THE MUSICAL SOUL OF SCIENTIFIC CREATIVITY

Rebecca Dirichlet's Development of the Complex Domain

by David Shavin

The famous American philosopher Yogi Berra, whose day job was as a catcher for the New York Yankees, once analyzed the key to the intricacies of hitting a baseball: "It's 90% half-mental." Surprisingly enough, it is a complex domain that combines the visual mapping of the incoming baseball with the required inverse, curved arc of the bat's trajectory. Whether or not Yogi had in mind the drawing at the end of Carl Gauss's 1799 "Fundamental Theorem of Algebra," Yogi's maxim holds. Gauss re-organized his own mind, along the lines of the non-visible geometry of the complex domain at the core of causality expressed in the material world. It was, to say the least, 90% half-mental!

Gauss's most distinguished followers, Lejeune Dirichlet and his student Bernhard Riemann, further developed this power of the mind, to embody the causal features of the non-visible complex domain.[1] Rigorous and fruitful analysis proceeded, but not as dictated by numbers. The reality of the so-called subjective processes of the mind (and not so-called hard particles of reality), conveying a rigorous causality, was now primary: Mathematics had been taught how to sing.

In the early 1950s, another famous American philosopher, Lyndon LaRouche (who never played catcher for the Yankees) worked intensively upon Riemann's contributions to causality in developing what is now

1. See Lyndon LaRouche's "Leibniz from Riemann's Standpoint," at http://www.schillerinstitute.org/fid_91-96/963A_lieb_rieman.html; "The Ontological Matter: The Substance of Tensors," at http://www.larouchepub.com/lar/2009/3622tensors_ontological.html; and Bruce Director's "Bernard Riemann's 'Dirichlet's Principle'" at http://www.schillerinstitute.org/fid_02-06/2004/044_riemann_dirichlet.html

Rebecca Mendelssohn Dirichlet—grand-daughter of the the great philosopher Moses Mendelssohn; sister to musicians Felix and Fanny Mendelssohn; and wife of the scientist Lejeune Dirichlet—with her musikabends*, created the "complex domain," in which the leading Classical musicians and scientists of mid-19th-Century Europe came together in fruitful and happy collaboration. Sketch by Wilhelm Hensel (husband of Fanny Mendelssohn), 1823.*

known as the LaRouche-Riemann economic model.[2] He later reported that the only appropriate recreation that he had found during "breaks" from this concentrated work, was to dive into certain Classical works, and, in particular, Beethoven's Late Quartets.[3] The suggestion here is, minimally, that it was a lot of work to get the mind properly organized into the complex domain, and that such a mind would not find replenishment except in a similarly organized complex domain. This report serves as the touchstone for investigating the undeniably subjective quality of science, but a subjectivity in the communicable, social form of the works of Bach, Mozart and Beethoven.

Dirichlets, Mendelssohns & Plato

The history recounted here will develop the role of Dirichlet's wife, Rebecca Mendelssohn Dirichlet, and her Göttingen *musikabends*, regarding these specific powers of the mind. Previously, this author addressed Dirichlet's introduction into the Mendelssohn family cultural life in 1828-29, as the young Lejeune carried out sensitive magnetic measurements in Berlin, in the Mendelssohn's backyard, while Felix and Fanny Mendelssohn rehearsed their friends for an historic reintroduction of J.S. Bach's "St. Matthew Passion." This excerpt makes the point:

"When Lejeune Dirichlet, at 23 years of age, worked with Alexander von Humboldt in making microscopic measurements of the motions of a suspended bar-magnet in a specially built hut in Abraham Mendelssohn's garden, he could hear, nearby in the gardenhouse, the Mendelssohn youth movement working through the voicing of J.S. Bach's "St. Matthew Passion." Felix and Fanny Mendelssohn, 19 and 23, were the leaders of a group of 16 friends who would meet every Saturday night in 1828, to explore this 'dead' work, unperformed since its debut a century earlier by Bach.

"The two simultaneous projects in the Mendelssohn garden at 3 Leipziger Strasse (in Berlin) are a beautiful example of Plato's [concept of the] Classical education necessary for the leaders of a republic: The astronomer's eyes and the musician's ears worked in counterpoint for the higher purpose of uniquely posing to the human mind *how the mind itself worked*. As described in the *Republic*, Book 7, the paradoxes of each 'field'—paradoxes (such as the 'diabolus') that, considered separately, tied up in knots the 'professionals'—taken together would triangulate for the future statesman the type of problems uniquely designed to properly exercise the human mind. After all, such a mind would have to master more than astronomy and music, simply to bring before the mind the series of paradoxes, so as to

2. See LaRouche's "The Secret Economy," *EIR*, May 28, 2010, http://www.larouchepub.com/lar/2010/3721secret_economy.html

3. See, for example, LaRouche, "Laughter, Music and Creativity," unpublished manuscript, June 3, 1976; LaRouche, "Why Poetry Must Supercede Mathematics in Physics," *Fusion*, October 1978.

Rebecca's 1855-56 musikabends *in Göttingen attracted the exceptionally gifted musicians Clara Schumann (center), Joseph Joachim (left), and Johannes Brahms (above). Rebecca's mission was to introduce there, the unique cultural life that the Mendelssohn family had created in Berlin.*

be made capable of dealing with the much more complicated dealings of a human society.

"Since the mind does not come equipped with a training manual, the composer of the universe created the harmonies of the heavens and of music as, for example, a mobile above a baby's crib.

"In that hut, Dirichlet would have been making microscopic measurements as part of making a geo-magnetic map of the Earth. The audacity in thinking that these minuscule motions of the suspended bar-magnet could capture such unseen properties, posed certain appropriate questions to Dirichlet. (Gauss's geodetic surveying a decade earlier was paradigmatic of the sort of project that mined such riches out of the ostensibly simple affair, e.g., of determining where one actually was! (But this also applies to locating oneself in the process of a proper daily political-intelligence briefing.)

"Similarly, the 16 youths' working to solve amongst themselves the complicated interrelationships of Bach's setting of the 'Passion' story, as related by St. Matthew, would have forced them to grapple with the scientific problem of ascertaining what our Maker would have in store for us, in their attempt to map their own souls. Just for starters, how would Jesus intone what he says? How would the chorus/audience respond to Jesus, etc.? The following historical sketch is offered as a few measurements, but instead of using a suspended magnetic bar, we'll use a few years of Dirichlet's life, and thereby try to triangulate some of the important characteristics for a map of the culture that created the world that, today, we are challenged to master."[4]

The key is the Classical method of counterposing astronomical and harmonic paradoxes to properly prepare the mind for statecraft in a republic.

Rebecca's Opening Salvo in Göttingen

Dirichlet went on to fall in love with and marry one of the members of the chorus, Rebecca, the younger sister of Felix and Fanny. This joining of science and music was part of the exciting life around the Mendelssohn culture of Berlin for the first 23 years of their mar-

4. David Shavin, "Dirichlet and the Multiply-Connected History of Humans: The Mendelssohn Youth Movement"; http://www.wlym.com/pedagogicals/dirichlet-shavin.html

riage. Then, in 1855, Dirichlet was chosen to succeed Gauss at Göttingen. Much less is known regarding Rebecca's role in organizing the appropriate musical culture there for Dirichlet's students, including Riemann.

Rebecca's 1855-58 *musikabends* in Göttingen attracted Clara Schumann, Joseph Joachim, and Johannes Brahms. She was hopeful that the unique cultural life of her family's Berlin *musikabends*, ended by the premature deaths of Felix and Fanny, could be replicated in Göttingen. Immediately, Clara Schumann came to Göttingen to play before Dirichlet, his associates and students. Shortly thereafter, Brahms and Joachim made the trip to Göttingen, playing at Rebecca's *musikabends*. How did this happen, and what did the musicians and mathematicians have to say to each other?

We have a pretty good report of the opening salvo of Rebecca's Göttingen *musikabends*, even before Clara arrived. Rebecca reported to her nephew, Sebastian:

"The day before yesterday, we sang the 'Son and Stranger' before sixty of our intimate friends.[5] Stout Bodemeier's capital bass inspired me with the idea, and it was very successful. The concerto-pieces went so prettily, and there was such spirit and go in the whole performance that I for my part enjoyed it thoroughly. Bodemeier's Kauz[6] was really splendid; he showed so much racy but good-natured humor, and so much musical intelligence, besides his really fine voice. The watchman's [that is, Kauz's] song made me shed many a tear, but nobody but you would know why.[7] The short solos in the chorus were sung by the two Siebold girls, who looked very pretty in the second place, and sang charmingly in the first.[8] We wound up with supper.... [O]ur company expressed their gratitude by eating and drinking to an enormous extent, and the professors by proposing the healths of everybody—hosts, guests, singers, and even the music. The rehearsals were the best part, it was so interesting to see how they understood the music and grew fond of it, *and we became the best of friends over it.*... It was very nice, and it has made me feel quite at home having good music in the house. Yes, indeed, we are feeding these people with the crumbs from our former feasts" (emphasis added).[9]

I. Crumbs from Our Former Feasts

Rebecca began the Dirichlets' life in Göttingen with morsels from the rich Mendelssohn *hausmusik* of Berlin. The "Son and Stranger" was a typical plot of the four Mendelssohn siblings back in 1829, that combined Felix's welcome return to Berlin with their parents' 25th anniversary. Then, the 18-year-old Rebecca was being courted by Lejeune Dirichlet. She had met her future husband the previous year, when a group of young people became "the best of friends" in their sustained work in the rehearsals of Bach's "St. Matthew Passion." Dirichlet could listen to Rebecca and her friends rehearsing in the garden, as he measured the Earth's magnetism. It was second nature for Rebecca to fashion human relationships upon beauty, and upon the work on behalf of beauty—that is, to "become the best of friends" through work on music. This was the story of her entire life around the Mendelssohn home, and of her marriage to Dirichlet.

Dirichlet Before Rebecca

The young genius, Lejeune Dirichlet, had been brought from Paris to Berlin, and introduced to the unique cultural life of the Mendelssohn family, by Alexander von Humboldt—who, along with his brother, Wilhelm—had studied at the feet of Moses Mendelssohn in the 1780s. Dirichlet had come to the Humboldts' attention no later than his brilliant 1825 submission to the French Academy on Fermat's Last Theorem.[10]

5. This was a light work, "Die Heimkehr aus der Fremde" ("Returning Home from Abroad") written by Felix when he, the son and "stranger," returned from his initial solo excursion—his 1829 trip to England—and also on the occasion of his parents' 25th anniversary.

6. Eduard Devrient, Mendelssohn's good friend, sang the original part of Kauz; Rebecca that of Lisbeth; Fanny that of the mother; brother Paul played cello, and Felix was at the keyboard. The son was sung by Eduard Mantius, who was a few months away from his opera premiere—Tamino in Mozart's "The Magic Flute." (His last performance would be as Florestan in Beethoven's "Fidelio.") Felix wrote a special one-note part for the father, played by Fanny's fiancée, Wilhelm Hensel—not known for his singing. (In the Dec. 26, 1829 performance, Hensel seemed to have successfully stuck to one note—though it wasn't the right one—causing Felix to break down in laughter at the keyboard.)

7. Nor does this author know why. However, for what it is worth, the watchman sings to Lisbeth. Back in 1829, that was Devrient singing to Rebecca herself. One assumes that Rebecca is referring to some private conversation between Sebastian and herself.

8. Three years later, Brahms would end up composing songs for, and falling in love with, Amalie Siebold.

9. Sebastian Hensel, *The Mendelssohn Family*; tr. by Carl Klingemann and an American collaborator (New York: Harper & Bros., 1882); second revised edition, v. II, pp. 343-344. (Other citations simply noting "Hensel" refer to this edition.)

10. Dirichlet's proof for the case of the fifth power was a continuation

Humboldt prevailed over Fourier in recruiting Dirichlet to leave Paris for Germany.

Dirichlet had first come to Paris in 1822, with a letter of introduction from François Larchet de Charmont to General Foy, the head of the republican faction in the French Chamber of Deputies—and the opposition to both Napoleon and the 1815 royalist restoration. Foy was noted for his eloquence and patriotism in leading the republicans. Of note, was his analysis that the royalist government bore the same despotic Napoleonism that it claimed to oppose—thereby undermining liberty and provoking anarchist movements. Larchet had served under Foy, and he and the Dirichlet family both lived in close proximity to Charlemagne's Aachen. Larchet had been the French commander of Jülich, while Dirichlet's father was the postmaster and city councilor of Duren. They shared what can best be described as hopes that an American Revolution would come to Europe—as they seem to have followed the better part of Lafayette's course: advocacy of a revolution in France, but opposition to the Jacobins, followed by problems with both the Napoleonic reaction and the Congress of Vienna counter-reaction. Sebastian Hensel's cryptic comment was that Dirichlet's "parents, who had some few good friends at Paris, dating from 'the French time…'" arranged for him to go study in Paris.[11]

The young genius Lejeune Dirichlet (above), had been brought from Paris to Berlin, and introduced to the unique cultural life of the Mendelssohn family, by Alexander von Humboldt (right)—who, along with his brother, Wilhelm—had studied at the feet of Moses Mendelssohn in the 1780s.

The 1815 Congress of Vienna had transferred control of Dirichlet's town from France to Germany. At the age of ten, Lejeune embarked upon an in-depth study of the French Revolution, developing his analytical powers in an historical field that he took very much to heart. What may have been provoked by the curiosity of one's town not being what it was the day before, developed into an investigation of the larger universe. How had Europe betrayed the hopes of the American Revolution in only three decades? The young Dirichlet wrapped his mind around the debacle of the French Revolution, going from the republican hopes of Spring 1789, to the insanity of the Terror of 1794—plus the horror of the semi-nationalist reaction of 1795 turning into Bonapartism, no later than 1799. When later, at 17, he arrived in Paris, he tackled Gauss's *Disquisitiones Arithmeticae* with the same relentless drive to get at the underlying principles, to get at the whole story.[12]

of the work of Sophie Germain, both of them serious students of Gauss's *Disquisitiones Arithmeticae*.

11. Sebastian Hensel is a unique source on Dirichlet's life. When his mother, Fanny Mendelssohn Hensel, died in 1847, the 16-year-old lived with Aunt Rebecca and Uncle Lejeune. It appears that Dirichlet, his second father, told stories of his own youthful development to his teenage ward.

12. Dirichlet's characteristic method—passionate, relentless, even warlike. Years later, while on a trip to Italy, Rebecca described (to her sister) Lejeune's study of Italian: "Dirichlet reads Boccaccio the whole day long.… You have more reason to be afraid of Dirichlet's Italian than of mine; he studies it with his usual perseverance, and, as Jakoby says, flogs his teachers till he makes them teach him something, and every person he meets he considers a teacher.…"

In Paris, Dirichlet was denied entrance to the Ecole Polytechnique, and instead, studied at the Collège de France and at the Faculté des Sciences. The Prussian chargé d'affaires at Paris would not apply for the proper "permission from the French Minister without a special authorization from the Prussian Minister von Altenstein!" And Altenstein would not comply. (This is the same Altenstein who, evidently, had no scruples in promoting Hegel's career.) Sebastian obviously got this story from Dirichlet's account many years later, indicating a wrong that Dirichlet could not forget. The suggestion here is that the chargé d'affaires would not proceed in a normal fashion, as there was some republican history with Dirichlet and/or his family, that would require a special authorization from higher up in order that it be overlooked. Such was typical of post-Congress of Vienna Europe, and, in particular, post-Carlsbad Decree Prussia.

