“NARRATIVE HISTORY” AMOUNTS TO FABULATION, THE REAL STUFF BEING MERE CHRONOLOGY
August 1, Sunday: Francis Scott Key was born.

Lorenz Oken was born “Lorenz Okenfuß” in Bohlsbach, which has now become part of Offenburg, in Baden. 

*Encyclopaedia Britannica* has had only the following to say about this life:

Oken, Lorenz (1779-1851), German naturalist, the most important of the early-19th-century German “nature philosophers,” who speculated about the significance of life, which they believed to be derived from a vital force that could not be understood totally through scientific means. He elaborated Wolfgang von Goethe’s theory that the vertebrate skull formed gradually from the fusion of vertebrae. Although the theory was later disproved, it helped prepare a receptive atmosphere for Charles Darwin’s theory of evolution.

**NOBODY COULD GUESS WHAT WOULD HAPPEN NEXT**
Lorenz Oken, who would come to be highly regarded by Waldo Emerson, announced that “Polarity is the first force which appears in the world. If time is eternal, polarity must also be eternal. There is no world, and in general nothing at all, without polar force” (this was in a writing in three parts in the 1809-1811 timeframe which would be translated into English as ELEMENTS OF PHYSIOPHILOSOPHY in 1847).

LIFE IS LIVED FORWARD BUT UNDERSTOOD BACKWARD?
— NO, THAT’S GIVING TOO MUCH TO THE HISTORIAN’S STORIES.
LIFE ISN’T TO BE UNDERSTOOD EITHER FORWARD OR BACKWARD.
June 22, Saturday: Britain ended its 13-year occupation of St. Pierre and Miquelon as these islands reverted to being a colony of France.

That night, George Gordon, Lord Byron and Percy Bysshe Shelley having plans for a boat trip around Lake Geneva on the next day, they abandoned their efforts to compete in the story contest, but Mary Godwin Wollstonecraft, after her late start, was persisting. The friends discussed a subject from Madame de Staël’s De l’Allemagne: “whether the principle of life could be discovered and whether scientists could galvanize a corpse of manufactured humanoid.”

Friend Stephen Wanton Gould wrote in his journal:

7th day Early this morning Several friends went to fort Walcot & procured liberty to meet with the Soldiers at 11 OClock, they went in the Custom House boat kindly accomodated by John
Stevens. The company from abroad were James Halleck, John Hull - - - - Robert Parry, Sally Parry, Dorothy Holding, Alice Abbot of our own towns folks was father Rodman, Jonathon Dennis, John Slocum, Benja Hadwen Hannah Dennis, Ruth & Eliza Rodman. They first went to Fort Walcot where they had good service & truth was maintained, then to fort Adams where Truth also bore the Palm, & the good cause preserved - This meeting was of great weight on my Spirits & since I find it succeeded well, I feel rejoiced with those who went having travailed with them as deeply as my capasity would admit. - I was fully persuaded it was best for me not to go, but to stay & promote the meeting appointed for people of colour at 5 OC this afternoon - While our aforementioned friends were on the fort Hugh Judge, Gerrard T Hopkins & company were called to go on Board the Packet for NYork 0- which rendered my presence necessary to pay their passages as one of the committee for that purpose 

Robert & Sally Parry & Sister Ruth dined with us. — The black meeting this Afternoon was not largely attended, but succeeded pretty well John Hallock, Dorothy Golding twice, James Halleck twice were concerned in testimony - Robert & Sally lodged at Jonathon Dennis’s to night & expect to be at Portsmouth tomorrow from thence to Providence homeward bound. —

1. The term “scientist” in this translation is of course an anachronism, as this term would not begin to be used until 1830. In regard to the scientific currency of Mary Shelley’s galvanic mechanism for bringing life to Dr. Victor Frankenstein’s monster: 

In 1809 in ELEMENTS OF PHYSIOPHILOSOPHY, no less a credited figure than Lorenz Oken had declared that “Galvanism is the principle of life. There is no other vital force than the galvanic polarity.”

![Lorenz Oken's portrait](image)
Lorenz Oken’s Gesellschaft deutschen Naturforscher und Ärzte, which would be the inspiration for not only the British but also the American Association for the Advancement of Science (AAAS).

William Buckland’s description of how ancient hyenas lived and fed in Kirkdale Cave was based on their fossil remains (this amounted to one of the 1st descriptions of living habits to be based upon fossil evidence). Buckland noticed that a human skeleton had been covered in ocher (referred to as “Red Lady,” this find would eventually be classified as a male Cro-Magnon).

On the basis of massive deposits of chalk, Omalius d’Halloy named the “Cretaceous System” (this timeframe would later be identified to have been that of the final dinosaurs and initial flowering plants).

