rearing, autonomous individuals could be formed, and harmonious social relations fostered.

There is a great deal of debate about the extent to which Locke self consciously applied his political and philosophical views to education, but there is no doubt that some of the central issues from his *Essay* and *Second Treatise* made their way into *Some Thoughts*, and subsequently into French debates on education.ⁱⁱ In particular, Locke bequeathed to his disciples a complex legacy regarding the role of nature and nurture (or nature and *habit*, as Locke and eighteenth century thinkers put it), in the development of individuality and social life.

Human Nature: “As Easily Turned as Water Itself” or “Stamped with a Certain Character”

Locke’s battle with innatism was primarily directed against the idea that human beings are born with general truths and principles already formed in their minds. His view of the mind as malleable (*tabula rasa*) opened the door to the possibility that children were born free from original sin, and that education could have a profound influence on them. However, in *Some Thoughts* Locke appeared determined to avoid the use of the *tabula rasa* to rob individuals of freedom, or to make individual action strictly a result of external conditioning or “habit.” Much of his treatise is taken up with an impassioned defense of children’s innate temperaments, and the necessity for educators to mould their methods around the diversity of personalities.

Thus, in sections of *Some Thoughts* we hear Locke arguing that in the case of most people, “nine parts of ten are what they are, good or evil, useful or not, by their education. ‘Tis that which makes the great difference in mankind.”ⁱⁱⁱ He insists that “the minds of children (are) as easily turned this or that way as water itself,”^{iv} and that human beings are “a sort of chameleons that still take a tincture from things near us.”^v In other parts of the work, however, Locke claims that each child has a unique temperament that cannot be fully changed. He warns parents that “God has stamped certain characters upon men’s minds, which, like their shapes, may perhaps be a little mended but can hardly be totally altered and transformed into the contrary.”^{vi} He admonishes parents to “study their (children’s) natures and aptitudes,” and base education on the “unalterable

frame of their constitution,” their “prevailing inclination,” and “natural propensities.” In contrast to his emphasis on malleability, which he draws from the philosophy of his *Essay*, Locke’s focus on the dignity of children is intimately linked with the transposition of his political beliefs from the *Second Treatise* onto *Some Thoughts*; in particular, his assertion that it is in the nature of children to love and strive for liberty, and that they are endowed with reason which leads them to grow into free and sociable beings.

Virtue: Instilled through Habit or Drawn out of Nature?

Locke’s position on nature and habit complicates his ensuing discussion of human motivation, and the critical question of whether virtue is a cause or consequence of action. This issue will become especially important for French thinkers, as they attempted to formulate concrete methods for shaping personhood and social life from infancy, to create a match between the ideal of the new man—free, unique, imbued with rights and dignity—and the new society, made up of loyal citizens with a sense of duty toward each other.

On the one hand, drawing from his *Essay*, Locke argues that human beings are driven fundamentally by their desire to avoid pain and maximize pleasure. He insists that the senses are the central element in the learning process, and that in order for education to succeed it must provide children with sensually pleasurable experiences. Locke argues that the best way to lead children to morality is to appeal to their immediate needs and desires, conditioning them like animals through *habit*, with rewards and punishments, to

find pleasure in those things that produce what the educator defines as virtue. In this formulation virtue is a result of habit, and is linked to self-interest.

On the other hand, Locke argues that human beings are capable of using their reason (an innate quality) to resist their desires, and acting virtuously as a *result* of this resistance. He reaches beyond a simple interpretation of the pain-pleasure impulse^{vii} and suggests that higher motivations should be expected from children. When arguing this case, Locke forcefully condemns parents for allowing pleasure to act as a motivating force for children's actions, and insists that children be treated as rational beings rather than as habit-driven animals. They should be taught to find pleasure only in virtuous acts chosen by rational calculation, rather than in those accidentally stumbled upon in the course of pursuing self-interest.

Locke's analysis leaves his readers with several vexing questions: Is virtue primarily a result of children's drive to pleasure, or a higher moral consciousness? Is it to be instilled through habit in malleable children, or drawn out from their natural, innate tendencies? In their educational methods should teachers and parents focus on giving freedom to nature, assuming an innate sociability will emerge spontaneously, or should they instill sociability through strict discipline and trust that nature will not be violated in the process?

A Tapestry of Virtue

In *Some Thoughts*, it becomes clear that Locke considers parents to be the central conduit between the two phases of a child's life, from habit-

driven/conditioned to reasonable/moral. In describing the process of evolution between the two phases, he often draws on his analysis from the *Second Treatise*, where he argued that parents act as surrogates for children's reason and conscience while the latter are not yet morally mature.^{viii} But Locke does not explain at what point the moment of transition between the two states arrives, what guarantees that "natural freedom and subjection to parents may consist together," or how habit *becomes* virtue.^{ix} At what point, in other words, do children become truly virtuous beings, acting in the service of what they consciously understand to be "good," rather than conditioned animals responding to rewards and positive reinforcement?

In his elaborate attempt to reconcile nature and habit through education, we see that Locke was aware of the tensions between them but that he did not find these tensions to be as problematic as would his French disciples. One of the reasons is that, although in *Some Thoughts* he offered a strong critique of what he called "artificial" behavior, he did not equate the *external* with the artificial, as Rousseau would. In other words, influences could be brought to children from outside (through habit) and still *correspond* with nature. In one of the most famous quotes from his treatise, Locke argues that what a child receives from education are "habits woven into the very principles of his nature."^x He seems to imply that habit and nature grow harmoniously in the evolution of a child, and a new element is created from an equal combination of the external and the internal. By carefully weaving together the dangling, incomplete threads of natural disposition and externally induced actions, a unified pattern of behavior

can be produced. Habits should not be seen as the imposition of artificial custom but the product of what our parents' reason has helped them understand of the laws of nature and childhood. As a result, parents can help children (through nurture) evolve into what they are (naturally) destined to become. Reason and moral conscience can in this case be compared to linguistic ability: although an innate quality, if left untrained it might never develop, or can be permanently impaired.