Larchet arranged for Dirichlet to be interviewed by General Foy, who proceeded to take him under his protection. At about the same time, Foy acted similarly with the young Alexander Dumas—later, the famous author.[13] Foy was apparently the central figure for French patriots who had fought for France under Napoleon, but who, subsequently, had opposed his imperial turn of 1798-1801. Foy himself had been an artillery specialist with many military successes, from 1792 to 1803. But he refused an appointment as aide-de-camp to Napoleon, objecting to his naming himself Emperor. (This is the same time, occasion, and reason, that Beethoven ripped up his dedication to Napoleon of his Third Symphony, now known as the "Eroica.") From 1823 to 1825, Dirichlet served as the tutor of Foy's children, and was supported during his studies in Paris by the General.

Dirichlet told Sebastian that the political discussions he had heard in the Foy household formed much of his character and worldview for the rest of his life: "…[I]t was very important for his whole life that General Foy's house—frequented by the first notables in art and science as well as by the most illustrious members of the chambers—gave him an opportunity of looking on life in a larger field, and of hearing the great political questions discussed that led to the July Revolution of 1830, and created in him such a vivid interest."[14] Perhaps the key initiative of that period, doubtless much discussed in the household, was the 1824-25 mission to the United States of Foy's friend, General Lafayette, who toured the United States, catalyzing a revival of the spirit of the American Revolution.

Dirichlet's first published memoir was a partial solution for Fermat's prime number theorem, presented to the French Academy of Science early in 1825. More elegant than work being done then by Legendre, it reflects the likely collaboration of Sophie Germain.[15] While not as famous as Dirichlet, Abel, and Galois, she was the early champion of Gauss's *Disquisitiones Arithmeticae*, and this quartet of "DA" activists shocked the mathematical world between 1825 and 1832. By 1832, Dirichlet was the only surviving member of this quartet.

After Foy's death in November 1825, Alexander von Humboldt succeeded in recruiting Dirichlet to Berlin, with a one-year post in Breslau. Fourier had entreated him to stay in Paris, saying that he "felt sure it was his vocation to occupy a high position at the [French] Academy."[16] But Dirichlet would have had to deliberately shut his eyes to the manipulations of Laplace and Cauchy; and he was too well moored, strategically and morally, to fall for such entreaties. Dirichlet avoided the treatment dispensed to Abel and Galois, the other two most famous proponents of Gauss's *Disquisitiones Arithmeticae*. Instead, he and Lazare Carnot became the two most important of Humboldt's recruits

13. Dumas' father, Gen. Thomas-Alexander Dumas, had become a general at only 31 years of age, in 1793, but he organized the republican opposition to Napoleon during the Egyptian campaign of 1798-99. When he was captured and imprisoned by King Ferdinand of Naples, Napoleon refused offers of exchange, leaving Dumas at their mercy. After two years of imprisonment, where he was fed arsenic, he suffered from partial paralysis, lameness, and deafness. When freed, Napoleon denied him his military pay, and he died a couple of years later. (Of note, Gen. Dumas' statue was taken down for Hitler's infamous one-day visit to Paris in 1940—and has not yet been put back up.) Foy sent Dumas' son, Alexander, to monitor Louis-Philippe's activities, and he would become a member of Lafayette's National Guard during the July Revolution of 1830.

14. Hensel, v. I, p. 312.

15. Sophie had been the major proponent of Ernst Chladni's work on harmonic wave-like determinations of musical singularities. (Shortly, Wilhelm Weber and his brother began their scientific career on this same material.) Her father, Ambroise-Français, may qualify as yet another anti-Napoleon republican. He was elected to the 1789 Etats-Generaux and later became head of the Banque de France. In 1806, Sophie intervened with a French general, a friend of the family, to protect Gauss—fearing that Napoleon would act toward Gauss, as the Romans had in their murder of Archimedes. Sophie and Dirichlet both worked outside of the official scientific establishment, and might well have met in the Foy circles.

16. Hensel, v. I, p. 314.

One of Rebecca's admirers, and attendees at her sister Fanny's musikabends *was the poet Heinrich Heine. Fanny wrote to her sister, that although she might despise him, "he is a poet, a true poet!"*

in bringing the best of the Ecole Polytechnique methods to Germany.

Lejeune and Rebecca

After a one-year posting to Breslau, Humboldt arranged for Dirichlet to come to Berlin, teaching math at the Berlin Military Academy. Dirichlet arrived in time for Humboldt's September 1828 scientific conference, which drew Gauss from Göttingen and Charles Babbage from England. (Humboldt also arranged for Felix Mendelssohn to compose a work for the opening of the conference—what is now called the "Humboldt Cantata.") Gauss stayed at Humboldt's home, where they planned out the magnetic mapping of the geosphere—whose home base Humboldt had established in the Mendelssohn backyard.

Humboldt introduced Dirichlet into both the backyard project and the Mendelssohn household. Rebecca's older sister Fanny described the scene, at the end of a year of collaboration in working out the parts of Bach's "St. Matthew's Passion":[17] "Christmas-eve [1828] was most animated and pleasant. You know that in our house there must always be a sort of '*jeune garde,*' and the presence of my brothers and the constant flow of young life exercise an ever attractive influence." One attendee was Prof. Eduard Gans, who "presides as commander and protector of the younger ones. He is a man of intellect and knowledge. . . ." Elsewhere, Fanny added: "We see him very often, and he has a great friendship for Rebecca, upon whom he has even forced a Greek lesson, in which these two learned persons read Plato. . . . It stands to reason that gossip will translate this Platonic union into a real one. . . ."

Also attending was a second admirer of Rebecca, Johann Gustav Droysen, "a philologist of nineteen, with all the freshness and lively active interests of his age, with a knowledge far above his age, endowed with a pure, poetic spirit and a healthy amiable mind, by which any age would be adorned. . . ." Within the next five years, Droysen would complete and publish both a translation of Aeschylus, and his famous work on Alexander the Great. Droysen was a close friend of a third Rebecca admirer, the poet Heinrich Heine. Again, from Fanny: "Heine is here . . . though for ten times you may be inclined to despise him, the eleventh time you cannot help confessing that he is a poet, a true poet!" On a separate occasion, Droysen conveyed to Rebecca a characteristic greeting from Heine: "As for chubby Rebecka, yes, please greet her for me too, a dear child she is, so charming and kind, and every pound of her an angel." (Though it credibly sounds like something Heine might say, it is also possible that Droysen manufactured the greeting so as to enhance his own courtship.) Gans, Droysen, and Heine would all lose out to the fourth admirer, Dirichlet.

Fanny continued: "As a counterpart of [the bearish] Gans, I must mention Dirichlet, professor of mathematics, a very handsome and amiable man, as full of fun and spirits as a student, and very learned. . . . A large *'Baumkuchen'* [a layer cake, with rings like those of a tree—ed.] was given to Dirichlet (he is excessively fond of it). It was dressed like a lady, and made him a declaration of love, which gave occasion for a thousand jokes." He evidently was quite good-natured about his unmarried status. Dirichlet and Rebecca became engaged in 1831, married in 1832; a son, Walter, was born in 1833.

17. Hensel, v. I, pp. 164-165.

Klein's Freakout over 'Dirichlet's Coffeehouse'

From the inception of Dirichlet's relationship with the Mendelssohns, a rich cultural life was part and parcel of his mental life, of his research, and of his teaching methods. Felix Klein was hysterical over just this matter, portraying Dirichlet as somehow barely tolerating the imposition of the musical socializing. Years after both Lejeune and Rebecca were dead, he reacted to Rebecca's Göttingen *musikabends*: "Frau Dirichlet was able to gather about her, in the brief Göttingen period, all the people most interested in science and art, creating a lively and cultivated social life. It is said that Dirichlet took part in the social arrangements at his house only in a reticent and very retiring way. The incessant choppy sea of dazzling intellects around him could not in the least have corresponded to the deeper sea-swell of his own spirit."[18]

For Klein, the "lively and cultivated social life" becomes a froth that could only distract from the way real mathematics is done. This may speak volumes about Klein's way of dealing with social life and with the abstractions of his pure math, but it is hysterically blind toward Dirichlet's passionately moral and historical approach.[19]

Dirichlet's "deeper sea-swell of his own spirit" was evidenced, for example, by Rebecca, when a number of their group visited Italy in 1843: "Then we went to see the remains of Leonardo's *'Cenacolo'* [The Last Supper—ed.], where I saw a very small engraving of a Christ, *en profile*, which I instantly recognized from a sketch in Hensel's [her brother-in-law's] book.... [T]he head of Christ by Leonardo had such a powerful effect, even on the mathematical minds [including those of Dirichlet and Jacobi, and possibly Jakob Steiner—ed.].... [W]e voted an address of thanks" to Hensel.[20]

The mathematician Felix Klein described Rebecca's soirées as an "incessant choppy sea of dazzling intellects," which must have distracted Dirichlet from "pure mathematics."

Only one of many examples—but Klein somehow knows that the Mendelssohns' "choppy sea of dazzling intellects around him could not in the least have corresponded" with Dirichlet's mathematical thought processes. "Could not in the least"! Perhaps this should be denominated as "Klein's fifth postulate."

We've discussed the passionate method of Dirichlet's thought processes. But, when he turned to mathematical subjects, is there any evidence that he abandoned this method, viewing number theory, for example, as an autochthonous matter? It certainly goes against his method of teaching mathematics. Dirichlet's teaching of mathematics was very personal, and it revolved around the social life at home—starting even before his marriage, and continuing later with Rebecca as hostess. First, we cite Wilhelm Weber, a student of Dirichlet in

18. Felix Klein, *Development of Mathematics in the 19th Century* (1928). Reprinted by Trans. Math. Sci. Press, R. Hermann ed., Brookline, Mass. (1979); trans. by Michael Ackerman; p, 90. In the 1920s, Klein claims that in 1905 a "close relative of Dirichlet confirmed this interpretation to me"—but this same "witness" claims that Dirichlet's family never appreciated him, which is certainly not true for Dirichlet's mother, children, and in-laws. Klein's conclusion: "Thus German society failed in what it promised to do: to build a unified cultural atmosphere which would include the exact scientific element as a unique and valued component." Did Klein fit his evidence to his bias?

19. E.g., Klein's infamous "Erlaengen program" of 1872 reflects the same disease. The provocative, causal role of, for example, Platonic solids in Galois' group theory approach gets flattened out—so that the relationships of Platonic solids become merely a parallel universe to those of numbers (and groups)—and the eunuchs outlaw causality.

20. Hensel. v. II, p. 205.

that first Fall in Berlin, in 1828, who wrote: "After the lectures, which were given three times per week from 12 to 1 o'clock, there used to be a walk in which Dirichlet often took part, and in the afternoon it became eventually common practice to go to the 'Dirichlet' coffeehouse. After the lecture, every time, one of us invites the others without further ado to have coffee at Dirichlet's, where we show up at 2 or 3 o'clock and stay quite cheerfully up to 6 o'clock."[21]

So, the strategy was to secure several hours, three times a week, with Dirichlet in a social setting—something that Dirichlet obviously chose to allow, and undoubtedly relished. (Incidentally, Weber's Nov. 21, 1828 letter describes the situation about one month before the Mendelssohn Christmas party, related above by Fanny.)

From 1834 onwards, Dirichlet ran an extended math seminar in his house—with Rebecca as the hostess. Later, even at the more formal Berlin Military Academy, he made it a practice, in the 1830s and 1840s, to invite his students, the military officers, to the "stimulating evening parties" hosted by Rebecca.[22] But how deeply was Dirichlet willing to go in preparing his students?

Riemann's close friend, Richard Dedekind, described Dirichlet's method of making "a new human being" of one such student, writing in the months after his participation in Rebecca's 1855-56 *musikabends*:

"What is most useful to me is the almost daily association with Dirichlet, with whom I am for the first time beginning to learn properly; he is always completely amiable towards me, and he tells me without beating about the bush what gaps I need to fill and at the same time he gives me the instructions and the means to do it. I thank him already for infinitely many things, and no doubt there will be many more."[23]

Undoubtedly, there really were "many more" than an infinity of dimensions to what Dedekind and Riemann were going through in 1855-56, but more of that another time. Before Rebecca's Göttingen *musikabends*, there were 23 years of married life in Berlin.

3 Leipziger Strasse

The "Dirichlet Coffee-House" of 1828 had developed, by 1834, into private teaching sessions in the professor's home. As Dedekind described it, Dirichlet's teaching method featured the identifying of the gaps in the student's epistemology, and the means of addressing them. Dirichlet judged that the mathematical training involved developing the aesthetic capacities of the student's mind, and evidently judged that his household, with Rebecca, was the most fruitful location for carrying this out. They resided at 3 Leipziger Strasse, in a section of the larger Mendelssohn household, whose cultural activities revolved around Fanny's *musikabends*, where Rebecca was the regular soprano.

The first series of *musikabends* was run by Fanny and Felix, from 1822 to 1829. (Today, one may just listen to Felix's glorious Octet and imagine oneself as a very happy "fly on the wall" at these affairs.) In 1825, Fanny proposed "to establish an instrumental music lovers' association … [as] this declining art needs a strong hand to raise it, otherwise it will disappear in the bad taste of the time, the egotism of the organizer, and the pandering of the public."[24] Fanny was not yet 20. About the time that Dirichlet arrived, Felix's study of Beethoven's Late Quartets[25] was part of the fare.

Schubring's *Life at 3 Leipzigerstrasse* provides a glimpse of the role of Humboldt, who "was a frequent visitor. Whenever he went, the rest of the persons present would gradually form a circle around him, for every other occupation or amusement soon yielded to his interesting conversation. He could go on, for hours together, without a pause, relating the most attractive facts from the rich stores of his experience. Hegel was another visitor, though he contributed little to the general entertainment," preferring instead to sit in a corner playing whist—or perhaps just monitoring the goings-on.

In 1829, there was a disruption in the *musikabends*, as Felix, now 20, left his parents' home, and Fanny mar-

21. Jürgen Elstrodt, *The Life and Work of Gustav Lejeune Dirichlet*" (2007), p. 16. See: http://www.uni-math.gwdg.de/tschinkel/gauss-dirichlet/elstrodt-new.pdf

22. However, this did indeed cease with the 1848 Revolution, after which the Dirichlets were strongly opposed to the more reactionary Berlin. A family tradition relates how, in 1850, Rebecca helped Carl Schurz free a political activist from Spandau prison, thereby escaping a life sentence. (Schurz became an early Lincoln Republican, a general in the Union Army, and a Senator from Missouri.)

23. July 1856 letter located in I. Dedekind, P. Dugac, W.-D. Geyerand W. Scharlau, Richard Dedekind, in *Eine Würdigung zu seinem 150* (Braunschweig: Geburtstag, 1981).

24. As quoted in R. Larry Todd's *Fanny Hensel: The Other Mendelssohn* (New York: Oxford University Press, 2010) p. 91. (Orig. in *Tagebücher of Fanny Mendelssohn*, p. 104.)

25 Felix's 1827 Op. 13 String Quartet comprised his sacred vow to the just-deceased Beethoven, that the 18-year-old would always love him and carry on his work.