On the basis of coal deposits, William Conybeare and William Phillips named the “Carboniferous System” (this timeframe would also come to be identified, in the United States, as the Mississippian and Pennsylvanian Periods).

Pondering upon some curiously shaped fossils near Lewes, Gideon Mantell identified them as fish parts (they were coprolites).

DO I HAVE YOUR ATTENTION? GOOD.
William Davis Ticknor left his home on a farm just outside Lebanon, New Hampshire at the age of 17, to work in the brokerage house of his uncle Benjamin Ticknor in Boston.

Professor Gotthilf Heinrich von Schubert was made a professor at the University of München. In this post, attempting to produce a religiously grounded interpretation of the cosmos, he would arouse the antagonism of Lorenz Oken.

Cornelius Conway Felton, who had been at least in part working his way through his education by teaching in Concord and in Boston, and at the Round Hill School in Northampton, at this point graduated from Harvard College. Horatio Wood graduated (his copious and carefully written notes on French and Spanish literature per the lectures of Professor George Ticknor, fresh from the German universities, would be preserved, and under the influence of Dr. Karl Follen, Horatio would persist in being a strenuous runner until the 7th decade of his life).

At the Divinity School, the following gentlemen commenced their studies:

- Julian Abbot
- Stephen Greenleaf Bulfinch (A.B. Col. [Columbia College?])
- Francis Cunningham
- Joseph Hawley Dorr (A.B. Bowdoin College)
- George Washington Hosmer
- Josiah Moore
- John Owen (A.B. Bowdoin College)
- Ephraim Peabody (A.B. Brown University)
- Allen Putnam
- George Putnam
- John Turner Sargent
- David Southard
- Oliver Stearns

(In these early years of the divinity school there were no formal class graduations, as students would be in the habit of remaining until they wrangled the offer of an appropriate pulpit.)

NEW “HARVARD MEN”

CHANGE IS ETERNITY, STASIS A FIGMENT
July: Early in this month Miss Elizabeth Palmer Peabody opened, in the front parlor of the building she had leased at 13 West Street in Boston, her Foreign Library, a bookstore and circulating library.\footnote{2}

At the suggestion of Washington Allston she would stock imported art supplies. One section was allocated to the homeopathic nostrums created by her father, Dr. Nathaniel Peabody. She displayed on the walls the paintings her sister Sophia was offering for sale. Margaret Fuller had staged her “conversations” here in late 1839 and this would continue in the early 1840s. The Reverend William Ellery Channing would stop by to read the newspaper. Sophia would marry Nathaniel Hawthorne at West Street in 1842. The editors of and contributors to The Dial would meet there, and for a time in 1842 and 1843 she would publish this journal as well as writing for it (her “A Glimpse of Christ’s Idea of Society,” a piece about Brook Farm, would appear in the October 1841 issue, and her “Fourierism” would appear in the April 1844 issue).

I had ... a foreign library of new French and German books, and then I came into contact with the world as never before. The Ripneys were starting Brook Farm, and they were friends of ours. Theodore Parker was beginning his career, and all these things were discussed in my book-store by Boston lawyers and Cambridge professors. Those were very living years for me.

\footnote{2. Circulating libraries were privately owned collections of books and periodicals lent out for profit at fixed rates; this institution had its heyday in America in the first half of the 19th Century, just prior to the rise of the public library movement.}

\(^3\) A facsimile of this catalog still exists, as part of Madeleine B. Stern’s “Elizabeth Peabody’s Foreign Library (1840),” *American Transcendental Quarterly*, No. 20 Supplement, Part 1, pages 5-12.

\(^4\) Henry Thoreau would consult this volume on December 5, 1840. His extracts would consist of quotations from Lorenz Oken and from Gotthilf Heinrich von Schubert.
Novelist Nathaniel Hawthorne once described 15 West Street as “Mrs. Peabody’s Caravansary,” in reference to the diverse activities of the Peabody family who from 1840 to 1854 made their home in this building. In the front parlor, daughter Elizabeth opened a bookstore, the first in Boston to offer works by foreign authors. Here she and Ralph Waldo Emerson published The Dial, the quarterly periodical of the Transcendentalist poets. Here also, journalist-critic Margaret Fuller held her famous “Conversations” which today are considered landmark tracts in the history of American feminism. In the private, rear parlor, daughter Sophia in 1842 married Hawthorne, and daughter Mary in 1843 married Horace Mann, the father of public education in America. During the years the Peabody family lived on West Street, they were hosts — and friends — to many who helped broaden American thought and literature.