Thus in *Some Thoughts* Locke does not feel the need to take a clear position (as Rousseau will) on whether human nature is good or bad, leaving us instead with the idea that the true nature of a person is his or her *second nature*—that combination of universal human disposition, individual temperament, and habits developed through education by reasonable people who have an understanding of God's purpose and of human potential.^{xi}

Habit and Nature in Early French Enlightenment Thought: A Troubled Partnership

The question of whether moral conscience was drawn out of or implanted into children became a topic of increasing concern for early eighteenth century French thinkers, who deliberated these matters in the context of the urgent questions of their time; in particular, how to wrest education from the hands of religious authorities, enlist education in the service of a stronger and more united nation, and turn pupils into productive and responsible citizens. In addressing these issues, French theorists elaborated a sophisticated child psychology and

developed experience-based methods of instruction, founded in great part on sensationist thought. They insisted that impressions must be inserted into a child's mind in proper order, that all learning be pleasurable, and that educational material correspond to a child's stage of development.^{xii}

The impact of sensationism is most clearly reflected in two aspects of eighteenth century pedagogical thought. The first is the theory of effortlessness, elaborated in great detail by educational thinkers who believed that children could only absorb knowledge if their learning experiences were entirely free of pain and effort. A close analysis of educational texts shows to what an extraordinary degree early eighteenth century theorists prefigured some of the most famous principles and tales from *Emile* regarding pleasurable and experiential learning.^{xiii} The impact of sensationist thought can also be heard in the fierce attack on corporal punishment waged by pedagogues during the French Enlightenment. The debate about corporal punishment reveals how profoundly sensationist psychology had affected traditional views of discipline and morality, and exemplifies the tentative alliance between a nascent form of child psychology and a new political ideal of citizenship based on the model of the social contract.

In their discussion of corporal punishment, theorists argue on pedagogical grounds—that beating damages children's ability to learn by interfering with natural brain processes—and on political grounds, that it creates a slave like disposition, preventing children from developing the self respect, discipline, and social skill required of citizens. A new kind of self-mastery is required of children,

which takes longer to instill than the brief moment between the crack of the whip and the shriek of the victim.

Even those thinkers who were not converted to the power of nurture and environmental influence approached the question of beating through the lens of sensationist thought. One of the most passionate attacks on the practice was articulated by the rector of the University of Paris Charles Rollin, a Jansenist who retained a strong belief in the power of nature—as manifested in original sin—and the need for strict discipline. In his *Method of Teaching and Studying the Belles-Lettres* (1712) Rollin attempts to extract all the pain from the pain of beating, leaving only an experience that is developmentally suitable and morally satisfying.

First, Rollin compares beating to a dramatic cure for a deadly disease, never to be used except as last resort, and then to be implemented with the caution of a surgeon. He warns that a child must never be hit in passion or anger; the teacher must wait till the child understands his fault and agrees with the punishment. Further, he argues that punishments should be like laws. They must never mirror temperament of individual teachers but reflect universal rational rules. Children will thus learn to understand the purpose and rationality of school rules as laws, as adults will accept the integrity of law and punishment in society. The purpose of punishments is thus not to engage or break the wills of children but to mold their attitude to fit the needs of school and later the society.^{xiv}

From a Foucauldian perspective, one can of course discern in Rollin's description the more sinister elements of the new educational philosophy.

Children were taught to be docile, and to choose the conditions of their own subjection. Their constant surveillance was recommended, and teachers were to create a science of education based on their observations of students' behavior. In a very telling passage from Rollin's *Treatise* we see how freedom and coercion, habit and nature, are entwined in the educational process in ways both reformist and repressive. Law, Rollin writes, is a hard and imperious teacher, threatening men's liberty, deaf to their desires, always adopting a menacing tone. Not surprisingly, men do not listen to the law, and constantly give in to natural penchants. But education, he says, is different;

It is a soft and insinuating mistress, enemy of violence and constraint, who only takes the route of persuasion, only offers the fruits of instruction in the voice of reason and truth, and aims to render virtue easier in rendering her more pleasant. Her lessons, which begin almost at the moment of the child's birth, grow and strengthen with him, in time throw profound roots, pass soon from memory and spirit into the heart, imprint themselves daily in his manners through practice and habit, become in him a *second nature* almost incapable of change, and in the course of his life act in the function of an ever present legislator who at each occasion shows him his duty, and compels him to practice it.^{xv}

Education is thus non-violent but self-regulating, a subtle and intricate process of character building, through which a series of habits somehow transforms, and yet never violates, nature. Through education a *second nature* is created, which faithfully reflects the wishes of society, and yet remains fully in accord with human disposition. The relationship between law and education becomes increasingly intimate; the specific purpose of education is to internalize law by non-violent means, to insert a permanent "legislator" inside children.

Foucauldian approaches, however, fail to capture the inventiveness of this unique moment in educational thought, sandwiched between stale methods of

rote learning and what would become a narrow form of utilitarianism later in the century. In this period of exploration many theorists embraced their lack of knowledge about childhood and human nature, allowing children and the process of learning to define education. They considered children to be bearers of the hidden clues to the state of nature, and in many cases a spirit of spontaneity and discovery guided their observations. Their sensitivity to children's needs and insights about psychological health were striking, and they were passionately driven by the belief that a well-treated mind was fertile ground for social-moral growth, and that only children whose dignity had been cared for could form a mature society.

Shifting the Burden of Sin: The Innocent Child versus the Guilty Teacher

In their endeavor to create an educational model that would prepare children for this mature society, most French theorists aim to develop a secular morality and free children from the burden of original sin. And yet they clearly worry about the effects of a philosophy emphasizing self-interest as the motivating force to action, and the environment as the sole influence on youth. Consequently, they embark on a delicate balancing act between nature and habit, giving equal weight to both in theory. In practical discussions of method, however, their increasing focus on malleability and the influence of the environment leads them progressively to abandon moral standards for young people. They shift the burden of bad children from nature to teachers and parents who, given children's neutrality and openness to experience, are to blame if they

develop negative dispositions. Such traits as curiosity and credulity, once considered a sign of children's stupidity, are now the fountain of potential. Theorists focus especially on bad habits created by early experiences, and on intellectual rather than moral error, which is said to be responsible for depravity in childhood and adulthood.