In 1829, Fanny married the painter Wilhelm Hensel, who did many paintings and drawings of the brilliant participants in Rebecca's musikabends.

ried the painter Wilhelm Hensel. They recommenced in 1831, becoming again the center of Berlin's cultural life. Fanny composed for many such events. From afar, Felix still sent his occasional contributions. Rebecca was the soprano for Fanny's lieder. Fanny's husband, Hensel, made paintings of many of the attendees—including Vincent Novello, Eduard and Theresa Devrient, Theodor Körner, Heinrich Heine, Jacob Grimm, Karl August Böckh, Robert and Clara Schumann, Leopold von Ranke, and Dirichlet's close colleague, Carl Jacobi.

By 1832, the *musikabends* were regularized on Sundays as *"Sonntagsmusik."* One Sunday in October 1833 included a Mozart string quartet, the Beethoven G major concerto, a duet from "Fidelio," Bach's D minor concerto, a trio by Ignaz Moscheles, and selections from Mozart's "The Magic Flute." Johanna Kinkel described Fanny's playing: "Fanny Hensel's interpretive skills impressed me even more than the great voices I heard at her house.... The spirit of a work was grasped in its most intimate texture, pouring forth to fill the souls of listeners and singers alike. A sforzando from her little finger would flash across our souls like an electric discharge...."[26]

Over the years, many musicians and soloists gave of their time and effort because of the uniqueness of the Mendelssohn *musikabends*. Fanny had her pithy expression for all the details and ruffled feathers: "There are so many cows with tails that need untying."

In February 1835, Fanny produced Bach's motet "God's Time Is the Very Best Time." She responded powerfully to the morally uncompromising mind of Bach, writing to Felix: "My favorite motet, 'Gottes Zeit'.... Ah! How it makes a person feel good again! I know no preacher who is more insistent than old Bach, especially when he ascends the pulpit in an aria and holds on to his theme until he has utterly moved, or edified and convinced his congregation."[27] Their father Abraham was also quite moved by this performance, one of the last that he heard. He died that Fall; afterwards, the *Sonntagsmusik* ceased for awhile.[28] Fanny recalled to Moscheles that when he had played an "Adagio" in F# from a Haydn quartet that Abraham hadn't heard before, he was moved to tears.

Two months later, Fanny wrote of her father that he "frequently regretted, in the latter time particularly, that no talent had been given him; but the most remarkable feature in his character, to my mind, was the harmonious development of his whole faculties, including the intellectual organs, which produced a unity of thought, feeling and action such as we seldom see."[29]

Schumanns and Mendelssohns

It was about this time that Robert Schumann began his collaboration with the Mendelssohns. Schumann, at

26. Cited in Monika Klaus, *Johanna Kinkel: Romantik und Revolution* (Köln/Weimar/Wien, Böhlau, 2008). p. 44. Orig. from Kinkel's 1886 "Memoiren, No. 46." Kinkel was a composer, trained by Beethoven's violin teacher, Franz Anton Ries. (In 1850, Rebecca would help rescue Kinkel's husband, a political prisoner, from Spandau prison.)

27. Fanny's Dec. 10, 1834 entry to her letter begun on Nov. 30, 1834. Marcia J. Citron, ed., *Letters of Fanny Hensel to Felix Mendelssohn* (Hillsdale, N.Y.: Pendragon Press, 1984)

28. Shortly before his death, Abraham displayed his feisty regard for the future of Germany. He had an usually edgy fight with his friend Varnhagen, who was defending the new revolutionaries in literature and poetry. Abraham insisted upon the roles of Lessing and Shakespeare as the key for Germany's and Europe's progress, rather than "all the theatrical and feuilletons written since that time...."

29. Hensel, v. II, p. 2.

23, had studied piano with Friedrich Wieck in Leipzig, and thought Germany, after the deaths of Beethoven and Schubert, was in danger of falling into musical mediocrity:

"At the close of the year '33, a number of musicians, mostly young, met in Leipzig every evening, apparently by accident at first, for social purposes, but no less for an exchange of ideas on the art which was meat and drink to them—music. It cannot be said that the musical state of Germany was very pleasing. Rossini still ruled the state. Herz and Huenten were sole lords of the piano. And yet but a few years had elapsed since Beethoven, C.M. von Weber, and Franz Schubert were with us. To be sure, Mendelssohn's star was in the ascendant; and wonderful things were reported of a Pole, Chopin by name; but they exercised no real influence till later. One day the young hot-heads thought, 'Why do we look idly on? Let's take hold, and make things better; let's restore the poetry of art to her ancient honor.' So arose the first sheets of a new journal for music."[30]

The *Neue Zeitschrift für Musik* was first issued in April 1834. Schumann explained: "Our plan was formed beforehand. It was simply this, to recall the old times and its works with great emphasis, thus to draw attention to the fact, that fresh artistic beauties can be strengthened only at such pure sources, and then to attack as inartistic the works of the present generation,—since they proceed from the praises of superficial virtuosos. . . ."[31]

Schumann's teacher, Wieck, was one of the four initiators of the *Zeitschrift*, but privately, Schumann waged a second front—his conspiracy of one, like David against the Philistines: "Here another alliance may be mentioned, which was more than a secret one; namely, the *Davidsbündler*, existing only in the brain of its creator. . . . This *Davidsbündlerschaft* ran like a scarlet thread through the Journal, combining 'truth and poetry' in a humorous manner."[32]

Mendelssohn, one year older than Schumann, moved to Leipzig in 1835, taking the post of the conductor of Leipzig Gewandhaus Orchestra. He opened with Beethoven's 4th Symphony and his own setting of Goethe's "Calm Sea and Prosperous Voyage." In his first two weeks in Leipzig, Felix heard Bach performed at the famous Thomaskirche, and he performed a Bach fugue for Clara Wieck's 16th birthday. He followed this, for fun, by mimicking the styles of Liszt and Chopin at the keyboard.[33] Here was born an alliance

Robert and Clara Schumann joined the cultural renaissance of Mendelssohns, Dirichlets, and Hensels, in 1835. After Robert's untimely death in 1856, Clara—one of the most celebrated pianists of the 19th Century—continued to write, teach, and play music.

30. Wilhelm Joseph von Wasielewski, *Life of Robert Schumann*; A.L. Alger, trans. (Boston: Oliver Ditson, 1871), p. 80 (reprinted by Detroit Reprints in Music, 1975).

31. Ibid, p. 82.

32. Ibid, p. 85. For more, see davidsbuendler.freehostia.com/davidsbuendler.htm

33. Evidently, Felix thought that mimicking Liszt was the most appropriate response. Max Müller recounted that once, at the Mendelssohns', "Liszt appeared in his Hungarian costume, wild and magnificent. . . ." Liszt played a Hungarian melody with three of four wild variations, and then pushed Felix to follow that performance. Felix replied, "Well, I'll play, but you must promise me not to be angry." He not only proceeded to repeat, on first hearing, Liszt's whole performance, but "slightly imitating Liszt's movements and raptures"—a performance Liszt would not soon forget.

between the Mendelssohns and the Schumanns, interrupted only by Felix's untimely death 12 years later.

Felix presented Fanny's lied "Die Schiffende" to great effect—and Schumann's review found much to admire. Felix wrote Fanny: "The new 'Musical Gazett' (I mean the editor [Schumann], who dines at the same hotel with me) is quite enthusiastic about you."[34] Shortly thereafter, the Wiecks hosted a private reading of Bach's "Triple Concerto in D," and Felix had Clara premiere her own "Piano Concerto in A minor" at the Gewandhaus. Further, in these same few weeks in Leipzig, the Dirichlets visited from Berlin, meeting one and all; and Schumann fell in love with Clara. (They would have to outlast her father's objections, before finally marrying in 1840.) This group that had coalesced in a few weeks in the Fall of 1835—Mendelssohns, Schumanns, Dirichlets, and Hensels—would collaborate until Felix's death in 1847; would draw the opposition of Liszt and Wagner; and would be revived by Rebecca's music/science seminars of 1855-56 in Göttingen—with the youths, Brahms, and Joachim, having to take the place of Mendelssohn and Schumann.

August Böckh, the great Classicist and philologist, was a regular at the musikabends, and a longtime family friend of the Mendelssohns. Among other instances of collaboration, he and Felix wrote the music for the 1841 staging of Aeschylus' "Antigone."

But before proceeding to Göttingen, a few more anecdotes from Fanny's Berlin *musikabends* may be the only way to briefly convey the breadth and depth of what Klein would label "froth."

'Froth'?

August Böckh, the great Classicist and philologist, and longtime family friend of the Mendelssohn, was a regular at the *musikabends*. He even took up residence in the Mendelssohn household from 1840 to 1846. Felix collaborated with Böckh in writing the music for the 1841 staging of Aeschylus' "Antigone" in Berlin—a performance that was probably facilitated by the newly opened railroad line connecting Leipzig and Berlin. The new king, Friedrich Wilhelm IV, commissioned the production, and had an interest in bringing Mendelssohn back to Berlin.

In 1843, on the occasion of the king opening a new palace, Mendelssohn performed his very appropriate "Midsummer Night's Dream." Fanny wrote to Rebecca: "Last week the musicians from Leipzig arrived to be present at the fete. They are [pianist and composer, Ferdinand] Hiller, [violinist Ferdinand] David, [composer Neils] Gade, and a delightful little Hungarian, [Joseph] Joachim, who, though only twelve, is such a clever violinist that David can teach him nothing more, and such a sensible boy that he traveled here alone. . . ."[35]

Max Müller was at the same Berlin *musikabends*: "Mendelssohn had received so good a Classical education that he could hold his own when discussing with the old master [Böckh] the choruses of the Antigone."[36] Müller's father, Wilhelm Müller, had been a classmate of Böckh in the first years of Humboldt University. He was also a close friend of Wilhelm Hensel; as young men, both Wilhelms had fought in the 1813-14 Liberation War against Napoleon. Two of Wilhelm Müller's collections of poems, "Die Schöne Müllerin" and "Winterreise," were famously set to music by Franz Schubert.

Max Müller entered Leipzig University in 1841 to study music and poetry. Felix might have contributed to making a Classicist out of him. When he was asked about Max's future in music, Felix advised him to "keep to Greek and Latin." Regardless, as a young man, before becoming famous as a Sanskrit scholar, Max was enamored of the Mendelssohns' cultural life. He recalled of Felix: "He was devoted to his sister Fanny, who was married to Hensel the painter, an intimate friend of my father. When I was a student at Berlin [1844-45], I was

34. Hensel, v. II, p. 31.

35. Hensel, v. II, p. 216.

36. F. Max Müller, *Auld Lang Syne* (New York: Scribners, 1901) p. 23.

much in their house in the Leipziger Strasse, and heard many a private concert.... With her [Fanny] he could speak and exchange whatever was uppermost or deepest in his heart. I have heard them extemporize together on the pianoforte, one holding with his little finger the finger of the other."[37]

Finally, Max relates of Felix's deepest loves: "The last piece was Beethoven's Ninth Symphony. I had sung in the chorus...." Afterwards, with personal friends, they "teased him about his approaching engagement. His beaming face betrayed him, but he would say nothing to anybody, till at last he sat down and extemporized on the pianoforte. And what was the theme of his fantasy? It was the passage of the chorus, *"Wer ein holdes Weib errungen, mische seinen Jubel ein!"* ["Who has won a noble wife, may join in the rejoicing!"] That was his confession to his friends, and then we all knew. And she was indeed *'ein holdes Weib.'* "[38]

Mendelssohn extemporized on a sublime moment from that evening, to allow his friends to share in his true feelings for Cecile, his bride-to-be.[39]

We'll end this section on the Mendelssohns' cultural life in Berlin with a few snippets from the letters between the sisters, Fanny and Rebecca, when Rebecca and Lejeune traveled to Italy.

Fanny and Rebecca

Dirichlet had organized Humboldt and the king's physician to seek help from the king for Dirichlet's colleague Jacobi, who was afflicted with diabetes. The king sponsored Jacobi's trip to Italy, and Lejeune and Rebecca accompanied him at their own expense.[40] Fanny writes to Rebecca (Dec. 11, 1843) about Felix's visit to Berlin: "Felix is as amiable, in as good spirits, and as delightful as you know he can be in his best days. I admire him afresh every day, for this quiet life together is new to me, and his mind is so many-sided, and so unique and interesting in every respect, that one never gets accustomed to him. I do believe that he gets more lovable, too, as he increases in years...."[41]

Rebecca responds, noting that Dirichlet and Jacobi are to meet with the Pope (Gregory XVI). Fanny relates (Dec. 26, 1843): "I assure you it is as good as a play to hear Felix talk of his dealings with the cathedral clergy [about Felix's setting of the 98th Psalm], of his intimate friendship with [Prussian Minister] Count [William] Redem, the mutual affection between him and [General Ferdinand] Herr von Witzleben, [42] and a thousand such stories. We often scarcely know how to stop laughing. You can never disconcert him either; the other day, at a soirée monster given by the English ambassador,[43] he conducted the latter's ridiculously childish symphony with an almost imperceptible smile of sarcasm on his lip, but with the utmost politeness. He was not in the least put out, but only laughed, though I was so vexed at seeing him conducting such stupid stuff that I felt inclined to cry."[44]

Evidently, Rebecca teased Felix about this, to which he responded rather tartly: "When I am playing to Lord Westmoreland four motets, a Magnificat, and six waltzes of his own composition, I am really not capable of forming a judgment...."[45]

A few days later, Rebecca reports: "...I have nothing important to say. The only striking event of last week was the visit to the Pope, with whom Dirichlet was quite enchanted. His Holiness talked with them for more than half an hour, all about mathematics and mathematicians, and showed much more knowledge of the subject than [the famed English mathematician] Lady Somerville. They [Dirichlet and Jacobi] believe he prepared himself beforehand."[46]

Fanny responds (Jan. 9, 1844): "Felix's psalm for New Year's day ... is beautiful, and was very well performed; but unfortunately the whole impression was ruined by a sermon from Strauss, which was miserable beyond description. Perfect enjoyment of the cathedral music appears to be out of the question, for though a

37. Ibid., p. 27.

38. Ibid., pp. 26-27.

39. Decades later, Joachim related that Brahms had been "quite enraptured" in reading Hensel's *Die Familie Mendelssohn*, saying "Those are magnificent people, with whom I would have wanted to mingle."

40. Steiner also accompanied them, in part due to his own health problems. Afterwards, Jacobi and the Humboldt brothers arranged for Steiner to chair a geometry department at Berlin.

41. Hensel, v. II, p. 237.

42. A member of the General Staff, Erzleben taught topology at the military academy. (His descendent, Erwin, would be part of the German patriots' July 20, 1944 assassination attempt against Hitler.)

43. Gen. John Fane, the 11th Earl of Westmoreland, was appointed by Lord Palmerston. (His father, the 10th Earl, was appointed to the Privy Council by William Pitt the Younger.)