Henry Thoreau read in Wolfgang Menzel’s GERMAN LITERATURE. TR. FROM THE GERMAN OF WOLFGANG MENZEL. BY C.C. FELTON... (3 volumes, Boston: Hilliard, Gray, and Company, 1840; this was Volumes 7-9 of the Reverend George Ripley’s SPECIMENS OF FOREIGN STANDARD LITERATURE, a 9-volume edition that had been being put through the presses at Hilliard, Gray since 1838). His extracts consist of quotations from Lorenz Oken and from Gotthilf Heinrich von Schubert.

THE FUTURE IS MOST READILY PREDICTED IN RETROSPECT
Lorenz Oken’s ELEMENTS OF PHYSIOPHILOSOPHY, which had originated in 1809, was done into English.

This is the treatise which would come to be highly regarded by Bronson Alcott and by Waldo Emerson, because it had announced that “Polarity is the first force which appears in the world. If time is eternal, polarity must also be eternal. There is no world, and in general nothing at all, without polar forces.”

WHAT I’M WRITING IS TRUE BUT NEVER MIND
YOU CAN ALWAYS LIE TO YOURSELF
Summer: The Alcott family was living in the very large and luxurious home of their benefactor, Mrs. James Savage, at 1 Temple Place in Boston, and, with space and quiet and privacy, Bronson Alcott was reading Emanuel Swedenborg, Jakob Böhme, and Lorenz Oken, and beginning his self-absorbed work on TABLETS.

Abby Hutchinson became so ill that it was feared she could not survive. This medical condition would improve, but very slowly.

George William Curtis returned from Europe to America, while James Burrill Curtis remained in Paris.

THE FUTURE CAN BE EASILY PREDICTED IN RETROSPECT
August 11, Monday: Lorenz Oken died in Zurich at the age of 72.

Henry Thoreau and Bronson Alcott took the train to Cambridge and passed the forenoon in Harvard Library. Bronson looked at the section of English poetry of the Elizabethan age but couldn’t find any book he wanted to check out. Henry returned the books he had checked out on August 1st and checked out Volume I of the Second Series of the Collections of the New York Historical Society, which contains Extracts from the New World, or, A Description of the West Indies. By John de Laet, Director of the Dutch West India Company, &c. Translated tr. from the original Dutch, by the editor [George Folsom]).

In addition, he checked out the first three volumes of Peter Kalm’s Travels into North America; Containing Its Natural History, and a Circumstantial Account of Its Plantations and Agriculture in General … (English version of 1770; Thoreau had evidently already been reading Kalm in volumes obtained from the library of the Boston Society of Natural History).


5. He would place his notes from this reading in his Canadian Notebook and in his Indian Notebook #5.
"There is no Frigate like a Book
To take us Lands away"
— Emily Dickinson

(I should mention at some point, and therefore will insert the material arbitrarily at this point in the Kouroo Contexture, that Thoreau had in his personal library one of the editions of a very expansive Latin/English lexicon that was being published regularly over the years by Harper & Brothers of New-York, A COPIOUS AND CRITICAL LATIN-ENGLISH LEXICON: FOUNDED ON THE LARGER LATIN-GERMAN LEXICON OF DR. WILLIAM FREUND; WITH ADDITIONS AND CORRECTIONS FROM THE LEXICONS OF GESNER, FACCIOLATI, SCHELLER, GEORGES, ETC, by Professor Ethan Allen Andrews. We do not know which edition it was that Thoreau owned, but it is the 1851 edition that is presently offered online by Google Books: <http://books.google.com/books?id=xXhfAAAAMAAJ&printsec=frontcover&source=gbs_summary_r&cad=0#PPT10,M1>.

Thoreau commented in WALDEN that old Marcus Porcius Cato the Censor’s De Re Rustica was his “Cultivator.” Compare this antique text that he at this point borrows from Alcott’s library, therefore, with a “Pictorial Cultivator” magazine being produced monthly for the farmers of Thoreau’s own era:

WALDEN: Old Cato, whose ”De Re Rusticâ” is my “Cultivator,” says, and the only translation I have seen makes sheer nonsense of the passage, “When you think of getting a farm, turn it thus in your mind, not to buy greedily; nor spare your pains to look at it, and do not think it enough to go round it once. The oftener you go there the more it will please you, if it is good.” I think I shall not buy greedily, but go round and round it as long as I live, and be buried in it first, that it may please me the more at last.
A

COPIOUS AND CRITICAL

LATIN-ENGLISH LEXICON,

FOUNDED ON THE

LARGER LATIN-GERMAN LEXICON OF

DR. WILLIAM FREUND;

WITH

ADDITIONS AND CORRECTIONS FROM THE LEXICONS OF GRÄNEL, FACCIOLO, SCHELLE, GEORGES, ETC.