Neither John Locke nor French theorists discovered the danger of bad habits. Most religious educators referred to the warnings in Scriptural passages that habits acquired in childhood cannot be erased,^{xvi} and the Jesuits in particular developed a sophisticated philosophy of "éternelle vigilance"^{xvii} in order to closely monitor children's actions and ensure that they never commit vice. The difference between traditional and Enlightenment ideas concerning habit and the environment is that, during the late seventeenth and early eighteenth centuries, habits shift from being experiences that can negatively or positively affect an already determined nature, to being the *essence* of nature itself, the fundamental channel through which character and individuality are formed. Since the danger not only comes from, but has its *source* in, the "outside" (rather than being a reflection of inherent vice), it is not insurmountable. The faults of children are increasingly blamed on parents, schools, cities, or the vices of the times. The idea of children as weak is slowly translated into the positive idea of the inherent strength of youth, a strength based on its potential.

Even parents, whom Locke had entrusted with the delicate work of passing the baton of reason to children, are slowly excluded from the educational process as French pedagogues become increasingly suspicious of all

environmental influences. On the one hand, theorists attempt to construct a solid bridge between the kind of freedom children learn in the family, and that which they will enjoy in society, based on more egalitarian social and political relations.^{xviii} On the other hand, educational thinkers believe they are developing a new model of pedagogy, based on a philosophical and scientific understanding of the human mind. This new pedagogical science can only be learned by specialists, in particular, educators and lawmakers. It is thus inaccessible to parents, and cannot be transmitted in the home. Eager to loosen the hold of religious values and institutions, and convinced that the principal goal of schools must be to impart a secular morality and form children into citizens, theorists assert the rights of the state, over those of the church or parents, to instruct children. Initially, they criticize parents for their ignorance of educational matters and encourage them to become better informed. Later, they regard parents with suspicion and consider them to be a noxious influence on their own children. Finally, many educators argue that parents are not to be trusted with the education of future citizens, and children must be removed from the home at an early age. Parents, now associated with a dangerous environmental influence, are excluded from the educational process. Eventually the same fate will befall teachers, who are rejected in favor of legislators.

The Fear of Habit and “The Limits of Reform”^{xix}

Thus the environment, embraced for its potential influence on malleable children, was also perceived by educational theorists to be an enormous peril.

Discussions of nature often acted as a corrective to this worry, as theorists expressed confidence that a moral center lay in children even if it was susceptible to external influence. However, although educational writers in the eighteenth century pay great homage to the concept of nature, the term is often too complex and ill defined to rescue them from their mounting fear of nurture.^{xx} In general, nature is invoked as an order that exists in the universe, in the bodies and minds of human beings, and potentially, in social relations. This order is mirrored in each individual, and can be discovered by studying children. On the one hand, therefore, nature is something stable and unalterable, and its fundamental core must be respected in the educational process. As manifested in the individual it can include the will to self-preservation, a sense of self-love, the search for happiness, an understanding of God, the ability to reason, sympathy for others, and natural sociability. On the other hand, in as much as nature is reflected in the sensual quality of human beings, it is “universal” only in the sense that *all* individuals are born with the tendency to be as flexible and pliable as wax, open to external influence, and ultimately, radically *differentiated* from each other. Thus nature can be altered easily, and, through habit formation, can become “second nature,” a superior (or inferior) variant of itself. At the core of these conflicting definitions are contradictory arguments that a child’s nature must be respected, if not revered, and controlled, if not suppressed.^{xxi}

Thus, while nature is lauded as the great teachers-guidebook, discussions increasingly focus on the all-powerful environment. Pedagogues do not trust that

nature can hold its own when confronted with nurture, and explore various ways they can place limits on children's experience of the world.

These limits were most strongly articulated in discussions about the education of women and the poor. As many scholars have shown, although the idea that education can create a second nature leads theorists to hail its transformative powers, many panic as they realize that opening the doors of opportunity to all individuals could threaten traditional hierarchies.^{xxii} Their response is to develop a *preventative* view of education for the poor and women, based on the idea that the dangers of withholding education outweigh those of extending it. They argue that a basic instruction should offer the poor and women skills and knowledge that conform to their "destiny," prevent them from harming themselves or others, and allow them to obtain some personal fulfillment while simultaneously serving the interests of society. The purpose of their education is defined strictly according to the criteria of social utility and safety.

I would like to point out, however, that notwithstanding the very real limits placed on the instruction of women and the poor, the new concept of education born in France during the eighteenth century is both expanded and restricted for almost *all* individuals, and in many different ways. In theory, the trend to broaden the definition of education is pedagogically progressive. Theorists reformulate their concept of learning to include experiences outside the classroom and beyond books, incorporating elements of everyday life into their understanding of growth and human development. They come to believe that, if sense impressions determine being, then all of life is an educational event, and the millions of

experiences that children have outside the classroom determine their nature. However, the same insights also lead theorists to extend their influence over everything that children do and think outside of school, and the impulse to aspirate all of life into the physical space of the classroom—or the intellectual space of the educational process—is present in almost all French educational works during the eighteenth century. The emphasis on practical, life-oriented learning is continually betrayed by theorists' lingering distrust of the “real world,” and although educators claim that they want children to act as little scientists who directly observe society and nature, touching and experiencing all aspects of life, in fact they never really want to let children “out.” Instead, they ruminate on the best ways to offer young people defenses against reality from within the walls of the school. The limits placed on education are not confined—although certainly applied in extreme form—to certain segments of society.

One of the clearest illustrations of this trend can be found in the Abbé Fleury's analysis of education, which he insisted must be based on the “nature” and “destiny” of each group of learners. After having described the many reasons why the education of women and the poor should be limited, Fleury uses almost the exact same restrictive language and terms when discussing the education of the nobility and clergy.^{xxiii} Because of their “nature” as brute (nobles of the sword) or indulgent (clergy) they must ensure that all their time is usefully engaged, that they never remain idle. They must be trained only in subjects that are relevant to their work and contribution to others, and not indulge in extra study. As in the

case of women and the poor, the aim of education is to usefully fill the intervals between purposeful actions.^{xxiv}

Fleury's educational philosophy is representative of what will become a new ideal of education in mid- and late eighteenth century France, both as preventative, and as an apprenticeship for life and work. The goals of instruction are clear, practical, and set in opposition to an ideal of education as personal enlightenment, represented by humanist thinkers such as Montaigne, or later by Morelly (see below) or Rousseau.^{xxv} During the course of the eighteenth century, utility becomes the guiding principle of an educational model based on its role in offering information or skills to individuals strictly in relation to their function in society, and according to the needs of the state. This view at first coexists with, but later battles for dominance over, an image of education as a process that offers individuals experiences and knowledge according to their nature and potential as human beings. It is this form of utilitarianism—an education that defines people by their profession or station rather than humanity or nature—against which Rousseau will rebel in *Emile*, when he insists that his pupil be taught only the art of being human.