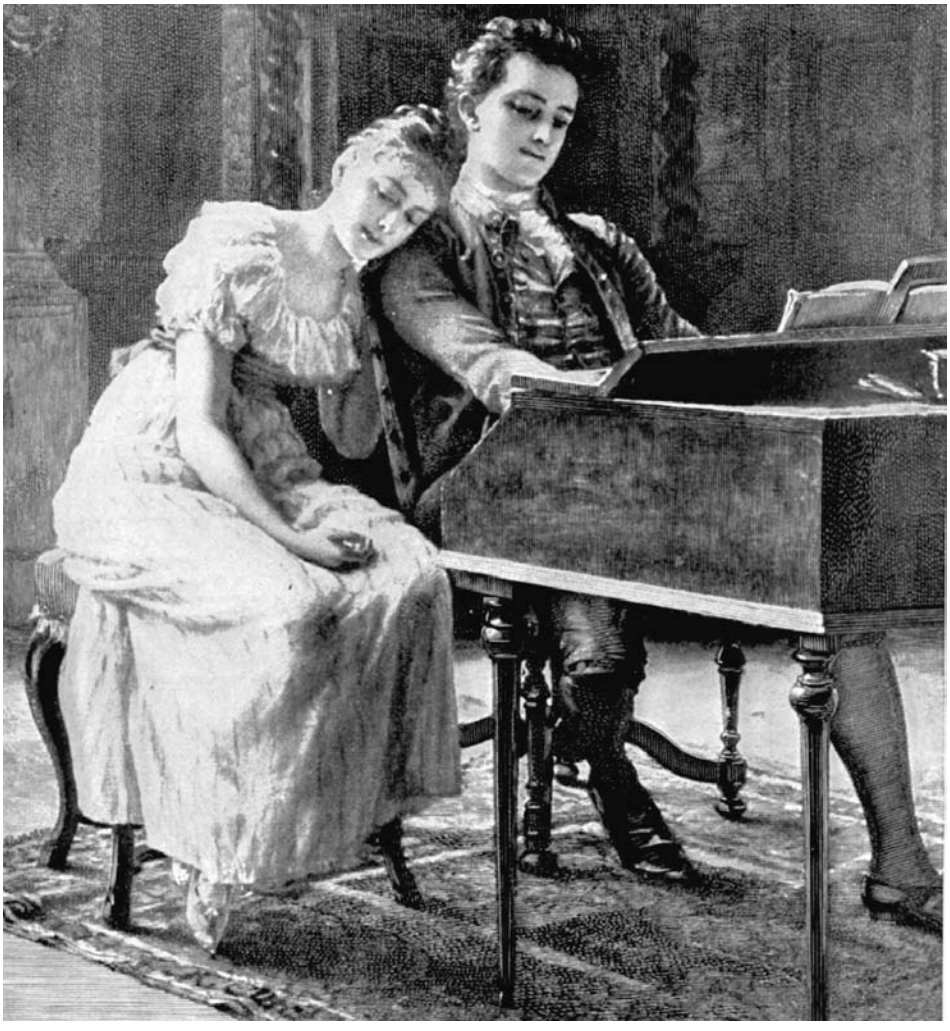
44. Hensel, v. II, p. 243.

45. Hensel, v. II, p. 253.

46. Hensel, v. II, p. 245. They had met Lady Somerville days before, and were not impressed.

choir can be found, it seems hopeless to look for a priest with any sense. Felix ought to undertake the sermon too; but, after all, that is more than one has a right to expect."[47]

Fanny writes (March 18, 1844) about a particularly showy *Sonntagsmusik:* "[W]e had twenty-two carriages in the court, and Liszt and eight princesses in the room. . . ." However, I will "dispense with my describing the splendors . . . but I will give you my programme: quintet by Hummel, duet from 'Fidelio,' variations by [Ferdinand] David, played by that capital little Joachim, who is no infant prodigy, but a most praiseworthy child, and Sebastian's great friend to boot. . . ."[48] Otherwise, Felix is arranging a performance of "Israel in Egypt" with 450 performers, while preparing his orchestra for Beethoven's 9th. At about this time, Fanny tells Rebecca: "Now that I am getting so near forty, I think how young and lively I mean to be when I am fifty."[49]



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Fanny suffered a fatal stroke at her piano, at age 42, in May 1847, as she was rehearsing for the upcoming Sonntagsmusik *(Sunday music); her closest friend and soulmate, brother Felix, collapsed when he heard the news, and never truly recovered. He died six months later, after writing a haunting string quartet (Op. 80) dedicated to Fanny.*

II. Wandering

It was not to be. Fanny died three years later, at the age of forty-two. She was at her piano, rehearsing participants in that week's *Sonntagsmusik*, when she had a stroke and, later that day, died. Fanny was just reaching the height of her compositional powers. Her major work, the "D minor Piano Trio," composed for Rebecca's April 11 birthday, is a powerful witness. In her last year, she had been urged by Robert von Keudell[50] to compose and publish such larger works. Fanny's diary noted: He "keeps me breathless and in a constant state

47. Hensel, v. II, p. 249. The sermon was probably by David Strauss, famed for his *Life of Jesus*, a controversial "de-mythologized" treatment.

48. Hensel, v. II, p. 261. Liszt's *modus operandi*. A report (from three years earlier) by Paul Heyse: "An illustrious company filled the huge room. . . . Böckh was among those permanently invited. . . . I also saw the blond mane of the young Franz Liszt . . . and in the first row of the audience a beautiful blond countess who left the room on the arm of the happy young conqueror."

49. Hensel, v. II, p. 257.

50. Robert von Keudell was a councilor, and, eventually, an ambassador. He'd studied music, particularly counterpoint and Beethoven sonatas. Fanny and Felix were both impressed with his playing and his memory. Later, he became a close friend of Bismarck, and liked to joke how Bismarck loved to hear music—that it "spurred him in one of these two opposite directions: the premises of war or those of romance."

of musical activity, as Gounod used to do. He looks with great interest at each new thing I write and tells me if something is missing—and in general, he's right."[51] Fanny much appreciated his analyses and encouragement.

That last Spring, Robert and Clara Schumann had visited Berlin, thinking they might move there. On March 15, 1847, Rebecca and Lejeune hosted the Schumanns and the Hensels. Except for Felix, who was in England, this was the group that had met in the Fall of 1835 in Leipzig. Dirichlet toasted the Schumanns' health (as Clara put it) "in beautiful language, though a little difficult to understand." Lejeune made a special reference to Schumann's "Paradise and the Peri" cantata, which was then being performed in Berlin. It was based upon a tale from the Irish poet and songwriter Thomas Moore's "Lalla-Rookh."[52] (As a 16-year-old, Fanny had first taken notice of Wilhelm Hensel while attending an exhibition of his drawings of the same "Lalla-Rookh.") Clara described that evening in her diary: "I have taken a great fancy to Madame Hensel and feel especially attracted to her in regard to music. We almost always harmonize with each other, and her conversation is always interesting. The only slight problem is that at first one has to accustom oneself to her rather brusque manner."[53] Clara joined Fanny in presiding over one of her *Sonntagsmusiks*.

When Clara received the news of Fanny's sudden death in May, she admitted to a friend: "I was very much upset by this news, for I had a great respect for this remarkable woman, and should much have enjoyed getting to know her better."[54] The Schumanns cancelled their plans to move to Berlin. Robert Schumann noted in his diary: "Madame Hensel … whose mind and depth of feeling speak through her eyes." Her husband, Wilhelm, drew Fanny on her deathbed and stopped painting. Their son, Sebastian, went to live with the Dirichlets.

During those last weeks, it is not known whether the young Bernhard Riemann attended any of Fanny's musical events (or of Clara's recitals). The 20-year-old had arrived in Berlin around Easter time to study with Dirichlet and Jacobi. He certainly did play the piano and attend concerts. However, the scheduled May 9 *Sonntagsmusik* at Fanny's never took place, and Riemann had only been there a few weeks. We will have some better evidence regarding Riemann's attendance at Mendelssohn *musikabends*, some eight years later in Göttingen.

When Felix heard the news of his sister's death, he was returning home from a grueling trip to England. He collapsed, and never truly recovered. That Summer, he composed a unique and deeply haunting string quartet for his sister (Opus 80), a gift for anyone who wishes to explore what these two souls meant to each other. On Oct. 9, Felix suffered a stroke while at the piano—just as his sister had. After a series of strokes over the next few weeks, Felix died, having outlasted her by less than six months. He was 38. At the funeral, mourners sang a final farewell, the last chorale of Bach's "St. Matthew Passion." Robert Schumann, a pallbearer, remarked: "[W]e valued him not only as an artist but also as a man and a friend. His death is an incalculable loss to all who knew and loved him. A thousand fond memories spring to mind . . . , I feel as though our grief over his death will last as long as we live."[55]

The Wanderer

Joseph Joachim had been Mendelssohn's student from the ages of 12 to 16, sharing the best moments of his young life. Never expecting such a collaboration to end so suddenly, Joachim adopted as his personal motto, *"Frei aber einsam"* ("Free but alone")—a condition that lasted for the next six years. Between the ages of 8 and 12, Joachim was taught violin by Joseph Böhm, director of the Vienna Conservatory, and the violinist preferred by Beethoven for his Late Quartets. Böhm's quartet evenings particularly captivated the young violinist. When he was twelve, Joachim's cousin, Fanny

51. Hensel, v. II, p. 325. Gounod had regularly visited Fanny when the Hensels were in Rome. There, he was introduced to Bach.

52. In brief, the peri—from Persian mythology, a creature descended from fallen angels—needs to find the most precious gift for Heaven, in order to be readmitted. It turns out to be a tear from an old sinner, having witnessed the sight of a child in prayer.

53. Clara Schumann's Diary for March 15, 1847. Found in Berthold Litzmann, *Clara Schumann: An Artist's Life*, Grace E Hadow, trans. (Whitefish, Mont.: Kessinger Publications, 1912) p. 429.

54. Ibid., p. 430; diary entry for May 18, 1847.

55. Robert Schumann's diary, two days later: "In M's house—his children playing [with] their dolls downstairs—the dead man, noble soul—his brow—his lips—the smile on them. . . ." That week, Schumann composed a couple of his pieces of his "Album for the Young" in the style of Felix's "Songs Without Words."

Between 1825 and 1827, Felix (left) and Fanny took on the personal mission of mastering Beethoven's late works. When Beethoven (right) died in 1827, the 18-year-old Felix composed his first string quartet (Op. 13). Portrait of Mendelssohn by Wilhelm Hensel (1837); portrait of Beethoven by Joseph Karl Stieler (1820).

Wittgenstein,[56] brought him to Mendelssohn's brand new Leipzig Conservatory. Mendelssohn told his friend, Ferdinand David—the violin teacher at the Conservatory—that there was nothing they could teach Joachim about violin technique, but only about music. Mendelssohn led the Gewandhaus orchestra for Joachim's performance of the Beethoven violin concerto—at the time, a neglected work that was revived by their collaboration. Joachim would also champion Mendelssohn's violin concerto, originally written for David. Felix took Joachim on some of his tours and involved him in the best music for those four years. However, with the sudden loss of Fanny and Felix, the heart was torn out of the movement to revive Bach's Classical methods, and the sharks went in for the kill against Schumann.

It Gets Ugly

In 1845, Franz Brendel, a doctrinaire Hegelian, launched an attack on the alliance of Schumann and Mendelssohn. He had managed to take over Schumann's *Neue Zeitschrift* and turn it to the promotion of the Wagner-Liszt "Zukunftsmusik," or "Music of the Future." What this turns out to really mean is: *Bach is the music of the past, and the only good Bach is a dead Bach.' The corollary: 'And only a Jewish outsider would attempt to touch the souls of Germans with their true heritage.* But Brendel's first attack uses much classier, Hegelian terms. His 1845 essay, "Robert Schumann with Reference to Mendelssohn-Bartholdy and the Development of Modern Music in General,"[57] attempts to warn Schumann away from the clever Mendelssohn, who may well be "representative of classicism in our time," but for that very reason must be rejected as a basis for our future.

Brendel first counterposes the formal Mozart (*you do know that he's Austrian, don't you?*) to the subjective Beethoven. He continues: Mendelssohn, being too much bound to Bach, could never digest the late Beethoven; but Schumann has started from the subjective, has deep inner feeling, and has a "personality so closely related to the newest epoch in literature." Mendelssohn achieves "the goals of a bygone age, along with the polemic—expressed most particularly through his creations themselves—against purely romantic music … and against artistic tendencies themselves

56. Fanny was the grandmother of Ludwig and Paul Wittgenstein. (For that matter, Joseph Böhm's brother was the grandfather of Georg Cantor.)

57. *Mendelssohn and His World*, R. Larry Todd, ed.; Susan Gillespie, trans. (Princeton, N.J.: Princeton University Press, 1991), pp. 342-351. Quotes in next paragraph are from this translation.

when they serve as an expression of the progressive movements of history." Further, "we are also justified in criticizing his lack of modern sensibilities.... [He] creates a stronger impression of the Classical and the perfect, in somewhat the same way as has been observed in the cases of Goethe and Schiller.... [H]e is the representative of the Classical in the present day, and thus not an expression of the character of the whole period, least of all its future striving."

To what was Brendel reacting? Felix had spent the previous 20 years fighting for Western Civilization, mainly by reintegrating German culture with the masterful poetry and counterpoint of J.S. Bach. A few highlights will have to suffice. Felix was no Beethoven, but between 1825 and 1827, he and Fanny took on the personal mission of mastering Beethoven's late works. In 1825, Felix gave Fanny, for her 20th birthday, Beethoven's "Hammerklavier" Piano Sonata (Op. 106), along with a letter from "Beethoven" (with Felix imitating Beethoven's handwriting): "[A]t my age and in the solitude of my lonely room ideas cross my mind which are not necessarily pleasing to everyone. When I encounter people who embrace this music of mine, and thus the utmost secrets of my soul; when such persons treat the solitary old man I am in a friendly manner, they render me a service for which I am most grateful.... On account of this friendship I am taking the liberty of sending you my Sonata.... I did not create it to throw dust in people's eyes: play it only when you have sufficient time, for it needs time...."[58]

And when Beethoven died in 1827, the 18-year-old Felix composed his first string quartet (Op. 13), making his sacred, musical vow to Beethoven that he would remain eternally true to him.[59] The next year, Felix wrote a cantata for Humboldt's Berlin science conference (attended by Dirichlet), a cantata for the 400th anniversary of the birth of Albrecht Dürer, and began the famous revival of Bach's "St. Matthew Passion." Later, when Mendelssohn joined forces with Robert Schumann and Clara Wieck in Leipzig in 1835, it led to many fruitful collaborations—including the revival of Franz Schubert. Schumann located the manuscript of Schubert's 9th Symphony, the "Great," ten years after Schubert's death, and Mendelssohn gave the work its premiere in 1839.[60] And the outpouring of both vocal and instrumental works by Schumann in the first year of his marriage (1840-41) was a happy portent of what was possible.

Brendel's warning to the Schumanns was clear—but, instead, they increased their collaboration. That December (1845), Clara wrote to Felix: "My husband has recently been very busy, and at Christmas he surprised and delighted me with the sketches of a new symphony. He is utterly possessed by music, and as a result it is impossible to do anything with him—I like him that way." She then travelled to Leipzig from their present home in Dresden, to play her husband's "Phantasie" with Felix in the Gewandhaus.[61] This was the last time that either Schumann made music with Felix.