BY E. A. ANDREWS, LL.D.

NEW YORK:
HARPER & BROTHERS, PUBLISHERS,
57 CLIFF STREET.
1851.
Marcus Porcius Cato (the Elder)  
(the Censor) 234-149 BCE
There were a great many holidays at Plumfield, and one of the most delightful was the yearly apple-picking, — for then the Marches, Laurences, Brookes, and Bhaers turned out in full force, and made a day of it. Five years after Jo’s wedding, one of these fruitful festivals occurred. — A mellow October day, when the air was full of an exhilarating freshness which made the spirits rise and the blood dance healthily in the veins. The old orchard wore its holiday attire; golden-rod and asters fringed the mossy walls; grasshoppers skipped briskly in the sere grass, and crickets chirped like fairy pipers at a feast. Squirrels were busy with their small harvesting; birds twittered their adieux from the alders in the lane; and every tree stood ready to send down its shower of red or yellow apples at the first shake. Everybody was there, — everybody laughed and sang, climbed up and tumbled down; everybody declared that there never had been such a perfect day or such a jolly set to enjoy it, — and every one gave themselves up to the simple pleasures of the hour as freely as if there were no such things as care or sorrow in the world.

Mr. March strolled placidly about, quoting Tusser, Cowley, and Columella to Mr. Laurence, while enjoying

“The gentle apple’s winey juice.”
L. IVNII MODERATI
COLVMELLAE
DE RERUSTI
CA LIBRI
XII.

Eiusdem de Arboribus liber,
separatus ab
alii,


UGDUI APVD SEB.


1541.
Thoreau also went to the Society of Natural History, and looked at Louis Agassiz and Augustus A. Gould’s *Principles of Zoölogy* in its new edition.

(He also looked through the 16 volumes of the Baron Cuvier’s *The Animal Kingdom.*)
April 27, Thursday: Waldo Emerson had offered to read a paper in Moncure Daniel Conway’s room at Harvard Divinity School, and Conway had sent out invitations. The authorities had been perplexed for some time at this student’s closeness to the heretic of Concord, and when this latest thing came to their attention, they went into a panic of sorts. Conway would be challenged by Harvard’s Professor of Christian Morals with the possibility that this represented a “decline of Christian morals” in Divinity Hall. Two of the professors would visit student Conway in his room and give voice to their fears that there was being organized “a school within the school,” amounting to an “Emersonian cult.” But the meeting in question, on this date, had in fact gone off without incident, the group having moved because of its size to a public room and Emerson having merely read his paper on “Poetry” to an audience that included Professor Henry Wadsworth Longfellow and faculty spouse Fanny Appleton Longfellow, James Russell Lowell, Professor Charles Eliot Norton, Franklin Benjamin Sanborn, and Arthur Hugh Clough. We are left wondering why on earth all these authority figures were getting so exercised.6

Meanwhile, out at Walden Pond, Henry Thoreau was hypothesizing that the level of water in the pond ought to become very low again during the period 1866-1869 (amazingly, this anticipation would prove to have been accurate).

April 27. 7 A.M. –To Cliffs. ... The wood thrush [Hermit Thrush Catharus guttatus] afar, –so superior a strain to that of other birds. I was doubting if it would affect me as of yore, but it did measurably. I did not believe there could be such differences. This is the gospel according to the wood thrush. He makes a sabbath out of a week-day — I could go to hear him—could buy a pew in his church— Did he ever practice pulpit eloquence? He is right about the slavery question—

... Forbes says that the guides who crossed the alps with him lost the skin of their faces — (Ap from the reflections from the snow.)

It is remarkable that the rise & fall of Walden though unsteady & whether periodical or merely occasional are not completed but after many years. I have observed one rise & part of 2 falls. It attains its maximum slowly & surely though unsteadily. It is remarkable that this fluctuation, whether periodical or not, requires many years for its accomplishment — and I expect that a dozen or 15 years hence it will again be as low as I have ever known it.