Etienne Gabriel Morelly: Habit and Nature, The Honeymoon

What we see at mid century in France is thus an educational philosophy that contains an elaborate child psychology, and a sensitivity to the broader goals of education for liberty and social-political life. At the same time, the relationship

between habit and nature becomes increasingly tense. Theorists continually refer to Locke's idea of malleability and insist that the senses are the gateway to knowledge, but they are deeply discomforted by the social and moral implications of sensationism.

A brief reprieve in this tension occurs in the work of Gabriel Etienne Morelly, an obscure thinker who makes the fullest attempt at reconciling the habit/nature divide, the malleable, sense driven nature of children and the innate moral intuition required for life in society. After Morelly, nature and habit are brutally severed; in the climactic intellectual battle between Helvétius and Rousseau, the former asserts the sole and decisive power of habit, and the latter declares the victory of nature.^{xxvi}

Morelly is primarily remembered by history as the author of the proto-communist utopian work, *Code de la nature* (1755). However, in the early 1740s, before political and economic preoccupations began to dominate his thoughts, Morelly wrote two educational treatises, *Essai sur l'esprit humain, ou principes naturels de l'éducation* (1743) and *Essai sur le coeur humain, ou principes naturels de l'éducation* (1745)^{xxvii} which together constitute one of the more remarkable expressions of the changing notion of education during the mid-eighteenth century. More than any other educational theorist, Morelly foreshadows, or prepares the ground for Rousseau, in both the tone and content of his educational works.^{xxviii} Drawing on the moral sense theorists, in particular the earl of Shaftsbury, Francis Hutcheson, and Alexander Pope, Morelly constructs an elaborate theory of innate sociability, and in the centre of this

theory he places “sentiment intérieur,” a concept with affinities to Rousseau’s “lumière intérieure” or “voix intérieure.” In addition, as does the Genevan *philosophe*, he focuses his discussions on “natural education” and anticipates the concept of “negative education.”

Morelly’s argument as set out in the two *Essais* is too intricate and multilayered to reproduce here.^{xxix} What is important for our purposes is that he does not merely assert the possibility of reconciling habit and nature, or the individual and the social elements in childhood. His views are unique in the pedagogical literature as he sets out to *build a bridge* in the soul of the child between the individual and the social, eliminating any tension between natural predispositions of children to self-interest, and habituation into social and moral consciousness. At the heart of Morelly’s belief that individuals can be both free and disciplined, fulfilled and other-oriented, lies the *sentiment intérieur*, a form of self-knowledge.

Morelly’s dynamic version of sensationist philosophy is permeated with mechanistic language, and the avowed aim of his project is to discover the laws of human nature that will ultimately lead to the regulation of the collective “machine.” However, Morelly implies that the *sentiment intérieur* brings a moral and spiritual force to children’s mechanical reactions, since the latter are connected to order and beauty, both of which reflect all that is right, good, and made by God. Central to Morelly’s reconciliation between nature and habit is the belief that, while “natural education” must challenge society’s prejudices, including certain hollow traditions of social and cultural life, education need not

reject society and culture in and of themselves. He does not believe in an irreconcilable antagonism between individuals, or between individuals and their environment, and in contrast to Rousseau, he finds a way to interpret the weakness and dependence felt by children as the *foundation*, rather than the scourge, of society. One of Rousseau's most celebrated propositions will be that, in society, the consciousness of dependence is the greatest threat to the liberty of human beings, who resent the power of other wills upon them, and who must be educated in ignorance of these wills in order to develop true freedom. In contrast, for Morelly "it is only once they (children) begin to know that the object of their desires depends on the will of another, that theirs becomes flexible."^{xxx} Thus sociability is born, not threatened, in the pivotal moment when children learn that their desires depend on others and their social sense is directly linked to their childhood experience.^{xxxi} Far from being an imposition from the outside, and even if learned through habit and nurture, society emerges from, and corresponds to, human nature.

Morelly will only articulate this holistic formula fully in the body of his work, but his ultimate conclusion is that if men's moral sense is linked with their appreciation of order in nature and in the universe, and if this appreciation for order emerges from their natural need for physical satisfaction (produced by a perception of order), there is also a sense in which satisfactions of the mind and heart (produced through the individual's connection to and appreciation of others) can be considered to have *physical* sources. He reasons thus. Gratitude is intimately and inextricably bound up with pleasure in infancy; it is a reflection of

our understanding of the natural order (in the universe and in ourselves), and of our interdependence. In adulthood, the memory of our gratitude toward our parents, combined with further experiences of our links with other human beings, is expressed as love for, and moral responsibility toward, all individuals. Through gratitude, physical satisfaction and love of others coexist during all stages of life. Children's innate ability to perceive order can thus be harmoniously integrated with the habits of socialization, habits that fortify their sense of order.

I would argue that this position makes Morelly an important precursor to the new "subjectivism" that Charles Taylor described in his analysis of Rousseau.^{xxxii} According to Taylor, Rousseau's importance lies in the fact that he not only recognizes the soul as a reflection of the cosmic order, and locates the good within the individual, as many theorists of moral sentiment had:

He begins to disassociate knowledge of the good from the providential order. Not just that I have, thanks be to God, sentiments which accord with what I see through other means to be the universal good, but that the inner voice of my true sentiments *defines* what is the good: since the elan of nature in me *is* the good, it is this which has to be consulted to discover it.^{xxxiii}

Taylor argues that Rousseau never actually took this step, but that he "provided the language...which could articulate this view" and thus "immensely enlarged the scope of the inner voice."^{xxxiv} I believe Morelly's educational work represents an early articulation of this position. He too puts forth the idea that individuals possess a "voix intérieure de la Nature"^{xxxv} that facilitates their understanding of the order of things, and promotes knowledge of human nature and social relations *within* them. In addition, he is unique in his anticipation of the most

extreme oppositions in Enlightenment educational thought, in particular on the question of habit and nature. On the one hand, in his unusually detailed articulation of sensationist thought he expresses the view that will become the cornerstone of French Enlightenment educational theory, and will be brought to its most extreme conclusions by Claude-Adrien Helvétius; that “the diversity of beings is a result of the environment. The art of educating thus consists above all in creating an adequate environment.”^{xxxvi} On the other hand, Morelly plants the seeds that, in the work of Rousseau flower into the most poignant counter-statement to Enlightenment educational views: that individuality and the spiritual force of nature, rather than inculcated habit and environmental influence, are the cornerstones of educational freedom and moral development.