Liszt: It Gets Uglier

In June 1848, not long after Robert had been a pallbearer at Felix's funeral, the peculiar Liszt showed up in Dresden, where the Schumanns now lived. After conferring with Wagner that morning, he showed up at the Schumanns. He wanted Clara to put together a *musikabend* for that very evening. Clara and a couple of Felix's Leipzig associates (violinist David and cellist Grabau) played a Beethoven "Trio in D," then Schumann's "D minor Piano Trio" and his "Piano Quintet." Liszt arrived two hours late, missed the Beethoven completely, complimented Schumann's trio, and put down the quintet as "a bit Leipzig-like"—meaning, too influenced by Mendelssohn. After the meal, Clara relates, Liszt went to the piano "and proceeded to play so abominably that I felt utterly ashamed at having to stay and listen, instead of leaving the room at once, as Bendemann did."[62] Liszt then proceeded to

58. Francois Tillard, *Fanny Mendelssohn*, Camille Naish, trans. (Portland, Ore.: Amadeus Press, 1996), pp. 128-29.

59. Besides drawing upon and treating several thematic ideas from Beethoven's Late Quartets, Felix used a lied, "Frage" ("Question"), that he had set months earlier. After Beethoven's death, he recast it on the model of Beethoven's (Op. 135) treatment of "Muss es sein?" ("Must it be?")—Beethoven's last major work, completed the previous Fall. The "Frage" is "Ist es wahr?" ("Is it true?")—a pretty strong echo of "Muss es sein?" (Finally, if it is true that his friend, the historian Gustav Droysen—and not Felix—actually composed the original text, then it would have been part of his courtship of Rebecca.)

60. Wilhelm Fürtwangler, a successor to Mendelssohn at the Gewandhaus Orchestra, would make this work a special project, achieving sublime results.

61. Clara was quite pregnant then, a month from delivering her fourth child.

62. Clara's diary. Also, Eduard J.F. Bendemann, a painter who had

Clara Schumann described Franz Liszt's piano playing as "so abominable that I felt utterly ashamed at having to stay and listen." When Liszt impugned Mendelssohn's character, Schumann stormed out of the room. The painting shows Liszt "Fantasizing at the Piano" in a Paris salon. Inset: Liszt (portrait by Miklos Barabas, 1847).

attack Mendelssohn as not up to Meyerbeer's level. Possibly, Liszt was provoked by a memory of Mendelssohn's habit of parodying Liszt's performances, or possibly it was premeditated, so as to force Schumann's hand. Either way, the insult was not about a comparison to Meyerbeer. Liszt knew that claim could not be taken seriously. However, Meyerbeer and Mendelssohn were distant cousins, both being descended from the famous Rabbi Isserles of Samocz. Liszt was lumping them together, implying to Schumann that Jews are to be compared with Jews, and we non-Jews can resume our own activities. The normally taciturn Schumann rose from the back of the room: "Meyerbeer is a pigmy compared with Mendelssohn . . . an artist who has done great work not only for Leipzig but for the whole world, and you would do better to hold your tongue!" Schumann then stormed out.[63] Liszt first tried to shrug off the confrontation, but he saw from the faces in the room that he had miscalculated. He turned to Cosima, pronounced that her husband was the only one in the world whom he would allow to talk to him that way, and took his leave.

And Yet Uglier: Liszt's Attack Dog

The next year, Liszt, and his mistress, the Countess von Sayn-Wittgenstein, became the protector and benefactor of Wagner, who then proceeded to publish—anonymously—his attack on Mendelssohn and

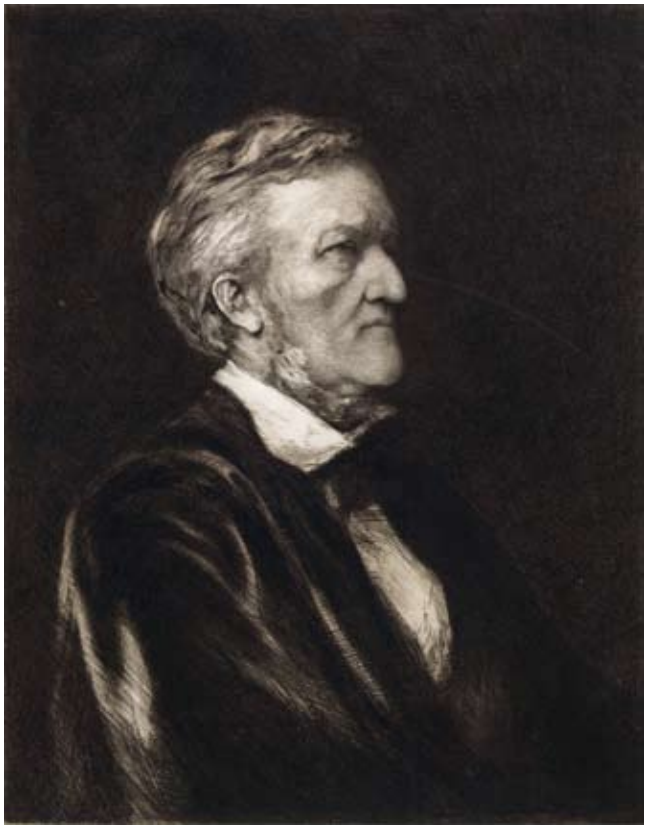
studied with Wilhelm von Schadow, and married his half-sister, Lida Schadow. Eduard, a good friend of Felix, had drawn him on his deathbed.

63. Litzmann, op. cit., p. 385. Quotes are from Clara's diary; she tracked Wagner's decay over the next year. In August 1848, Robert Schumann's diary records his frustration with Wagner's performance of Beethoven's "Fidelio": "Wagner took the tempi altogether wrong." In January 1849, Robert wrote that Wagner "is a poetic fellow, and clever as well, but he is doing his best to break away from what is really musical." Finally, after Wagner conducted Beethoven's 9th in April, he summed up: "Wagner almost invariably takes the tempi wrong, and very often mistakes the feeling, lessening the character of the whole work, which contains the most magnificent passion and depth of emotion, by trivial ritardandos.... [T]he conductor ... does not understand the work!"

Schumann: "Das Judenthum in der Musick" ("Jewishness in Music").[64] How to arrange for an editor who would agree to publish such a controversial article, and with no attribution? It turned out, it wasn't so difficult. It was the same Franz Brendel who had launched the 1845 attack—but now Mendelssohn was dead, so they could say it without the Hegelian verbiage.

Wagner was then a fugitive from the law, for his anarchist-type activities in the "1848 Revolution" in Dresden—which actually occurred there in 1849. The first place that he sought refuge was the Altenburg castle of the Countess, where she and Liszt cohabited. Wagner's years "on the lam" began with the sponsorship and guidance of this home base. His essay was sent to Brendel in 1850, from Paris, under the name "K. Freigedank" (that is, "K. Free-thinker").[65] He doesn't so much attack Mendelssohn as dismiss his music as sweet and tinkling, without depth. Of Heine and Germany, he explains that the maggots only attack dead flesh: "So long as the separate art of music had a real organic life-need in it . . . there was nowhere to be found a Jewish composer. . . . Only when a body's inner death is manifest, do outside elements win the power of lodgment in it—yet merely to destroy it. Then, indeed, that body's flesh dissolves into a swarming colony of insect life; but who in looking on that body's self, would hold it still for living?"

The free-thinker concludes: If Jewish artists wish to help Germany, the Jewish solution is self-annihilation. "Without once looking back, take ye your part in this regenerative work of deliverance through the bloody struggle of self-annihilation; then are we one and undissevered! But bethink ye, that only one thing can redeem you from your curse; the redemption of Ahasuerus—Going under!" However, don't be fooled—Wagner is not talking about conversion. Both Mendelssohn and Heine had previously converted to Christianity. No such action solves Wagner's objection. He means exactly what Nietzsche came to worship in Wagner—that Jews are stubborn adherents of monotheism, a harbinger of the larger force of Christianity, which also must needs be extirpated.



Library of Congress

The composer Richard Wagner, like Liszt, was virulently anti-Semitic—only he was more open about it. In a implicit reference to the Mendelssohn circle, he advised "Jewish artists" that if they wished to help Germany, the solution were self-annihilation. "Without once looking back, take ye your part in this regenerative work of deliverance through the bloody struggle of self-annihilation. . . ."

But his essay, as repulsive as it is towards Jews and Christians, is actually more ugly toward *we native Germans*. Wagner claims that his work was written to "explain to ourselves the involuntary repellence possessed for us by the nature and personality of the Jews, so as to vindicate that instinctive dislike which we plainly recognise as stronger and more overpowering than our conscious zeal to rid ourselves hereof." How many insults can the reader count in one sentence. First, Jewish nature is alien; but, further, we just have an "involuntary repellence." It's a fact of life, that we've tried to suppress by "our conscious zeal"—meaning the culture of Bach, Mozart, Moses Mendelssohn, Beethoven, Goethe, and Schiller has artificially aided the suppression. Free-thinker advises: *Don't*

64. The 1894 English translation by William Ashton Ellis shows both 1850 and 1869 versions. It is available online at users.belgacom.net/wagnerlibrary/prose/wagjuda.htm.

65. Wagner explained his anonymity to Liszt (April 4, 1851): He had used a pseudonym "to prevent the question being dragged down by the Jews to a purely personal level." In 1869, with a different political situation, Wagner would republish his essay, now under his own name.

fight your inmost, nativist inclinations. Let the beast out! It is Dr. Strangelove wrestling with his Nazi-saluting right arm, but now allowed free reign.

Sophistry par Excellence—and the 'Most Perfect Dishonesty'

As wild as Wagner was, Liszt was cool and calculating, much more the Jesuitical dissembler. Follow a sample of their interchanges, while Wagner was on the run.[66] Wagner writes to Liszt: "Whatever my passions demand of me, I become for the time being—musician, poet, director, author, lecturer or anything else." Liszt, July 29, 1849, sends money, and advises whom not to attack: "P.S.—Be careful in your articles in the newspapers to omit all political allusions to Germany, and leave royal princes alone. In case there should be opportunity of paying Weymar a modest compliment en passant, give free vent to your reminiscences with the necessary kid gloves."

Wagner's encloses, Aug. 4, 1849, the article, "Die Kunst und die Revolution," and writes: "Whether you will be pleased with it I do not know, but I feel certain that your nature is at one with me. I hope you will find in it nothing of the political commonplaces, socialistic balderdash, or personal animosities, against which you warned me; but that, in the deepest depth of things, I see what I see, is entirely owing to the circumstance that my own artistic nature and the sufferings it has to go through, have opened my eyes in such a manner that death alone can close them again. I look forward either to an entirely useless existence, or to an activity which responds to my inmost being, even if I have to exercise it afar from all external splendor. In the former case I should have to think of abbreviating that existence.... Whether you ought to show her [Sayn-Wittgenstein] my manuscript I am not quite certain; in it I am so much of a Greek [read, for Wagner, not "classicist" but "non-Christian" or "pagan"] that I have not been able quite to convert myself to Christianity. But what nonsense I talk! As if you were not the right people! Pardon me. Farewell, dear, unique friend!" Wagner was actually on target here. While the Countess was, on the surface, a fervent Catholic, she was fundamentally a medievalist; and Liszt, with and without her, would embrace, over time, sensualism, asceticism, and blood-and-soil medievalism.

Wagner provides hyper-ventilating praise of Liszt: "Our friend Uhlig, to whom I attribute excellent judgment, sends me word that he values this single overture [of yours, "Prometheus"] more than the whole of Mendelssohn." Despite this (or perhaps because of this), the controller Liszt now pulls the puppet strings. He feigns ignorance of Wagner's activity, driving Wagner into desperation: "You ask me about the 'Judenthum.' You must know that the article is by me. Why do you ask? ... I felt a long-repressed hatred for this Jewry, and this hatred is as necessary to my nature as gall is to the blood.... It seems to have made a tremendous impression, and that pleases me, for I really wanted only to frighten them in this manner...." The expected fare—but now Wagner manages to pile on a couple of more sins: "[T]hat they [Jewry] will remain the masters is as certain as that not our princes, but the bankers and the Philistines, are nowadays our masters." He only wished to frighten the Mendelssohns and Heines, because the Jewish bankers will always rule. Real usurious practices may be destroying the country, whoever is actually doing it, but that alone is what can't be changed! (And you didn't think Wagner could pile on another sin in so short a time. But, hold on to your seats....)

The tortured soul concludes, referencing Meyerbeer's musical and financial help for Wagner back in the 1830s Paris: "Towards Meyerbeer my position is a peculiar one. I do not hate him, but he disgusts me beyond measure. This eternally amiable and pleasant man reminds me of the most turbid, not to say most vicious, period of my life, when he pretended to be my protector." Remember, he is writing to his present protector, Liszt, who has asked Wagner whether he had authored the "Judenthum." Continuing: "[T]hat was a period of connections and back stairs when we are made fools of by our protectors, whom in our inmost heart we do not like. This is a relation of the most perfect dishonesty; neither party is sincere towards the other; one and the other assume the appearance of affection, and both make of each other as long as their mutual interest requires it." Liszt tortures Wagner, and Wagner skewers Liszt. Wagner and Liszt understand each other. But, while Wagner may be evil in many ways, he is rather transparent. Keep such in mind as the reader attempts to appraise Liszt's status in hell.

66. The following quotes are from *The Correspondence of Wagner and Liszt*, Francis Hueffer, ed., part of the Cambridge Library series (2009).

Richard Wagner's 'Mendelssohn Obsession'

In 1869, Wagner republished his "Judenthum," this time under his own name. Cosima, Liszt's daugher, began her diary about this time, as she has just taken up residence with Wagner. (Cosima had left her husband, the conductor Hans von Bülow, in November 1868, being two months' pregnant with Wagner's child, Siegfried.) Her diary provides some insight into their discussions, at the time of the release of the second edition:

Jan. 19: "He continues to insist that the emancipation of the Jews has stifled all German impulses. Then we discuss the difference between the former rough and robust German musicians and the present Jewish, elegant, educated ones."

Jan. 27: "R. [Richard] has ordered Devrient's book about Mendelssohn—it looks somewhat comical, and the fact that Devrient is an uneducated playactor and Mendelssohn a Jew emerges clearly." Eduard Devrient came from a family of actors, specializing in Shakespeare and Schiller. He worked with Mendelssohn to organize the famous revival of the "St. Matthews' Passion," and sang the role of Christ.

Jan. 28: "…Devrient's book.… Much impatience with it, but much enlightenment, this account is like a confirmation of what R. wrote about Mendelssohn in his essay." So, despite Wagner's pretense, the essay was always about Mendelssohn.

However, Wagner is haunted by Mendelssohn's death, and Cosima constructs an elaborate rationalization for him. On Feb. 14, he asks Cosima to go through that rationalization again for him: "At lunch R. asked me to develop the thought I had expressed in relation to Weber and Mendelssohn. He had observed that, when he had Weber's ashes moved to Dresden, only eighteen years had elapsed since the composer's death, whereas it was now 22 years since Mendelssohn died; yet at the time [of moving Weber's ashes] it had seemed to him an eternity since the tragic news [of his death] was received, while now it seemed to him as if M.'s death had been reported only yesterday."

Wagner is bothered that Mendelssohn's death seems so much more real and present, but Cosima is non-plussed: "I said that … it seemed to me that a genius such as Weber would very soon be imbued with the nimbus and halo of the past, whereas a personality such as Mendelssohn's would be preserved in remembrance only because very many people who once knew him are still alive, and they keep the memory of him green. Such a shadow does not grow, it can only disappear; the genius, however, is bound to become a legend immediately after his death; one can hardly believe that one knew him.…" She continues in this vein.

Wagner is intrigued with Cosima's inverted theory, but needs repetition to get the proper steps. This discussion does not cease here, as Cosima later goes back to insert additional argumentation into this day's entry: "The sorrow that mankind feels at the loss of a genius also adds to the illusion. Every time it is called to mind it produces pain, and that is doubled and tripled by Time. The passing 'What a shame' that a loss like that of Mendelssohn evokes from us does not engrave on our minds the sense of his being dead, and we must then always ask ourselves when he did in fact die." Another cogent argument from Cosima as to why the unimportance of Mendelssohn makes the event of his death stay fresh in our minds.