6. It wasn’t the fact that Waldo Emerson talked about “arrested and progressive development” in this paper on poetry which had gotten the faculty all excited, even though later it would be proposed, by some folks who demonstrably knew nothing whatever of evolutionary theory, that Emerson had here been anticipating Charles Darwin’s theory. What Emerson had said was simply “The electric word pronounced by [Doctor] John Hunter [1728-1793] a hundred years ago, — arrested and progressive development — indicating the way upward from the invisible protoplasm to the highest organism, — gave the poetic key to natural science, — of which the theories of Geoffroy St. Hilaire, of Lorenz Oken [1779-1851], of Johann Wolfgang von Goethe [1749-1832], of Louis Agassiz [1807-1873], and [Sir] Richard Owen [1804-1892] and [Doctor] Erasmus Darwin [1731-1802] in zoölogy and botany, are the fruits, — a hint whose power is not exhausted, showing unity and perfect order in physics.” —Which is not Darwinism, but the obsolete mental universe of hierarchy and superiority, of Naturphilosophie, the great ladder of being, all of which amounted to the wanna-believe bullshit that Charles Darwin would be struggling to supersede.
February 9, Friday: The Reverend Moncure Daniel Conway addressed the Royal Institution in London on “Emerson and his Views of Nature.” He attempted to advise this competent audience that on April 27, 1854, Waldo Emerson had delivered a talk on poetry in a public room at the Harvard Theological School, at Conway’s request, in which Emerson had spoken of arrested and progressive development in a manner which quite anticipated the 1859 theory of Mr. Charles Darwin’s ON THE ORIGIN OF SPECIES. Darwin, it seems, wasn’t simply mistaken, as Professor Louis Agassiz had been waxing apoplectic at the time and as he died still insisting, but simply hadn’t been original — it had been Agassiz’s buddy Emerson who had been the original, he had known it all along, while the good professor of biology simply hadn’t noticed this wonderful thing about his buddy!

“What does this prove...?”

“This is truly monstrous!”

What Emerson had said about the primary theoretical framework of the science of biology, Conway reported, was “The electric word pronounced by [Doctor] John Hunter [1728-1793] a hundred years ago, — arrested and progressive development — indicating the way upward from the invisible protoplasm to the highest organism, — gave the poetic key to natural science, — of which the theories of [Isidore] Geoffroy St. Hilaire [1805-1861], of Lorenz Oken [1779-1851], of Johann Wolfgang von Goethe [1749-1832], of [Professor] Louis Agassiz [1807-1873], and [Sir] Richard Owen [1804-1892] and [Doctor] Erasmus Darwin [1731-1802] in
zoölogy and botany, are the fruits, —a hint whose power is not exhausted, showing unity and perfect order in physics.”—Which of course was not Darwinism, but far from it and in opposition to it. It was in fact the obsolete mental universe of hierarchy and superiority, of Naturphilosophie, the great ladder of being which Mr. Charles Darwin had been struggling to supersede.

Evidently Waldo had been referring to Saint-Hilaire’s 1832-1837 *Histoire Generale Et Particuliere Des Anomalies De L’organisation Chez L’homme Et Les Animaux ... Ou Traite De Teratologie ...*, or perhaps to the English version of Volume I of this by Palmer which had appeared in 1835. Evidently, also, the assembled Brits were so tolerant toward this venturesome American minister, that he was able to mistake their politeness. At any rate, in his relentlessly self-promotional autobiography of 1904 he would proclaim that his audience had been “much startled.”

In *Louis Agassiz: A Life in Science* (Baltimore: Johns Hopkins UP, 1988, Edward Lurie would report in regard to this sort of total misunderstanding, on his pages 282-290, that:

Moses Ashley Curtis told his botanist friend, "I am always suspicious of Agassiz. He has an enormous amount of facts—he is incomparable in the discovery of facts— but I am becoming continually more dissatisfied with him as a generalizer...." One reason why the academicians and laymen of Boston were so well informed on major aspects of the new biology was that Agassiz had spent so much time and effort contradicting these ideas. Before 1859, Agassiz had argued with almost every major assumption of the forthcoming Darwinian analysis. As [Asa] Gray knew and Agassiz indicated by his protestations, the world was prepared for a revival of the “development” theory. But this would be in a form that, as Gray predicted, would obviate many of the older arguments against it. In Agassiz’s view, every old argument was just as valid as ever; Darwin’s work supplied no new mechanism or interpretation but was simply a rehash of Lamarck, [Lorenz] Oken, and the VESTIGES It was hardly worth the bother, it seemed, for the director of the Harvard museum to refute the arguments again, but bother he must, because his colleagues would not let the matter rest.