Signs of Discord

There is, however, a dramatic change between Morelly’s early views on education and those elaborated in his utopian work *Code de la nature*. In his early works, education is a dynamic and commanding force, strong enough to act as a bridge between the dissatisfied, misguided individual and the happy, contented one, and even between the divided society and the properly balanced one. Childhood is the symbol and location of all possibilities, a place of harmony that relies on a delicate balance between the forces of nature and environmental influences. But there is a dramatic change between Morelly’s early views on education and those elaborated in his utopian work *Code de la nature* (1755).

In the *Code*, Morelly describes education as it will be in almost all future utopian and socialist works; a rigid system of controls intended to counter the limits of human nature, fully regulated by the state, with no individual component.^{xxxvii} Children are separated from their parents at age five and educated in a collective environment, and their studies, marriages, professions and even clothing are regulated by the state. Their moral sense is developed through a strictly regulated form of indoctrination based on a few set principles of sociability and collective life. Morelly appears to have concluded that individuals cannot be reformed through “natural” education, but need continual external coercion (habit and conditioning) in order to become virtuous.^{xxxviii} The protagonist of education in the *Code* is no longer the child, the parent, or even the teacher, but the legislator, whose responsibility is to enact laws which reflect changes already made in state and society, recall individuals to their true interests, and create circumstances in which they work together to satisfy them.

This change in Morelly’s work reflects a broader change in eighteenth century French thought, in which education is increasingly abandoned as a *tool* of reform, in favor of being a *reflection* of reform.^{xxxix} This trend will be reflected in most utopian works, and its echoes can be heard in the educational reform plans submitted by teachers, clergymen and *parlementaires* in the wake of the expulsion of the Jesuits from their colleges in 1762. While insisting that they still believe in nature, individuality and the power of education to create the new man and society, in practice these reformers favor a method of education that rests

increasingly on the power of the teacher and legislator to mold children into useful professionals and citizens.^{xi}

Claude Adrien Helvétius: Habit and Nature, The Divorce

The image of the legislator as educator, and the emphasis on socialization, reaches its fullest expression in the work of Claude Adrien Helvétius (1715-1771), a figure who is rarely treated in the history of pedagogical thought. With the work of Helvétius, habit, nurture, and the environment attain complete victory over the soul of the individual, and nature is eliminated. Education becomes a science, led by the legislator who has discovered the laws of human nature and will create materials to help educators apply them systematically.

Helvétius' *De l'Esprit* (1758) and *De l'Homme* (1772) are central texts in the debate on childhood and education, for two reasons. First, in these works he expressed the most radical implications of Locke's sensationism—the possibility of thinking matter, the absence of free will, the full equality of human beings—and was the first to draw out the implications of these ideas for educational philosophy. Second, his works had an enormous (negative) impact on Rousseau, who revised several sections of *Emile* in order to counter Helvétius' conclusions.^{xli}

When Helvétius' contemporaries picked up *De l'Esprit*, they entered a familiar world in which each of the elements of the well-known sensationist philosophy were presented. Readers who made their way to the end of the book,

however, found themselves in a frightening and foreign universe, one in which immediate sensual gratification was the *only* motivating force of human action. In Helvétius' scheme, people are always in search of immediate physical pleasure. They possess no moral sense separate from their desire. Their ability to re-channel their desires toward the collective good is not a result of reason or attunement to a universal morality. It is made possible by man-made laws established precisely with the intention of allowing individuals to satisfy their desires *while* contributing to collective welfare. Individuals do not need to have a higher concept or intuition of the good, need no moral sense, no perception of order in the universe or in themselves. They need only to behave in a manner prescribed by the educator-legislator.^{xlii}

The unique and progressive conclusion of Helvétius argument is that, as he puts it in *De l'Homme*, "l'éducation peut tout;" because all individuals are led by the same drives, and all are capable of receiving an equal number of sensations, they are fundamentally and *fully* equal, even in talent and potential for greatness. The only differences between them are a result of external conditioning. Unlike his contemporaries, Helvétius does not cushion his justification for equality with arguments about individuals being "equal in the eyes of God" or having an "equal right to happiness." He argues that all difference is simply illusory, a product of habit and nurture. Further, we are not only equal, we are the *same*. Thus, while other educational theorists struggle to balance nature and habit in a new interpretation of virtue—appealing to partially innate characteristics such as reason, sentiment, or benevolence—Helvétius removes

nature from the balance altogether, arguing that virtue is produced only through educational conditioning, and reinforced through laws that uphold the lessons children are taught in school.

While Helvétius' courage in drawing out the conclusion of full equality is impressive and moving, the most problematic consequence of his position, and the one that Rousseau will challenge in his *Emile*, is that the individual is merely an afterthought in the educational process.^{xliii} This shocked and outraged even Helvétius' most like-minded contemporaries, who felt that he had "revealed everybody's secret."^{xliv}

Rousseau was not only shocked at *De l'Esprit*, he was livid.^{xlv} What was most offensive to him was the fact that Helvétius' theory stripped individuals not only of all moral responsibility but also of their innate moral sense. Although educational theorists had taken several steps in this direction already, their aim was not to eliminate moral conscience, but to *locate it in different developmental stages*, or to define it according to different criteria. Most remained convinced that morality was partially innate, and could be cultivated, drawn out, or, at least, instilled in childhood. For Helvétius, morality was merely a consequence of action, and thus children had simply to be conditioned to perform good actions. Moral conditioning would take place in a social or collective arena, and did not involve any individual spiritual or intellectual journey.