As ugly as Wagner is, he suffered for his ugliness. His biggest sin might well have been his proclivity for sophistical handlers like Liszt and Cosima, whose casuistry aided and abetted his beast-man proclivities.

Clara Schumann, Brahms, and especially Joachim will help to clarify matters.

Admission: Target Was Schumann

In 1869, when Wagner, for a new attack on the Jews, publishes his article under his own name, he makes clear his resentment against Mendelssohn for his association with Schumann. Wagner first takes exception to Eduard Hanslick's 1854 defense of Mendelssohn: "This gentleman now wrote a booklet on the 'Musically-Beautiful,' in which he played into the hands of Music-Judaism with extraordinary skill.…

[I]nasmuch as to the chain of Haydn, Mozart and Beethoven he linked on Mendelssohn in the most natural way in the world. . . .”[67] Wagner continues, rueing Mendelssohn’s influence upon Schumann: “Schumann in this second period looked peevishly, morosely and askance on those to whom in his period, as editor of the *Neue Zeitschrift für Musik,* he so warmly and so amiably held out his German hand. . . . Into this passivity sank Robert Schumann’s genius too, when it became a burden to him to make a stand against the restless, busy spirit of the Jews; it fatigued him to have to keep watch on all the thousand single features which were the first to come under his notice, and thus to find out what was really going on. So he lost unconsciously his noble freedom, and his old friends [meaning Wagner and Liszt]—even disowned by him in the long run—have lived to see him borne in triumph by the music-Jews [Hanslick], as one of their own people!”

The young Brahms (standing) toured as pianist with the Hungarian violinist Eduoard Remenyi (seated). In Weimar, they meet, and hear Liszt play something of Brahms. Remenyi is enraptured, but Brahms is repulsed. He leaves the two behind, and returns to Göttingen.

And finally, to whom did Wagner offer these insights? The pamphlet is addressed “To Madame Marie Muchanoff, nee Countess Nesselrode”—who visited the Wagners at this time. (Her great-grandson, Richard Coudenhove-Kalergi,[68] founded the Pan-European League.) They had a mutual interest in a current ultramontane political offensive, attacking the unification and modernization of Germany as a Jewish-controlled plot. In the same pamphlet about Schumann and Hanslick, Wagner confided to Muchanoff: “Our Liberals and Men of Progress have terribly to smart for being cast by the Old-Conservative party into one pot with Judaism and its specific interests; when the Ultramontanes ask what right has a Press conducted by the Jews to interfere in matters of the Christian Church, there lies a fatal meaning in the question, which at any rate is founded on an accurate knowledge of the wires that pull those leading journals. . . .” Shortly afterwards, the young Nietzsche enters the scene, briefing the Wagners on the enemy accusations that (as Cosima put it) the Wagners were making “an alliance with the Catholic party; the proof: Frau von Muchanoff, whose daughter is a radical supporter of the Catholics, and so on. . . .”

III. The Moral Art of Conquering Evil

Joseph Joachim, free but alone, wandered. For two years (1850-52), he joined with the young musicians who had gathered around Liszt in Weimar, with the plan to push music into the future. Once, Joachim and Liszt both heard Bach played on the organ. Joachim exclaimed “What divine music!” Liszt retorted, “Hmm. Bones.” Joachim, taken aback, said, “Well, I must say I prefer it to jelly.” As Clara related the story, “After which, Liszt very soon disappeared.”[69] When Joachim left Weimar, he thought that Liszt, while gifted, was a misspent talent—though not necessarily evil. That would change. Clara, late in 1851, was more decided about Liszt: “He played with a demonic brilliance, as always, with a mastery like that of the devil himself (I can think of no other way of putting it). But oh, what terrible compositions! If a youngster were to write such stuff, one could forgive him on account of age, but what can one say when a full-grown man is so deluded? We both felt very sad—it is so depressing. Liszt

67. Quotes in this paragraph are from Wagner’s “Some Explanations Concerning Jewishness in Music.” Found at users.belgacom.net/wagnerlibrary/prose/wagjuda2.htm (Hanslick’s work, in English, is titled *On the Beautiful in Music*.)

68. Raised by her uncle, Count Charles Nesselrode, she married Johann Kalergi. Marie’s daughter married another Coudenhove, Franz, whence came Richard’s father, Heinrich. Marie left Kalergi for Count Sergei Muchanoff, the head of the Imperial Theaters in Warsaw. She had a reputation as a mistress of, among others, Liszt and Alfred de Musset. Clearly, she was Pan-European before her time.

69. Litzman, op. cit., p. 63. Clara related the story several years later.

himself seemed offended that we did not say anything, but how can one, when one feels so angry?"[70]

Brahms and Joachim in Göttingen

Joachim's wandering is about to come to an end. He visits the Schumanns in the Spring of 1853, and Clara accompanies him on Robert's "A minor Violin Sonata." In late May, Joachim interrupts his concertizing to attend lectures at Göttingen. There he attends Heinrich Ritter's lectures on Pythagoras and the Ionians, and Georg Waitz's history lectures.[71] Clara writes him about his visit: "We are still living in the memory of those glorious hours you granted us. See that those hours of the past are renewed in the early future."

The young, unknown Johannes Brahms is on tour as the pianist for Eduoard Remenyi,[72] a Hungarian violinist. Both Remenyi and Joachim had been young Jewish violin students of Joseph Böhm a decade before. At their concert in Göttingen, Joachim is struck by Brahms' piano-playing, and writes: "How would it be if we were to meet at Wehner's" to play music?[73] Joachim describes his first meeting with Brahms:

"Never in the course of my artist's life have I been more completely overwhelmed with delighted surprise, than when the rather shy-mannered, blonde companion of my countryman played me his sonata movements, of quite undreamt-of originality and power, looking noble and inspired the while. His song 'O, versenk dein Leid' sounded so imaginative, so free and so fiery, [it] held me spell-bound."[74]

Soon, however, Remenyi is ordered out of Göttingen, with the Austro-Hungarian Empire's police in pursuit. The two continue their concert tour. Then, in Weimar, in June, Remenyi and Brahms meet and hear Liszt—a fortunate event, as Remenyi is enraptured by Liszt, causing Brahms to leave Remenyi and Liszt, for Joachim and Göttingen.

Evidently, Liszt had played some of Brahms' works rather casually, offering running commentary as to how Brahms could improve—that is, for Liszt, "sex-up" his compositions. Liszt then played his own works, and Brahms was unimpressed with the exhibition. The American musician William Mason, who was studying with Liszt, provided one account: "As he progressed, he came to a very expressive part, which he always imbued with extreme pathos, and in which he looked for the especial interest and sympathy of his listeners. Glancing at Brahms, he found that the latter, supposedly, was dozing in his chair. Liszt continued playing to the end of the sonata, and then rose and left the room."[75] Mason, though, didn't actually see Brahms dozing; that particular element of the story was conveyed to him second-hand from Remenyi. (The only other account, by one Klindworth, relates the same story without the dozing.) Remenyi thought Brahms did not know how to play up to Liszt, which Remenyi proceeded to do.

Afterwards, Brahms wrote Joachim of his "bitter experience" with Liszt, asking, "May I visit you?" Brahms spent the rest of the Summer in Göttingen, playing music with Joachim. He wrote a comedic trio for Joachim's 22nd birthday. The two gave a very successful public concert there. Years later, his "Academic Festival Overture" drew upon and celebrated his memories of that happy Summer.

Joachim complied with Clara's request to return for more music-making, and he raved to the Schumanns about Brahms. Leaving again for more concertizing, he arranged for Brahms' famous visit to the Schumanns. On Oct. 1, Brahms came and played some of his compositions for the Schumanns. Clara recorded in her diary: "He played us sonatas, scherzos, etc., of his own, all of them showing exuberant imagination, depth of feeling, and mastery of form. Robert says there was nothing he could tell him to take away or add"—a very

70. Litzman, op. cit., p. 27.

71. Waitz is said to be the chief disciple of Mendelssohn's friend, Leopold von Ranke.

72. Originally a Jew named Hoffman, Remenyi was a political refugee from the Austro-Hungarian Empire's police, having served in the army. His violin playing was considered a key moral factor for the rebels in the 1848 Revolution. Brahms helped him flee to the United States, and in late 1852, he had just returned. He would have been an interesting source of discussion with Brahms during their months of touring.

73. Curiously, five years before, Brahms had heard Joachim in Hamburg play Beethoven's "Violin Concerto." Arnold Wehner was the music director in Göttingen. He set poems by Heine to lieder, and, in 1857, helped secure the "B minor Mass" for the publication of Bach's collected works.

74. Florence May, *Life of Johannes Brahms* (London: Edward Arnold, 1906) v. I, p. 106.

75. Ibid., p. 109. A son of the famous Lowell Mason, William had studied with both Moscheles and Liszt, and was, at the time, trying to become a "musician of the future." However, he returned to New York that year and gave the American premiere of Brahms! Further, he became well-known as the leader of a New York-based chamber ensemble that championed the works of Schumann.

different conclusion than Liszt's, three months earlier. Robert's diary simply noted: "Visit from Brahms, a genius." Clara, who, that very same day, had learned she was pregnant with her eighth child, recorded of Brahms' arrival: "Here again is one of those who comes as if sent straight from God."

For several weeks, Brahms played much music with them, including his F# minor Sonata. Schumann had just finished his "Violin Concerto," which he sent off to Joachim. Schumann had spent a lot of that year re-studying Bach, including re-working the Bach "Cello Suites," making his own accompaniments for all six.[76]

Within three weeks, and without Brahms' knowledge, Schumann wrote his first article in years for the *Neue Zeitschrift für Musik*—his "New Paths" announcement that the world had found a musical genius, "the Chosen One." Brahms was "recommended to me recently by an esteemed and well-known master. He carries all the marks of one who has received a call. Seated at the piano, he began to disclose wonderful regions.... There were sonatas, or rather veiled symphonies; songs whose poetry would be clear even if one were ignorant of the words, though a profound singing melody runs through them all.... His contemporaries salute him on his first journey through the world where wounds may await him, but also palms and laurels; we welcome him as a powerful fighter...."

The career of the Brahms whom we know today had begun. His works began to be published. Schumann, who had suffered physically and mentally for years, now recognized that the aborted Mendelssohn project had new hope. As part of that, though only three months from his final breakdown, he organized a beautiful gift for the "free but alone" Joachim: a newly composed "Violin Sonata," "in anticipation of the arrival of our revered and beloved friend Joseph Joachim...." Schumann wrote the Intermezzo and Finale; his student Dietrich, the opening Allegro; and Brahms, the C minor Scherzo. The principal theme was based upon Joachim's motto, the notes F-A-E, for "Frei aber einsam." Clearly, the collaboration proved that Joachim was no longer alone. Schumann was ecstatic that Joachim had sent him Brahms—and Schumann knew that there would be another generation of Classicists.

76. Schumann also wrote keyboard accompaniments for Bach violin solos. Brahms and Joachim would later play these for Schumann's memorial concert.

Brahms and Joachim immerse themselves in Schiller's work. Joachim writes, "I am now treating myself with the healing waters of Schiller's aesthetics," referring to the "Aesthetic Letters." Brahms "vehemently urged me to read [Schiller's] Kabale und Liebe*," writes a friend.*

Die Schillerzeit

Within weeks, Joachim had plunged himself into Schiller's "Aesthetic Letters." He wrote (Oct. 25, 1853) to Wehner (who had hosted Brahms' and Joachim's first music-making in Göttingen): "I agree most heartily with what you say about journalism. I myself have been so stupefied by it that I am now treating myself with the healing waters of Schiller's aesthetics. Am I not a good doctor?"[77]

Brahms was also delving into Schiller. In December, when in Leipzig to perform at the Gewandhaus with Ferdinand David[78], Brahms—according to salo-

77. Nora Bickley, ed. and trans., *Letters from and to Joseph Joachim* (New York: Vienna House, 1972), p. 33.

78. Mendelssohn's "D major Quartet," Mozart's "G minor Quartet," and two of Brahms' own piano sonatas.

nist Hedwig Salomon, he "vehemently urged me to read [Schiller's] *Kabale und Liebe*...." Her diary continues: "Schumann's young Messiah ... though only in his twentieth year, his face shows the triumph of his spirit. Purity, innocence, naturalness, power and depth—this describes his character. Schumann's prophecy tempts one perhaps to find him rather absurd, and to be severe with him, but one forgets everything, and loves and admires him without restraint."

Importantly, Joachim, while not yet breaking with Liszt, is now able to identify the banality of Liszt's paramour, Caroline. He writes (Dec. 4, 1853): "I have nothing in common with her, least of all with *her* enthusiasm for my soul's favorite, Schiller. The only thing about Schiller which would appeal to the Princess's nature, as exhibited on its most bearable side in her chatter about the immortal Liszt, would be the superficial grandeur of his aspirations. The magnitude of his ideas satisfies her lust of power just as the pathos of Schiller's language suits her Polish sense of family pride and royal dignity.... [O]f the intrinsic worth of the great man Schiller, in whom the love of justice had grown to be the guiding destiny of life—of the majesty of the mind which, in spite of all obstacles, still believed in the growing seed of truth—of Schiller's reverence for the individual arising from his love for the universal—of the Schiller whom *I* mean, the finicking Princess has no notion."

However, Joachim was still more than two years away from recognizing the actual evil of Liszt—a direct consequence of Rebecca's *musikabends*.

Brahms' Aesthetic Education & Bach

In January 1854, Schumann traveled to Leipzig to attend the performance of his "Paradise and the Peri," in part organized by Joachim and Brahms. Then, in his last letter to Joachim (Feb. 6, 1854), he reports on his study of great Classical views of music: "I have discovered particularly splendid passages in Plato." It is likely that he included here the passage from Plato's *Republic*, Book 7, cited at the beginning of this report.

His last composition was five variations for the piano—on a theme that he thought was brought by "angels as a greeting from Mendelssohn and Schubert."[79] A few weeks later, on Feb. 26, he was fished out of the Rhine, apparently after jumping off the bridge. Schumann spent his last two years in a sanitarium. (The details of his illness are far too complicated to be included here.) Rebecca's brother Paul made a gift of 400 talers to Clara. Brahms, though only 20, attended to Clara's six children, while she attempted to earn a living concertizing. On June 11, 1854, Clara gave birth to her last child. Brahms, whom Clara had met the same day that the pregnancy was confirmed, became the godfather. She named her child after Felix Mendelssohn.

Brahms spent a large part of 1854 and 1855 taking care of the Schumann household. This included care of Schumann's library, where he found notations by the composer in his "Album for the Young." There Schumann had referenced the date of Felix's death, on pieces he'd written in the style of Felix's "Song without Words." Brahms proceeded to compose his own *"Erinnerung an Mendelssohn"* ("In Memory of Mendelssohn") which Clara noted, in her diary (April 21, 1854), were "very ingenious."

In Schumann's extensive library, Brahms delved into an intense study of Bach, as well as Aeschylus, Dante, and Shakespeare. (At that time, he chose to arrange for two pianos, Joachim's overture for Shakespeare's "Henry IV.") Regarding this period of "adult education," Brahms would later report (to Gustav Wendt) that "Mendelssohn had a great advantage compared with us: the excellent school. What indescribable efforts it has cost me to recover this lost ground as a man!"[80]

These studies were interrupted briefly in November, when Brahms and Joachim joined Clara in a concert tour to Danzig, Hamburg, Altona, Kiel, Bremen, Leipzig, and Hanover. Again, in February 1855, after a visit with Schumann, Brahms reported to Clara: "We talked a good deal about his books and his music, and he was as happy as a king when he saw how well I knew them all, and their proper places."[81]

79. Quote of Schumann in Joachim's March 6, 1854 letter to Wolfgang Bargiel (Clara's half-brother). Schumann clearly felt the weight of responsibility of his position. Later, Brahms would also compose variations upon Schumann's last composition. (See Brahms Op. 23.)