Agassiz’s cosmic philosophy shaped his entire reaction to the evolution idea. His definition of the relation of natural history to transcendental conceptions was that such conceptions were basic to understanding and were supported by evidence. Thus he could assert:

There is a system in nature... to which the different [classification] systems of authors are successive approximations.... This growing coincidence between our systems and that of nature shows... the identity of the operations of the human and the Divine intellect; especially when it is remembered to what an extraordinary degree many a priori conceptions, relating to nature, have in the end proved to agree with reality, in spite of every objection at first offered
An attitude such as this made Agassiz appear to his critics an exponent of a traditional idealism whose German education in the spirit of Naturphilosophie prevented him from admitting the validity of an objective interpretation of nature based on observable, secondary phenomena. This was an understandable reaction to Agassiz. There was an unbroken thread connecting his mental outlook with a view of nature stretching back to Plato, a view intellectually close to a concept of being in which the immaterial world was considered the essence of reality. Exemplifying this intellectual tradition, Agassiz saw natural history as the earthly representation of spirit, and thought of the Creative Power as having engineered a timeless, all-encompassing plan for the universe. This scheme of creation was rational, because nature past and present illustrated the creative intention. All facts could be subsumed under this master plan that had been fashioned in the beginning, and all apparent change explained as indicative of a predictable, fixed order in the universe. Species, the individual units of identity in nature, were types of thought reflecting an ideal, immaterial inspiration. The same was true of the larger taxonomic categories—genera, families, orders, branches, and kingdoms. All such categories had no real existence in nature. Reality could be discovered only in the character of the individual animals and plants that had inhabited and were now inhabiting the material world. The individual fossil or living form represented on earth the categories of divine thought ranging from species to kingdom and ultimately symbolized a complete identity with the highest concept of being, God.

For Agassiz there was only one method by which an insight could be gained into this creative process, and that was the method of the natural scientist. The naturalist had an understanding vastly superior to the theologian; it was his expert knowledge of the data of the material world that could provide continual and ever more impressive verification of the power and grandeur implicit in the plan of creation. The fact that Agassiz thought of himself as possessing this ability provided him with the intellectual drive to achieve superior knowledge. It was this life role, moreover, that prevented a simple espousal of traditional idealism. Without constant empirical study, Agassiz would have been deprived of a basis for offering the world new demonstrations of the work of the Creative Power, such as the Ice Age. In drawing a spiritual lesson from his study, Agassiz had to create “species” that did not exist, because he could not admit variation and had to interpret the glacial epoch as another event in a long chain of divinely inspired catastrophes. It was this intellectual quality that made Agassiz such a formidable and perplexing opponent for men like Darwin and Gray. He was quite capable of making the most admirable scientific discoveries reflecting complete devotion to scientific method, but he would then interpret the data through the medium of what
seemed to be the most absurd metaphysics. Faced with this kind of mentality, Darwin and his defenders understandably labeled Agassiz the advocate of an outworn idealism.

The tragedy of Agassiz’s relationship to Darwin’s ideas was that in a crucial decade of transformation in natural history interpretation, he had given too little thought to justifying his own viewpoint. When Agassiz finally published an integrated statement of his philosophy in 1857, the “Essay on Classification” represented ideas that had little value for his times.

This publication demonstrated, however, that Agassiz was by this time entirely certain that the teachings of Naturphilosophie were incompatible with special creationism. He therefore equated this concept with the false notion that “all animals formed but one simple, continuous series,” an idea that could readily “become the foundation of a system of the philosophy of nature which suggests all animals as [being] the different degrees of development of a few primitive types.” It was but a short step from such a view to one that interpreted animal forms as sharing a unity of origin and genetic derivation, illustrating the transformation of one form into another through modification from “physical” causes. Unable to tolerate this idea, Agassiz found it necessary to abjure what he felt were these larger tendencies of Naturphilosophie, all the while retaining the mental attitude once derived from its idealism, the ability to interpret the data of experience as significant of a meaning above and beyond experience.

Naturphilosophie seemed a threat to Agassiz’s special creationism primarily because it assumed a continuity in organic creation. Agassiz and his honored master Cuvier, on the other hand, deeply believed that the creative plan was so ordered as to illustrate discontinuity and the independence of natural categories. Thus catastrophes had operated to break the thread of natural history on many occasions. Moreover, since species and the larger units of identity were symbolic of divine intelligence, they were immutable and could never be said to illustrate material connection with each other. Individuals representing the divine plan were created independently and separately. This discontinuous view of creation gave the Deity much more power than believers in “development” were ever able to allow. Multiple and new creations were symbolic of the discontinuity ordained by the creator.