The legislator is thus the educator *par excellence* in *De l'Esprit*. His task is to study the principles of human motivation, and to use the information from this study to frame laws that offer human beings all possible incentives to the kind of

behaviour that is profitable to society, and to the nation. When the motives of individuals are discovered, Helvétius asserts, the principles of public happiness will have been established. The only work left will be for educators (under the guidance of legislators) to ensure that schools instill correct values and, through curriculum and method, direct self-interest and passion toward the public good.

To be fair, Helvétius—in many ways a great forerunner of cultural relativism—insisted that this “scientific” process was neither static nor final. Since the nature of human beings depended on the times in which they lived and their stage of social evolution, it would be necessary continually to reevaluate the science and adjust the laws. Nevertheless, he left his readers with the unsettling conclusion that there is no solid core to human identity; habit and nurture are all we have, and that is a good thing.

Rousseau’s Response: L’éducation ne peut rien

Scholars have not always recognized the powerful effect that Helvétius’ *De l’Esprit* had on Rousseau’s *Emile*. And yet Rousseau’s notes in the margins of Helvétius’ work and comments to friends reveal that he refashioned the major thesis of Book IV (and some sections of the earlier books) in opposition to Helvétius’ principal conclusions. In fact, despite the fact that *Emile* is famous for being an educational treatise, in the book Rousseau actually *striped education* (and nurture, with which it was now associated) *of all power*, in order to return this power to the child, to the individual, to nature.^{xlvi} He based much of his educational theory on the idea that morality is unteachable, since it is located

deeply within the conscience of individuals. Each child must be an active participant in the process of his own moral awakening. Further, he aimed to break the perilous alliance between nature and habit, or as Mark Hulliung aptly put it, “to demolish the treaty between interest and virtue so carefully worked out by the *philosophes*.”^{xlvii} While Rousseau remaining committed to the centrality of sense experience in the life of children, he insisted that sense reactions do not define human nature. Like Morelly, he claimed that human beings have an innate capacity to know things independent of their senses. Finally, in *Emile* he repudiated the excessively close relation between social/political and individual virtue that had been established in the work of his French predecessors. He insisted that political and moral virtue could only come after a child had been fully formed to freedom, and could be reached only through a personal internal journey. School was not a tool of socialization (nurture), but the development of individual conscience (nature).

In the process of trying to disassociate freedom and socialization, Rousseau created an artificial and irreconcilable rupture in *Emile* between books I-III, where the child’s individuality and senses are developed, and IV-V, where social/moral conscience is instilled in him. It was a rupture that dramatized the hundred years struggle among educational philosophers to extract the tensions from the habit/nature association. Notwithstanding Rousseau’s attempt to build a bridge between the individual and the social/moral by inserting Emile into the world of the *Social Contact* into Book V, in the end he himself recognized that Emile was unable to make the transition between the two worlds.

The clues to Rousseau's recognition lie buried in the rarely studied, but extremely telling, unfinished sequel to *Emile*, *Emile et Sophie, ou les solitaires*, which Rousseau began writing in 1762. As the short story reveals, the education offered Emile did not succeed in creating an autonomous being fit for the world of the social contract. Ultimately Emile was both unsocializeable—in the sense of being able to live in contemporary society, among his peers—and unable to transform society into one of many Emiles. In order to survive, Emile ultimately returned to the lessons of books I-III, his personhood, nature, and individualized journey. It appears that both the religious message of Book IV, and the social-political one of Book V, was lost. Not only did Emile absent himself from society, he never called on God. In his time of need he communed with nature in what appears to be a spiritual sense, (reminiscent of Rousseau's solitary walks), but he never had the opportunity of putting the lessons of the Savoyard priest into practice.^{xlviii}

In *Emile*, Rousseau thus dared to reinstate the moral sense through a method that both depended on, and claimed to dispense with, nurture and education. In the process, however, he brought his contemporaries anxieties about habit and the environment to extremes, made an art form of surveillance, and left us with a compelling but tortured vision of freedom.

It is tempting to see the failure of Emile's odyssey as the projection of Rousseau's personal difficulty reconciling his own individual journey and yearning for fulfilling social bonds. But this failure also reflects the unfortunate separation of nature and nurture in the work of his predecessors, a separation

that was as artificial in the eighteenth century as it is today. Fortunately, some creative minds are finally asserting the common sense view that nature and nurture cooperate in evolution and individual growth, weaving an intricate and wondrous tapestry of identity not dissimilar to that envisioned by Locke or Morelly.^{xlix} One can only hope that scholars and educators investigating questions of human nature and social life will come to agree that “rather than looking at culture as the antithesis of nature, we will be gaining much more profound understanding of human behavior by silently carrying the old nature/nurture debate to its grave.”^l

Endnotes

ⁱ Among the most notable are royal tutor abbé Claude Fleury, Swiss educator and rector of the Académie de Lausanne Jean-Pierre Crousaz, rector of the University of Paris Charles Rollin, educator and grammarian Claude Cesar Chesneau Dumarsais, writer Charles-Irénéé Castel, abbé de Saint-Pierre, author of the famous *Le spectacle de la nature*, Noel Antoine Pluche, archbishop of Cambrai François Fenelon, and *salonniere* and woman of letters Anne Thérèse de Marguenat de Courcelles, marquise de Lambert.

ⁱⁱ I deal with this controversy at length in chapter one of *Second Nature: Educational Philosophy in Eighteenth Century France* (Doctoral Thesis for New York University, 2002). For other discussions see Nina Reicyn, *Le pédagogie de John Locke* (Paris: Hermann & Cie, Editeurs, 1941); John W. Yolton, *John Locke and Education* (New York: Random House, 1971); Peter Gay, *John Locke on Education* (New York: Teachers College Press, 1964); James Tully, *An Approach to Political Philosophy: Locke in Contexts* (Cambridge: Cambridge University Press, 1993); Peter Schouls, *Reasoned Freedom: John Locke and the Enlightenment* (Ithaca: Cornell University Press, 1992); James Axtell, *The Educational Writings of John Locke*, Nathan Tarcov, *Locke's Education for Liberty* (Chicago: Chicago University Press, 1984); Nicholas Wolterstorff, *John Locke and the Ethics of Belief* (Cambridge: Cambridge University Press, 1996).

ⁱⁱⁱ John Locke, *John Locke: Some Thoughts Concerning Education and Of the Conduct of the Understanding*, ed. Ruth Grant and Nathan Tarcov (Cambridge: Hackett Publishing, 1996), 10.