80. Max Kalbeck, *Brahms* (Tutzing: H. Schneider, 1976) v. I, p. 220. Cited in *Brahms Studies*, v. II, edited by David Brodbeck (Lincoln, Neb.: University of Nebraska Press, 1998.)

81. Styra Avins, ed., *Johannes Brahms: Life and Letters* (Oxford: Oxford University Press, 1997), p. 96.

Clara's Göttingen Seminar

In the Spring of 1855, the Dirichlets arrived in Göttingen. Gauss had died in February, and Dirichlet succeeded him as Professor of Astronomy. Riemann and Dedekind quickly attached themselves to Dirichlet. Riemann, after his studies with Dirichlet in Berlin, 1847-49, had returned to Göttingen, and worked with Gauss, Wilhelm Weber and Rudolf Kohlrausch.[82] When Dirichlet had visited Göttingen in 1852, his discussions with Riemann proved to be most valuable for his dissertation. Riemann wrote to his family, amazed that Dirichlet has come by for several hours to read his dissertation with him, and to talk through the ideas. Afterwards, they proceeded to Weber's for more discussion. That summer, Dirichlet also pointed Riemann to some little known work of Abel, and to the superiority of Abel's methods over those of Cauchy. Clearly, Dirichlet was aware of Cauchy's role in "losing" Abel's papers while attempting to lift some of Abel's work; and the precious opportunity he had with Riemann to right history. In 1854, Gauss's last year, Riemann's habilitation papers proved an amazing success, particularly his famous "On the Hypotheses which Underlie Geometry."

By no later than September 1855, Clara had arranged to play at Rebecca's *musikabends* in October, and Brahms was planning his own trip. He wrote to his friend Grimm:[83] "Frau Schumann would like to play a recital towards the end of October (between the 25th and the 28th) [the period of her reunion with the Dirichlets]. . . . Then I would like to enquire whether it wouldn't be possible for me to play (for a small fee or none at all) in one of the [university music director] Hille concerts?"[84] As part of his intense study of Bach, Brahms had composed a suite based upon Bach's "First Partita" (BWV 825). Clara noted in her diary for Sept. 12, 1855 that Brahms played part of this suite for her. Grimm had heard about the suite, and wrote Brahms in early October, having already arranged for his trip to Göttingen: "And bring your suite with you. . . ." However, it was Clara who presented Brahms' "Gavotte" from that suite, in late October at Rebecca's, as a prelude to the whole work.

Clara's presentation at the Dirichlets' captivated her audience. She began with "Appassionata," played two songs by Felix, and then the "Gavotte" from Brahms' new, anticipated study of Bach. That was followed by a nocturne and an impromptu by Chopin, two ballads by her husband, and then his "Etudes Symphoniques." (The multifarious modes of variation of this work alone would certainly have caught the attention of the mathematicians.) Clara then played two songs by Fanny, two of Felix's "Songs without Words," and finished with a "Rondo" by Weber.

There is no textual evidence that Riemann attended the event, but what were the odds that he missed it? Consider: First of all, Riemann himself was a pianist.[85] He had taken lessons, evidently, while at the Johanneum in Lüneburg. We also know that he attended a performance of Haydn's "The Creation" in February 1841, when he was at Hanover.[86] Moreover, this was Clara Wieck Schumann coming to Riemann's teacher's home! Clara, personally, was linked to both thinkers—Fechner and Herbart—whom Riemann had cited in his "Philosophical Fragments." Gustav Theodor Fechner was Clara's step-uncle! (Clara's biological mother left when she was four. Five years later, Fechner's sister Clementine became her step-mother.) Further, Clara was the leading proponent of Friedrich Conrad Griepenkerl's work on Bach, and Griepenkerl himself was a leading proponent of Johann Friedrich Herbart. Riemann's "Fragments" display how fascinated he was with the issue of concept formation, and the shapes and/or patterns involved. (But more of this below, when Brahms plays the Griepenkerl edition of Bach.) Riemann had taken to heart the writings of Herbart and Fechner over the preceding four or five years.

Of note, some of the mathematicians and scientists who also attended these *musikabends* were:

- Riemann's good friend, Dedekind, who played

82. Kohlrausch's father, Heinrich, had been a schoolmate of Gauss at Göttingen, and was the inspector of the Johanneum in Lüneburg, Riemann's school. Further, Kohlrausch was the cousin of Schmalfuss, Riemann's math teacher in Lüneburg.

83. Julius Otto Grimm headed the women's chorus in Göttingen and taught voice and piano. Even though trained in philology, he became a professor of music at Göttingen.

84. Op. cit., *Johannes Brahms: Life and Letters*, p. 113.

85. For example, his wife Elise described that, on one of their trips to Italy, they played on a church organ. Unpublished translation of "Notes from Mrs. Professor Riemann (1866) on the last years of the life of her husband" by Oyang Teng and Aaron Halevy, LaRouche Youth Movement.

86. This might even have been the performance of the Braunschweig Singakademie, organized by Griepenkerl, the proponent of Riemann's admired Herbart. However, this author has not been able to establish exactly which performance Riemann saw.

the piano for the dancing that followed the more intellectual work.[87]

• Wilhelm Weber, Gauss's longtime colleague, with whom Riemann worked closely. Weber's interest in and work with music went back over 30 years.

• Wilhelm Baum, head of surgery at Göttingen, and teacher of Theodor Billroth. (Billroth, who would later become a close friend of Brahms, had accompanied Mendelssohn's favorite soprano, Jenny Lind, when she sang at Göttingen in 1850—a concert that Gauss enjoyed. It was Billroth who, in 1879, sent Brahms Hensel's *Die Familie Mendelssohn*, which so impressed Brahms.)

• Medical professor von Siebold and his two daughters. Rebecca had referred to them at her first Göttingen *musikabends*: "…the two Siebold girls, who looked very pretty in the second place, and sang charmingly in the first." Two years after his appearance at Rebecca's, Brahms would return to Göttingen and fall in love with, and become engaged to Agathe von Siebold. (However, Brahms would break off this, his only engagement.)

• Julius Otto Grimm, professor of music, and his fiancée, Phillipine Ritmüller, the daughter of the piano manufacturer in Göttingen.

• Hans Sommer, a student of Weber, Dirichlet, and Dedekind, who also studied music with Grimm. Later, he would teach at the Collegium Carolinum in Braunschweig and found the Braunschweiger Association for Music, where Joachim and Clara would perform.

• Paul Bachman, Dirichlet's student who played the piano and composed music. He became a good friend of Dedekind.

In November, Clara briefed Joachim and Brahms at the concerts that they shared in Leipzig and Danzig. Brahms, after over a year of intensive Bach studies, had decided to add Bach's "Chromatic Fantasy" to his public repertoire, and for his Rebecca *musikabends*.[88] Among other matters, Clara and Joachim argued again about Liszt, and their moral mission. The Liszt extravaganza came to Berlin, and Clara left town precipitously, so as to avoid the show. Joachim stayed to hear him and reported to a friend: "[A] man whom I had often called friend, in whom I had gladly pardoned colossal follies out of respect for his powers, cringing contemptibly to the public and acting with revolting hypocrisy towards himself. Shame on those who are bent on succeeding and cannot refrain from heightening the effect and making themselves cheap with groans and shrieks of woe to heaven because they know they are misusing their powers…."[89]

And then to Clara, Joachim admitted: "I have much to tell you, dear, sympathetic friend, about Liszt and other matters. I have not been so bitterly disillusioned for a long time as I was by Liszt's compositions; I had to admit that a more vulgar misuse of sacred forms, a more repulsive coquetting with the noblest feelings for the sake of effect, had never been attempted.… [O]ne can hear the lies in every note and see them in every movement.… [I]nstead of taking him for a mighty erring spirit striving to return to God, I have suddenly realized that he is a cunning contriver of effects, who has miscalculated. You were right, dear Frau Schumann, whenever we argued about his nature."[90]

Bach's 'Chromatic Fantasy' at Rebecca's

In mid-February 1856, Joachim and Brahms went to Rebecca's.[91] They first rehearsed and discussed at Joachim's place in Hanover. There, Joachim writes to David in Leipzig: "Brahms … is staying a few more days with me.… [He] plays the piano more magnificently than ever, and there is no end to the music."[92] Then in Göttingen, they gave a public concert, where they included Beethoven's "Violin Sonata," Op. 96, and played it again the next evening at Rebecca's. Brahms wrote to Clara (Feb. 22, 1856) sardonically: "The evening after the concert in G[öttingen], we were all at Dirikle [Dirichlet, but as Brahms alters it]. I, most reluctantly, for I have a veritable dread of all cliquish

87. One happy piece of evidence that Riemann regularly attended Rebecca's *musikabends* was discovered by LaRouche's "Basement Team." They found amongst Riemann's Göttingen papers, two pages of detailed notes in Riemann's hand on … how to dance(!)—undoubtedly, dictated by the dance pianist, Riemann's good friend, Dedekind. It would appear that the shy, young bachelor took the *musikabends* quite seriously.

88. At this same time, Brahms' copy of Bach's "Art of the Fugue," with his own pencil corrections, has his inscription "Nov. 1855." Similarly, his autograph and the "1855" date is on his collection of J.S. Bach's German chorales, edited by C.P.E. Bach, 1765.

89. Op. cit., Avins, ed., p. 113.

90. Ibid., p. 113-114.

91. Dedekind mentions on Feb. 14, 1856 that there was a "gigantic party of 60-70 persons," at the Dirichlets', where he played piano for the dancing. This is either the same event attended by Brahms and Joachim, or one a week earlier.

92. Op. cit., Avins, ed., p. 117. It would appear that Joachim conducted Beethoven's 9th in Hanover on Feb. 16, 1856, and then the two proceeded to Göttingen.

ways. J. [Joachim] naturally played the [Mendelssohn] concerto, during which the women cried a lot.... I played the 'Chromatic Fantasy' [Bach's "Chromatic Fantasy and Fugue" or CFF (BWV 903)—then, quoting Rebecca], 'which Felix also liked to play so much' and the ['Wanderer] Fantasy' by Schubert which she did not know, and also did not seem to interest her all too much."[93]

Translated from Brahms' sardonic tone, this means something like: "You briefed me on the clique, the special group, in Göttingen, and I came, as you said I should; but Joachim is the hero here, as they all knew him as Felix's teenage prodigy. I played the Bach CFF, but you didn't tell me that you had sold Felix on the same piece. I did the 'Wanderer' for Joachim's welcome home, but I don't think Rebecca made the connection."

The Bach "Chromatic Fantasy and Fugue," in particular, had to have provoked the scientists there—and it has a special history. The CFF was one of two pieces that Clara required all her students to master. One of them, Adeline de Lara—who had turned pages for Joachim, Brahms, and Clara—described "the training Clara Schumann gave her pupils.... There were two works in particular, Bach's 'Chromatic Fantasy and Fugue' and Beethoven's 'Thirty-Two Variations in C minor,' the correct interpretation of which had been handed down to her direct from the composers—how exactly I do not know, but so it was unquestionably.... [W]hile teaching us in those days she would say, quite positively, 'Beethoven wished it so,' or in the case of the 'Chromatic Fantasy and Fugue,' 'Bach wanted it thus,' 'Bach willed it so,' until one felt oneself in the presence of these great spirits.... No one has ever given the 'Chromatic Fantasy' the same breadth and fullness of phrasing and brought out its glorious beauties as Clara Schumann did."[94]

The Mendelssohn family revived the works of the great J.S. Bach (shown here at the organ), notably, the "St. Matthew Passion," which had not been performed for 100 years, and the "Chromatic Fantasy and Fugue," as the core of their music/science renaissance.

93. Ibid., p. 113. It would appear that such sardonic comments were the rule, not the exception. Rebecca also wrote to Sebastian Hensel about Joachim and Brahms coming to play their "uninterresante Soiree ... of Schubert, Schumann, Brahms." Translated, we assume it means something like: "Your childhood friend came. Nothing interesting here—you didn't miss anything!" (Otherwise, whether works of Schumann were performed is not known.)

94. De Lara on Clara's character: "[O]ne of the strongest impressions ... is that of her intolerance of affectation and sentimentality. I am not referring to true expression, for no one felt music more keenly than she did. She told us more than once that we could never become real artists until we had loved and suffered, but that she could not and

De Lara also heard from Clara that she and her father were personal associates of Griepenkerl, the man who first edited and published Bach's CFF in 1819. Both used his edition of the CFF, one designed to convey the way Forkel learned to play the CFF from Bach's eldest son, Wilhelm Friedemann.

Griepenkerl's copy of the CFF came from W.F. Bach, and was passed to Göttingen's Johann Forkel, the biographer of Bach. Griepenkerl studied philosophy at Göttingen, and acquired the "Bach-touch" directly from Forkel. He wrote a preface for his publication of the CFF[95], explaining the method that Bach had passed down. Clara Schumann would have heard this directly from Griepenkerl, whence she made it central to her teaching. There is no way that she did not communicate her thoughts on this matter both to Mendelssohn and to Brahms. So, when Clara organized Brahms to play this work, she would have known how important the piece had been for Felix.[96]

The Multiply-Connected Griepenkerl

Friedrich Conrad Griepenkerl was a leading advocate of Herbart, a key influence upon Riemann's intellectual development. Riemann knew his mind was creating, changing the culture that itself changed minds—and he took the matter of concept formation as a vital area of investigation. Griepenkerl had studied under Herbart at Göttingen, and had written his dissertation on Plato in 1805. Riemann might well have studied Griepenkerl's 1832 work on Herbart.[97] In fact, he might have been introduced to Herbart from Griepenkerl—either from hearing Griepenkerl's group sing Haydn's "Creation" in 1841, or from hearing the musical debates about Griepenkerl and A.B. Marx, when he was around the Dirichlets in Berlin, 1847-49.

Griepenkerl was born about five years after Gauss, near Gauss's birthplace, and attended the same Braunschweig Carolinum before studying at Göttingen.[98] Griepenkerl became the Professor of Philosophy and taught at the Braunschweig Carolinum for three decades, where his colleague was Dedekind's father. Dedekind's study of piano there was likely influenced by Griepenkerl, if not directly. Of some note, in his *Zeitschrift für Musik,* Schumann published excerpts from an 1838 novella by Griepenkerl's son, Wolfgang. His *Das Musikfest oder die Beethovener* insisted that the wild humor of a Beethoven, as with a Shakespeare, was integral to Classical art.[99]

How To Fight for Culture

Brahms and Joachim come out of Rebecca's *musikabends* with a new mission. Brahms took the upper hand. He wrote to Joachim on Feb. 26, 1856: "But especially I want to remind you, and beg you to carry out at last what we've so often discussed. Namely, to exchange contrapuntal exercises … continuing this exchange for a good long time until both of us have become oh so very clever."[100] They exchanged counterpoint assignments every week. Four weeks later, Brahms was still at it: "I'm sending along 2 little pieces as the beginning of our joint studies.… Every Sunday,

would not countenance cheap sentiment. She taught us to play with truth, sincerity and, love, to choose music we could love and reverence.…" You may even hear De Lara herself speak on Clara Schumann: http://www.youtube.com/watch?v=NzNqa52v8qs&feature=related

95. See wwkbank.harpsichord.be/Griepenkerl.pdf

96. Clara might also have been motivated by Liszt's attempt, right after Felix's death, to "sex-up" Bach's CFF. As Mendelssohn's teacher, A.B. Marx, wrote (Jan. 19, 1848) in an *Allgemeine Musikalische Zeitung* article, "Sebastian Bach's Chromatische Fantasie: A Few Remarks by A B Marx": "Franz Liszt in his demonic style is so highly regarded that he need not be bothered to understand a single work more or less correctly. He stormed through the Fantasie and Fugue as in a bacchanalian intoxication (the Fugue twice as fast as it is usually played—or can be played); he doubled the bass in the Fugue almost throughout, and added to this storm in tone unexpected sforzandi … now in this voice, now in that, which had the effect of random lightning flashes in a night sky, bursting all the more into the foreground than they were indicated by the Fugue's structure."