Agassiz did believe, however, in one particular concept of continuity and development. Indebted to his German education from Dollinger, he affirmed that change was to be discerned in the life-history of the individual form, namely, the ontogenetic transformations revealed by embryology. The development of the individual from egg to adult signified, to Agassiz, a progressive, unfolding evolution along a path predetermined by the potentiality of the original egg and ending in a fixed form
that was the permanent character of the individual. Change and development were in this view transitory stages in the achievement of permanence. Schelling employed this concept to demonstrate the existence of a supreme being who could ordain the potentiality of highest perfection from the beginning. Agassiz drew similar comfort from embryology, synthesizing empiricism and idealism by insisting that the naturalist had to observe the development of the egg under the microscope to experience demonstrations of absolute power. Understandably, Agassiz insisted that embryology provided "the most trustworthy standard to determine relative rank among animals." This science was the necessary basis for all classification, since study of individual development revealed how the animal conformed to the essence of its type. Individual growth reflected an unfolding of the higher categories of identity, and by studying a single fish Agassiz could see the entire scale of being from species to branch in the animal kingdom.

Embryology thus illustrated the entire history of life. Agassiz, therefore, could never understand why the evolution concept of Darwin required such a great amount of time to accomplish change in species or types when he could observe change and evolution that occurred rapidly in the individual. If such change was so sudden in the history of life from egg to adult, it was incomprehensible why great periods were required to effect changes in classes, orders, or types. To Agassiz change was dynamic and catastrophic in embryology, just as it was in geology. In each instance, sudden change resulted in preordained, final purpose.

Agassiz could not understand the evolutionary process because he confused two different kinds of evolution. He made the common error of his time of equating the history of the individual—ontogeny—with the history of the type or race—phylogeny. Agassiz believed that the various phases of embryological development or ontogeny were in fact determined by the inherent race history that each individual form contained within its germ as a kind of preview of things to come. Thus the embryology of the animal revealed in successive stages the predetermined scale of categories to which it belonged—species, genus, family, and so on.

Agassiz was consequently very impressed with the "biogenetic law," that ontogeny or individual development is a recapitulation of phylogeny or racial history, the history of the type being the cause of the history of the individual. His student Joseph Le Conte claimed that Agassiz had discovered this "law." This was an unfounded assertion, because the concept had been known since the late eighteenth century, and Agassiz had learned it from his teacher Tiedemann. Agassiz’s specific contribution to the recapitulation concept was empirical. In his own words, "I have shown that there is a correspondence between the succession of Fishes in geological times and the different stages of growth in their egg, that is all."
Analysts such as Le Conte and others claimed that Agassiz’s association with the recapitulation idea made him a notable forerunner of Darwin. Nothing could be further from the truth. Agassiz’s interpretation of the facts of embryology was a cosmic one:

The leading thought which runs through the succession of all organized beings in past ages is manifested again in new combinations in the phases of development of the living representatives of these different types. It exhibits everywhere the working of the same creative Mind, through all times, and upon the surface of the whole globe.

Moreover, Agassiz emphatically contradicted the wider uses of the recapitulation concept by men of his generation, an interpretation that viewed the separate examples of ontogeny as proof of a long history of causally connected phylogenetic transformations in an ascending scale of development from lower to higher forms beginning with the earliest ancestor and ending with contemporary creation.

Agassiz insisted, therefore, that embryology showed a recapitulation of phylogeny only in the repetition of the natural history of the particular and separate type-plan to which the individual belonged. In so doing he reflected his disapproval of the assumptions of Naturphilosophie, that there was an ascending and unbroken scale of development from lower to higher forms. He was explicit on this point:

It has been maintained... that the higher animals pass during their development through all the phases characteristic of the inferior classes. Put in this form, no statement can be further from the truth; and yet there are decided relations, within certain limits, between the embryonic stages of growth of higher animals and the permanent characters of others of an inferior grade.... As eggs, in their primitive condition, animals do not differ one from the other; but as soon as the embryo has begun to show any characteristic features, it presents such peculiarities as distinguish its branch. It cannot, therefore, be said that any animal passes through the phases of development which are not included within the limits of its own branch. No Vertebrate is, or resembles at any time, an Articulate; no Articulate a Mollusk.... Whatever correlations between the young of higher animals and the perfect condition of inferior ones may be traced, they are always limited to representatives of the same branch.... No higher animal passes through phases of development recalling all the lower types of the animal kingdom.