^{iv} Ibid.

^v Ibid., 44-45.

^{vi} Ibid., 41.

^{vii} Neither Locke nor any of the other theorists to whom I refer use the phrase “pain-pleasure impulse.” I use the term to convey the idea, generally agreed upon in the late seventeenth and eighteenth century, that human beings are fundamentally motivated by an attraction to pleasure and repulsion from pain.

^{viii} John Locke, “Of Paternal Power” in *Second Treatise of Government*, C.B. Macpherson, ed. (Indianapolis: Hackett Publishing, 1980), 30-42.

^{ix} *Second Treatise*, 34.

^x *Some Thoughts*, 32.

^{xi} The phrase “second nature” is found in several educational texts during the late seventeenth and eighteenth century. The earliest I encountered is from a 1678 treatise entitled *The Compleat Gentleman*, by Jean Gailhard. Gailhard calls education “second nature” claiming that it “reforms what is amiss in nature, and perfects what good we have.” Jean Gailhard, *The Compleat Gentleman: or Directions for the Education of Youth as to their Breeding at Home and Traveling Abroad* (London: Tho. Newcomb, 1678), 3.

^{xii} In addition to being strongly influenced by Locke’s sensationism, pedagogical thinkers during the early part of the century were influenced by the work of “natural order” theorists such as Claude Cesar Chesneau Dumarsais (1676-1756). Dumarsais applied Lockean principles directly to grammar, insisting that all children could absorb knowledge if it was properly communicated, and provided teachers understood the “natural order” in which children learned. See his *Exposition d’une methode raisonnée pour apprendre la langue latine* (1722) and *Traité des Tropes* (1730).

^{xiii} For example, Jean-Pierre Crousaz anticipates Emile’s forestrial explorations when he offers his pupil a lesson in astronomy through a starry night walk. The abbé Claude Fleury foreshadows Rousseau’s attack on the use of La Fontaine’s fairy tales as educational tools, claiming that adults who read morally ambiguous stories such as *Peau d’Ane* to children suffer from psychological blindness. See Jean Pierre Crousaz, *Traité de l’éducation des enfans*, (La Haya: Vaillant/Prevost, 1722), 462 ; Abbé Claude Fleury, *Traité du choix et de la méthode d’études* (Paris: l’Harmattan, 1998), 70.

^{xiv} Charles Rollin, *The Method of Teaching and Studying the Belles-Lettres* (London: W. Strahan, 1770), vol. IV, 262-280.

^{xv} “C’est une maîtresse douce et insinuante, ennemie de la violence et de la contrainte, qui aime à n’agir que par voie de persuasion, qui s’applique à faire goûter ses instructions en parlant toujours raison et vérité, et qui ne tend qu’à rendre la vertu plus facile, en la rendant plus aimable. Ses leçons, qui commencent presque avec la naissance de l’enfant, croissent et se fortifient avec lui, jettent avec le temps de profondes racines, passent bientôt de la mémoire et de l’esprit dans le coeur, s’impriment de jour en jour dans ses moeurs par la pratique et l’habitude, deviennent en lui une *seconde nature* qui ne peut presque plus changer, et font auprès de lui, dans toute la suite de sa vie, la fonction d’un législateur toujours présent, qui dans chaque occasion lui montre son devoir, et le lui fait pratiquer.” *Oeuvre complètes de Rollin*, vol. IV, (Paris, 1805), 433-434. Italics added.

^{xvi} See Marcel Grandière, *L’Ideal pédagogique en France aux dix-huitième siècle* (Oxford: The Voltaire Foundation, 1998).

^{xvii} George Synders, *La pédagogie en France aux XVIIe et XVIIIe siècles* (Paris: PUF, 1965), 39.

^{xviii} For a discussion of how similar contradictory approaches to individuality, authority and freedom were explored in Renaissance pedagogy, see Rebecca Bushnell, *A Culture of Teaching: Early Modern Humanism in Theory and Practice* (Ithaca: Cornell University Press, 1996).

^{xix} This phrase is taken from Harvey Chisick's study *The Limits of Reform: Attitudes Toward the Education of the Lower Classes in Eighteenth Century France* (Princeton: Princeton University Press, 1981).

^{xx} For the complexities of the uses of the word "nature" in the eighteenth century, see Henry Vyverberg, *Human Nature, Cultural Diversity and the French Enlightenment* (Oxford: Oxford University Press, 1989), and Jean Ehrard, *L'idée de la nature en France dans la première moitié du XVIIIe siècle* (Paris: S.E.V.P.E.N., 1963). Vyverberg's assertion that "the concept of human nature was sometimes introduced into Enlightened discourse more as a casual, unexamined assumption than as an operative force" (20) is never more apparent than in educational texts.

^{xxi} Nature is also invoked in justifications for and arguments against the education of the lower classes: because all individuals are by *nature* capable of learning, education must offer all citizens knowledge and information; but because *natural* order and harmony demand hierarchy, structure, and deferential behaviour, not all individuals or groups should be educated in the same way, or with similar goals.

^{xxii} See for example Harvey Chisick *The Limits of Reform*, and Mary Jo Maynes *Schooling in Western Europe: A Social History* (Albany: State University of New York Press, 1985).

^{xxiii} For Fleury's analysis of women see Claude Fleury, *Traité du choix et de la methode des études* (Paris: l'Harmattan, 1998), 141-144. For his analysis of the education of the poor see *Traité*, 91-92.

^{xxiv} Fleury, *Traité*, 144-148.

^{xxv} See Harvey Chisick for a discussion of the difference between education and enlightenment in *Limits of Reform*, 274.