97. His 1832 *Briefe an einem jüngeren Freund über Philosophie und besonders über Herbart's Lehren* (*Letters to a Young Friend on Philosophy and Especially on Herbart's Teaching*), Kessinger Publishing, 2010. Griepenkerl's student, Ludwig von Strümpell, went to work with Herbart the following year.

98. Under Forkel, around 1801, Griepenkerl studied C.P.E. Bach's "Über die wahre Art, Klavier zu spielen" ("On the True Art of Playing the Piano") a work in the Göttingen University library that had been checked out by Gauss in 1797. While Gauss almost certainly heard Forkel play, it were also likely that he had discussions with him about Bach.

99. This same work was the first to put forward the contention, that, while "*Freude*/joy" was the opening of Schiller's "Ode to Joy," "*Freiheit*/freedom" was the proper conclusion drawn by Beethoven. Later, Wolfgang would attempt to get Mendelssohn to write an opera based upon Shakespeare's "The Tempest."

100. op. cit., Avins, ed. Quotes in this paragraph from pp. 123, 124, and 128.

work must go back or forth … but whoever misses the day, i.e., sends nothing, must send one thaler instead, which the other can use to buy books!!! One is excused only if instead of the exercise, one sends a composition.…"

A month later, Brahms had upped the ante, in his taciturn, understated way: "I also enclose a work which seems difficult to me and which I beg you, or assign to you, to complete." It was, in fact, the subject of Bach's "Art of the Fugue"—left incomplete on Bach's deathbed! Brahms went on to become the composer that we know, the last great Classical composer … so far. However, Joachim helped Brahms with more than just contrapuntal studies. They would jointly summon the courage to confront the evil represented by Liszt, and to take on their shoulders, at the ripe old ages of 24 and 26, the preservation and development of Classical culture.

But first, Schumann died that Summer of 1856. Brahms "carried the wreath before him, Joachim and Dietrich walked beside me.…"[101]—just as Schumann had composed the "F-A-E" alliance back in November, 1853, three months before his collapse. Brahms told Clara that their friends in Göttingen want "to perform the 'Peri'" for their Schumann memorial—the work that Dirichlet had toasted back in 1847.

A group of musicians had organized, in 1853, a new journal, the *Niederrheinische Musik-Zeitung,* an eight-page weekly, to counter the Liszt-Wagner *Music of the Future*. They were primarily Mendelssohn's collaborators: Ferdinand Hiller and Ignaz Moscheles, and Mendelssohn's youthful teacher Adolph Marx—the one who, in 1848, had blasted Liszt's performance of Bach's "Chromatic Fantasy and Fugue." The organizer was Prof. L.F.C. Bischoff, a veteran of the Liberation War and a philologist trained at Humboldt's University of Berlin. Bischoff, shortly after Brahms' trip to Göttingen, had a chance to meet Brahms, who reported to Clara: "Before I was even introduced to him [Bischoff], he lunged at me, gave my hand a tremendous squeeze and paid me the greatest compliments. That I didn't expect at all, for I have never visited him, and my status as 'musician of the future' makes me his natural enemy, after all." (Again, Brahms' joke. He was a musician of the future, not by ideology, but in reality—by his intent and action.)[102] Brahms well knew Bischoff's group, and they well knew the hope that Brahms represented.

Bischoff had something to teach Brahms. The previous year, Bischoff had published the famous article by Anton Schindler, Beethoven's secretary, that exposed the 1815 Congress of Vienna, 40 years after the fact, for deliberately jacking up the musical pitch standard.[103] Schindler wrote that there'd been many complaints about "the overly high pitch of all orchestras, so harmful to the organs of singing, and not less for the sound of string instruments.… Many reasons and causes are presented for that pitch … the intensified excitability of the current generations' sensibility … the arbitrariness of the orchestra itself or … mere accident.… [T]his annoying orchestral phenomenon was, and still is, produced in purely mechanical ways as the result of human action.… The Congress of Vienna … was … an indirect cause (may the hyperbole be forgiven) of collapse of all proportions in European orchestral pitch.…"

He proceeded to cite the "considerable sums of money" spent for the Kaiser Alexander Regiment, which "appeared with completely new instruments," pitched higher and brighter, "for the glory of this corps … a fact whose consequences was to be felt in an infelicitous manner by the orchestras of the capital [Vienna].…"

The point is, nothing had been done, despite all the complaints for 40 years, until names were named. Human action had distorted the pitch, and human action was required to restore the pitch. In 1858 and 1859, conferences in France and England succeeded in moving the pitch back down.

'Not One Corner of the Vast Waste of Nothingness'

This lesson as to how to fight was not lost on Brahms and Joachim. But first, Joachim was provided the occasion to reflect upon their trip to Rebecca's. A year after

101. Ibid., p. 142. This letter includes Brahms' description of Clara's last tender moments with Robert.

102. An excuse to give another typical Brahms' comment: The following year, he was asked by a Kapellmeister, who was composing on a Psalm (probably 84.1), about the meaning of the Scriptural expression "To the chief musician on the Gittith"—as Brahms was perhaps a chief musician. "Pray can you inform me what a Gittith was?" Brahms, with a serious air, replied: "Probably a pretty Jewish girl."

103. "Die gegenwärtige hohe Orchester-Stimmung und ihr Ausgang" ("The Present High Orchestra Tuning and Its Effect") in the *Niederrheinische Musik-Zeitung*.

their visit, Joachim received "an engraving of Raphael's violinist"—probably, the 1518 work, "Il Suonatore"—along with "a few charming words" from "Frau Dirichlet." Joachim was struck at "her friendliness towards me, as … she has such a shrewd, clear outlook.…"[104]

Then, that Summer, Joachim was back in Göttingen. Liszt had, as he'd done for five years, presumed that Joachim really wants to be working with him, and had invited him for his music festival in Weimar. Only now does Joachim finally confront Liszt directly:

"Your music is entirely antagonistic to me; it contradicts everything with which the spirits of our great ones have nourished my mind from my earliest youth. If it were thinkable that I could ever be deprived of, that I should ever have to renounce all that I learnt to love and honor in their creations, all that I feel music to be, your strains would not fill one corner of the vast waste of nothingness.… I must rather make up my mind to strive for that which I have marked out for myself … for that which I know to be good, and which I consider to be my mission. I can be of no assistance to you, and I can no longer allow you to think that the aims for which you and your pupils are working are mine.… I revere the memory of the Prince [Carl August of Weimar], who lived with Goethe and Schiller and wished to rest with them, too much to be present out of curiosity."[105]

In his "Philosophical Fragments," Riemann developed his concept of the "thought-mass": "The soul is a compact thought-mass, bound together in the most intimate and most manifold way. It constantly grows by the introduction of thought-masses, and upon this rests its further development."

It is not known whether anyone had ever so confronted Liszt. He didn't respond openly. Instead, he sent a young recruit to visit Joachim, to testify that he also had doubts about Liszt; but he conquered them, and was all the better a man for it. Joachim was beyond such contrivances. Brahms was amazed at the Jesuitical methods of Liszt. He explained to Clara: "[W]hoever wishes to write against this Liszt clique *must spread gossip*. For these people maintain themselves by gossiping, and by having the meanest and most convoluted personalities; one has to expose them if one wants to stir up their nest."[106] Brahms had taken a measure of the depth of the disease, and didn't look back.

IV. Riemann & Musical 'Thought-Masses'

Did Brahms' presentation of the "Chromatic Fantasy and Fugue" to Dirichlet, Riemann, and Dedekind aid in organizing the *Geistesmassen*, or "thought-masses" in Riemann's mind? Certainly, Brahms was at the height of his pianistic skills, and was deep into his Bach studies. Further, Clara would have demanded that Brahms save the CFF from Liszt's dirty fingers. We can be fairly confident that he gave a strong presentation of the material. Also, the CFF certainly defies the "Aristotelian category" approach made famous by Johann Joseph Fux. While there may have been Kantians and sterile mathematicians who performed Bach dutifully, the CFF defied such dumbing-down. Riemann had already, in his 1854 habilitation presentation, demolished such Euclidean approaches to living space; and Bach's mind was, to say the least, no less alive than space.

Regarding Dirichlet, we can be fairly confident that when his mind was seized by a problem, it began organizing itself, confident that humans could figure out why tragedies occurred, and could solve any problem that they had to solve. Even as a ten-year-old, he did not passively watch his hometown be redefined (from French to German). Instead of shrugging his shoulders, he delved into the multiply connected human strengths and weaknesses that had played out, in going from the hopes of an American-style revolu-

104. Op. cit., Avins, ed., p. 143.

105. Ibid., p. 147. The historic day was Aug. 27, 1857.

106. Ibid, p. 159.

tion to the travesty of the French Terror and Napoleon—confident that this farce need not be replayed. This was the case with his ceaseless study of Italian and of Boccaccio's *Decameron*—and so, of the Black Death—on his visit to Italy; with his confrontation with Gauss's *Disquisitiones Arithmeticae* as a 17-year-old; and with his development of mathematical analysis that put causality on a higher level than what the numbers supposedly dictated.

Riemann was at least as fanatical as Dirichlet on these matters. His intellectual wellspring ran deep, in his passion to bend his soul toward his Creator, by exploring the whole of the created world. In his "Philosophical Fragments,"[107] he develops the "thought-mass":

"With each simple act of thinking, something enduring, substantial, enters our soul. This substance appears to us, indeed, as a unity, but it appears (insofar as it is the expression of a spatial and temporal extension) to contain an inner manifoldness; hence, I call this a *'Geistesmasse'* [thought-mass]. All thought is, according to this, the formation of new thought-masses.... The currently forming thought-masses merge, blend, or entangle themselves to a certain degree, partially with one another, partially with older thought-masses. Both the type and strength of this union depend upon conditions recognized only in part by Herbart, which I will elaborate in what follows. They rest, principally, on the inner relationship of the thought-masses. The soul is a compact thought-mass, bound together in the most intimate and most manifold way. It constantly grows by the introduction of thought-masses, and upon this rests its further development."

What would Riemann's mind think of Bach's rigorous presentation as to how the mind itself grows?[108] And, beyond this, would Riemann's character respond to the sublime beauty and be further challenged to discover how such transfinite actions were able to move his inner being, with the power with which they did?

This is the question of Einstein's meditation with his violin, with his teenage love for the shape and form of Mozart violin sonatas, with his time away from equations to allow his thought-masses to grow an answer. This is what LaRouche reported in working through Riemann's scientific treatment of causality as a powerful enough method to attack the problems of human economies—when he found that the appropriate recreation, the appropriate nutrition to feed his mind, was Beethoven's Late String Quartets.

But, dear reader—don't pretend that this is a subject far removed from you. You know how to measure without discrete numbers. Consider: It is pretty well-established that the American Revolution ended the childhood of mankind, and put on the table the issue of a nation progressing, by developing the cultural and skill levels of each new generation, beyond that of the previous generation. For over 200 years now, human civilization has been enduring the spasm of living, as Lincoln put it, "half-slave and half-free."

The most obvious boundary condition of anyone born in the last two centuries is: What force or forces are holding the world hostage, and what potentiality must be developed to free the world? Properly characterize your boundary conditions, and you will be able to create numbers, and any other needed mental constructs, that work properly.

But, if you habitually accept analyses of economics, history, and politics, which would have you first agree to be willfully blind and stupid with regard to the most basic conditions of life, then all measurements, all metrical relations, all judgments you attempt to make in so-called practical matters, will frustrate you. All the numerical relations of the "free market" that you accept as given, laid down for eternity, and sacrosanct, will kill you as surely as drinking feces-laden water.

So, don't drink the water, and don't allow numbers to dictate to you. Why not ask yourself, instead, what would you have to do to secure freshwater in proper supply for billions of people? Your mind can form concepts and make analyses, can address ways of thinking, rooting out the ones that destroy and delving into the ones that work.

In fact, Yogi Berra, even given his unlikely physique, did hit the ball surprisingly well. He might have hit the mark also, when he, in his own semi-verbal way, attempted to convey that the subjective qualities of mind, when engaged in a mission, don't allow 90% of the numbers to order him around, at least half the time.

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107. "Philosophical Fragments from the Riemann Werke," *21st Century Science & Technology,* Winter, 1995-96. This extract reflects an improved translation, unpublished, prepared by LaRouche's "Basement Team."

108. Bruce Director, "The Importance of Beethoven's Late String Quartets for Understanding Riemann's P-Function," unpublished manuscript, available from EIRNS.

Summary

In the Fall and Winter of 1855-56, the visits of Clara Schumann, Joseph Joachim, and Johannes Brahms to the Dirichlet household in Göttingen celebrated the unseen, but causal workings of the mind … and of the soul. The musical dialogue there—in particular, the re-presentation of Bach (alive again!)—uniquely conveyed to the scientific minds of Dirichlet and Riemann the sorts of non-material, though highly substantial, actions that they were fighting for in their revolution in mathematics. The mind knows that it is real, and that its most precious contributions are beyond the literal—and finds that some precious, healthy communion with its own self, both strengthens the originating mind and raises the potential of other minds to share in the scientific developments.

Both musicians and scientists were at a branchpoint that Winter. Within months, the musicians took on the weight of Classical civilization, and proved that they could face up to evil, summoning the passion for mankind's future; and the scientists put the concept-formation power of the human mind into an explicit working relationship with mankind—as it were, a qualitatively new sort of machine tool. A century and a half later, most of that potential remains untapped.

"In the Fall and Winter of 1855-56, the visits of Clara Schumann, Joseph Joachim, and Johannes Brahms to the Dirichlet household in Göttingen celebrated the unseen, but causal workings of the mind … and of the soul.…" Shown: The monument to Gauss (seated) and Weber at Göttingen (by Carl Ferdinand Hartzer, 1899).

The subjective life of the creative human mind may well be mysterious, and may always be a tricky business—but it need not be mystified. In music and science, we may now welcome it to center stage, and attempt an adult, mature, open, and honest relationship with it. Such are the examples of Bach's "Chromatic Fantasy and Fugue," of Gauss's sketch at the end of his "Fundamental Theorem of Arithmetic," of Riemann's insistence upon the "Dirichlet" principle, or of LaRouche's "Triple Curve." After all, the joy and passion witnessed in decades of the Mendelssohn *musikabends* are, today, only as far removed from us as the source of our own tears of joy. And this is how any human might know that the American Revolution has been left unfinished—and yet is as close as "the twinkling of an eye."

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