Agassiz’s interpretation of the recapitulation idea had consequences for the concept of evolution. From the first,
Agassiz was much more radical in regard to recapitulation than the embryologist Karl Ernst von Baer. Agassiz believed that ontogeny was a recapitulation of adult ancestral forms, while Von Baer would grant only that recapitulation was limited to a repetition of young or intermediate forms in the life-history of ancestors and that the individual deviated from these resemblances in a progressive fashion during its growth. In 1859 Darwin cited Agassiz’s concept of adult recapitulation and Agassiz’s belief that this process of repetition in the individual signified the history of the race. For Darwin, this concept “accords well with the theory of natural selection,” and he hoped it would be proved in the future. Subsequently, Darwin accepted the Agassiz view without qualification. Agassiz’s view of recapitulation as a direct repetition of final adult forms was erroneous. Darwin’s acceptance of it had unfortunate results for the later history of the evolution doctrine. Von Baer’s view, on the other hand, laid the groundwork for the modern science of embryology by stressing the fact of individual development from egg to adult, and the very limited recapitulation of younger forms in such development. Had Darwin followed Von Baer and not Agassiz, modern embryology would not have had to rescue Von Baer’s interpretations from the obscurity in which they were placed by the triumph of Darwinism and by the ideas of such subsequent advocates of the Agassiz position as Ernst Haeckel. Von Baer, of course, opposed evolution from idealistic presuppositions, and vacillated a good deal in his own relationship to Darwinism. Nevertheless, when modern embryologists who were intellectually equipped to separate Von Baer the idealist from Von Baer the embryologist perceived the value of his view of recapitulation, they could employ it as a means of understanding phylogeny as the result of individual ontogeny in particular periods of natural history.

To call Agassiz a precursor of Darwin on the basis of Darwin’s ill-considered use of an erroneous Agassiz conception is a vast mistake. In fact, when Von Baer criticized Darwin for his use of the recapitulation concept, he was in effect criticizing Agassiz. Agassiz was wrong on recapitulation, and Darwin made the same error. Darwin made other errors too, but despite gaps in his knowledge, despite ignorance of the mechanism of heredity, and despite Agassiz, Darwin was right. He was right because the evolution idea did not require the recapitulation theory for its general validity. Darwin, after all, understood phylogeny, and Agassiz did not.

Regardless of the erroneous Agassiz belief that individual development was determined by previous ancestral history, it is most nearly accurate to say that the history of types and races is the result of separate, modified, individual transformations. Ontogeny “causes” phylogeny in the large sense, rather than the reverse of this process, as Agassiz believed. Phylogeny, moreover, is best understood through knowledge of the history of life. Organic development occurs through the introduction and
preservation of new and useful variations and the consequent influence of such transformations on the character of subsequent populations.

In Von Baer’s criticisms, Darwin paid a heavy price for his use or Agassiz’s interpretation of recapitulation. To make matters worse, Darwin did not realize that Agassiz had expressed strong reservations about the very recapitulation idea he advocated and Darwin used. Agassiz criticized recapitulation, moreover, before 1859, and his criticism was both empirical and idealistic.

Agassiz did so because of a growing realization that the concept was useful to advocates of the development hypothesis. Recapitulation, sometimes put forward as proof of a long, continuous sweep of natural history with types and races transformed into more advanced types, was a view of phylogeny Agassiz could never accept. Consequently, he cast doubt upon such continuity, taking issue with the logical extension of an idea he had advocated by citing evidence that demonstrated that ontogeny did not always recapitulate phylogeny in direct repetition, since many characters appeared in the individual in a sequence different from that in which they had appeared in the history of the type. Agassiz joined Von Baer both before and after 1859 in opposing concepts of development with the weapons of idealism. For Agassiz, the reality of the plan of creation was threatened by a historical view of the evolution of types and races; permanence of type was also threatened by a concept of transmutation made possible through the agency of physical processes. Hence recapitulation, to Agassiz, had to prove thought and premeditation.

“MAGISTERIAL HISTORY” IS FANTASIZING: HISTORY IS CHRONOLOGY
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“It’s all now you see. Yesterday won’t be over until tomorrow and tomorrow began ten thousand years ago.”

- Remark by character “Garin Stevens” in William Faulkner’s INTRUDER IN THE DUST

Prepared: December 3, 2014
This stuff presumably looks to you as if it were generated by a human. Such is not the case. Instead, someone has requested that we pull it out of the hat of a pirate who has grown out of the shoulder of our pet parrot "Laura" (as above). What these chronological lists are: they are research reports compiled by ARRGH algorithms out of a database of modules which we term the Kouroo Contexture (this is data mining). To respond to such a request for information we merely push a button.
Commonly, the first output of the algorithm has obvious deficiencies and we need to go back into the modules stored in the contexture and do a minor amount of tweaking, and then we need to punch that button again and recompile the chronology—but there is nothing here that remotely resembles the ordinary "writerly" process you know and love. As the contents of this originating contexture improve, and as the programming improves, and as funding becomes available (to date no funding whatever has been needed in the creation of this facility, the entire operation being run out of pocket change) we expect a diminished need to do such tweaking and recompiling, and we fully expect to achieve a simulation of a generous and untiring robotic research librarian. Onward and upward in this brave new world.

First come first serve. There is no charge.
Place requests with <Kouroo@kouroo.info>. Arrgh.