^{xxvi} To call Morelly an "obscure" writer is an understatement. Until the middle of the twentieth century almost nothing was known about him except that he was a Regent at the Collège de Vitry-le-François. There is almost no testimony of anyone ever physically meeting Morelly and except for some ambiguous remarks, no mention of him among his contemporaries. The most extensive archival research has been done by Guy Antonetti, who has made interesting discoveries about Morelly, but engages in quite a bit of conjecture concerning his thoughts, movements, and patrons. See Nicolas Wagner, *Morelly, le méconnu des Lumières* (Paris: Librairie Klincksieck, 1978). Charles Rihs, *Les philosophes utopistes: Le mythe de la cité communautaire en France au XVIIIe siècle* (Paris: Éditions Marcel Rivière, 1970). Antoine Alexandre Barbier, *Dictionnaire des Ouvrages anonymes*, 4 vols (Paris: G.P. Maisonneuse & Larose, 1964). André Lichtenberg, *Le socialisme au XVIIIe siècle: Études sur les idées socialistes dans les écrivains français au XVIIIe siècle avant la Revolution* (Paris: 1895). Guy Antonetti, "Étienne-Gabriel Morelly; l'homme et sa famille" and "Etienne-Gabriel Morelly; l'écrivain et ses protecteurs" in *Revue d'histoire littéraire de la France*, no. 3 (May-June, 1983):390-402, and no. 1 (Jan.-Feb., 1984): 19-52.

^{xxvii} Etienne Gabriel Morelly, *Essai sur l'esprit humain ou principes naturels de l'éducation* (Paris: Jean-Baptiste Delespine, 1743); *Essai sur le coeur humain ou principes naturels de l'éducation* (Paris: Jean-Baptiste Delespine, 1745).

^{xxviii} No one has been able to prove the influence of Morelly on Rousseau, although most writers assume there was one, and a similarity of tone and aim is indisputable. See Pierre Maurice Masson's discussion of the evidence in *Revue d'histoire littéraire de la France*, vol XIX (1912): 414-415. Masson's article includes a reproduction of two passages, one from Morelly's *Basiliade* and the other from *Emile*, which contain almost *identical* language. I have reproduced these passages in the appendix to this article.

^{xxix} See chapters 6-8 of *Second Nature* for a detailed account of Morelly's theory.

^{xxx} “Ce n’est que lorsqu’ils (les enfans) commencent a connoître que l’objet de leurs désirs dépend de la volonté d’un autre, que la leur devient flexible.” *Essai sur le coeur*, 38.

^{xxxi} Rousseau makes a similar argument in Book I of *Emile* when he says that the communication that takes place between children’s tears and a mother’s response is the first sign of sociability. But as soon as the will enters the relationship, the harmony is broken.

^{xxxii} See *Sources of the Self: The Making of the Modern Identity* (Cambridge: Harvard university Press, 1989), ch. 20.

^{xxxiii} *Ibid.*, 362.

^{xxxiv} *Ibid.*

^{xxxv} Etienne Gabriel Morelly, *Code de la nature, our veritable esprit des loix*, Gilbert Chinard, ed. (Paris: P. Geuthner, 1910), 255.

^{xxxvi} “La diversité des êtres s’explique d’abord par le milieu. L’art d’éduquer consiste donc en premier à créer un milieu adéquat.” Rihs, *Les philosophes utopistes*, 148.

^{xxxvii} See Annette Bridgman, “Aspects of Education in Eighteenth Century Utopias,” *Studies on Voltaire in the Eighteenth Century* (Oxford: The Voltaire Foundation, 1977), 569-585.

^{xxxviii} There is not much evidence as to why Morelly changed his views. See Antonetti’s essays for a possible explanation.

^{xxxix} For a discussion of this transformation, see Bridgman, “Aspects of Education in Eighteenth Century Utopias.”

^{xl} For an example of an influential reform plan, see Louis René François de Caradeuc de La Chalotais, *Essai d’éducation national ou plan d’éduces pour la jeunesse*, Robert Grandroute ed. (Paris: CNRD Editions, 1996).

^{xli} Not only did Rousseau and Helvétius’ work depend on similar sources; their educational ideas were formulated, at least in part, in opposition to one another’s work. The evidence of mutual influence is found in letters, reported conversations, marginalia, and the contents of *De l’Esprit*, *Emile*, *La Nouvelle Héloïse*, and *De l’Homme*. For an analysis of the mutual influence between the two authors, see A. Schinz, “La profession de foi du vicaire savoyard et le livre *De l’Esprit*” in *Revue d’histoire littéraire de la France*, XVII (1910), 225-61, Pierre-Maurice Masson, “Rousseau contre Helvétius” in *RHLF*, XVIII (1911), 103-24, and “Sur les sources de Rousseau,” in *RHLF*, XIX (1912), 640-646.

^{xlii} Helvétius does not deny that individuals can be conditioned to desire future goods, or goods that are directed toward collective happiness. However, he believes they cannot be free of their inherent motivations and that there can be no such thing as freedom *in relation to the will*. See *De l’Esprit*, 47-48.

^{xliii} Helvétius does not argue that instruction should be the same for all children. However, individual differences are only relevant in the matter of vocational training. The common element in human nature, the search for pleasure, is to be conditioned to virtue in the same way in all individuals, in a social environment, and with only one objective, to form loyal citizens whose desires are properly aligned with the needs of the general public, and the nation.

^{xliv} Cummings, *Helvétius: His Life and Place in the history of Educational Thought*, 80.

^{xlv} We have learned of Rousseau's reaction through letters, comments, and marginalia. See especially his his *Lettres Écrites de la Montagne*, and the marginalia of his copy of *De l'Esprit* in Jean Jacques Rousseau, *Oeuvres complètes*, vol IV.

^{xlvi} Although Rousseau is famous for his use of the word "nature," his definition of the term in an educational context is complex and often contradictory, both incorporating and resisting previous interpretations. He defines nature as; 1) an individual's personal, innate characteristics; 2) the common elements of human nature; 3) the order in which the human mind absorbs knowledge; 4) life outside the city; 5) the ability to engage in intuitive, self-generated and spiritual learning.

^{xlvii} Mark Hulliung, *The Autocritique of Enlightenment: Rousseau and the Philosophes* (Cambridge: Harvard University Press, 1994), 9.

^{xlviii} For a discussion of *Emile et Sophie*, see *Second Nature*, chapter 11.

^{xlix} Matt Ridley, *The Agile Gene: How Nature Turns on Nurture* (New York: Perennial, 2003); Frans de Waal, "The End of Nature Versus Nurture" in *Scientific America*, Vol. 281, Issue 6 (December 1999): 94-99; Geoffrey Cowley, "It's Time to Rethink Nature and Nurture," in *Newsweek* (March 1995): 52-3.

^l "The End of Nature Versus Nurture," 98.