1 An intimate history

The Spectral Piano explores the relationship of theory and technology to compositional and performance practices. It is an admittedly biased history of spectral music written from the perspective of an American pianist, in response to the repertoire I have explored and the composers with whom I have been fortunate to work. A larger, comprehensive history of the spectral attitude; its composers and their predecessors; and the repertoire of spectral and protospectral orchestral, electroacoustic, and instrumental music remains to be written. But an examination of the piano and the composers compelled to write for it offers a frame within which to contextualize the spectral attitude as both a contemporary phenomenon and a compositional approach rooted in the cultural, technological, and scientific developments of the past 200 years. A thoughtful appreciation of this history will in turn foster an appreciation of the attitudes towards sound, nature, and physicality that define spectralism in relation to the aesthetics of the late-Romantic and early-modern composers.

This is a story of transformation: how the conception of an instrument and its practice evolves and what inspires that evolution. It is an intimate history that tells, above all, a story of individuals and affinities, not eras. I will delineate the aesthetic trajectories of composers who shared an interest in specific aspects of the musical experience and explored them in their music, conscious, to paraphrase the composer Tristan Murail (b. 1947), of both the weight of history and the trivialities of fashion.

Although it is said that "history is written by the winners," my purpose in writing this book is not to single out particular composers as "the winners." As a pianist committed to the performance of works representative of many styles, I have never seen it as my role to identify any *Zukunftsmusik* or the "best" piece among a given group of pieces. Besides, I'm not certain what, if anything, is to be won: as composer and computer-music pioneer Jean-Claude Risset (b. 1938) tersely stated, "music is not an arms race" (Risset, 1996b). My role is to reveal the familial resemblances among various attitudes towards the craft of composition in general and to examine them in relation to the art of keyboard performance in particular.

The summer before attending conservatory, when I was seventeen years old, I studied with the pianist Armand Basile (b. 1922). In the 1950s and 1960s, then at the height of his powers, Basile was an acclaimed soloist and

chamber musician. Hailed as "a pianist of exceptional talents and terrific promise … [whose] varied tone colors … were more than enough to reveal a gifted pianist" (Steinfirst, 1943), Basile was appointed to the guest faculty at the Eastman School of Music and toured widely with violinist Abram Loft. By the time I came to work with him, his career had long since ended badly. He was almost entirely blind, plagued by poor health, and mournful of a life in music crippled by his own erratic performances and a form of self-sabotage, what his closest collaborators called a fatal "unwillingness to recognize that promotion of a concert career … takes significant investment in printing and publicity" (Loft, 2003: 135). While his professional career had been a disappointment, he was still passionate about the repertoire and obsessed with the pursuit of different pianistic colors and harmonic-timbral transformations. I recall his fascination with sound as though it were yesterday that we sat together. I had never heard anyone speak about music in this fashion, treating sound itself as a material graspable, malleable, manipulable in time. My strongest memory is of our work together on Scriabin's tenth sonata. In lessons, we would play all the notes in a measure at tempo, then catch their resonance in the pedal and simply wait, sitting silently and listening to their decay. In retrospect, I see that he was far more interested in teaching me how to listen to the piano than how to play the instrument in any traditional sense. Neely Bruce (b. 1944), an American composer who studied piano with Basile at Eastman in the 1960s, recalled Basile's insistence that his students always practice at tempo – even if it meant proceeding only a few measures at a time – to learn to hear the distinctive sound of each phrase and grasp specific acoustic phenomena relating to tone color observable only in real time. As I became versed in a broader repertoire, I became aware that there were certain composers, like Scriabin, Liszt, and Debussy, whose music was particularly suited to Basile's approach, rewarding the pianist intrigued by the temporal nature of timbral color. Other composers' music, approached from this perspective, offered no rewards. Their music was "about" other things, not the sonorous world unique to the piano and the environment it offered for musical exploration.

Anecdotally, Bruce recalled rumors that Basile's prodigious technique and sensitivity to touch and its timbral consequence came from untold hours in which he was forced, as a young pianist, to practice on a Virgil Practice Clavier – an early-twentieth-century silent keyboard with no strings and weighted keys, which clicked in response to the pianist's touch and could be adjusted to various degrees of tension. Basile's obsession with tone color may have been linked to traumatic experiences at the keyboard: initially, those of a prodigy allowed to play but not hear his instrument, and, later, to those of an artist who could imagine brilliant colors but only produce

them through the hands of another pianist. His fascination with pianistic resonance may also be traced to his later studies in New York. As a young man, he studied at The Juilliard School with Olga Samaroff (1880–1948), an American student (born Lucy Mary Agnes Hickenlooper) of Debussy's teacher Antoine-François Marmontel (1816–1898); and with Eduard Steuermann (1892–1964), who had worked in Berlin with Ferruccio Busoni (1886–1924), the virtuoso pianist, composer, and editor of several volumes of the Franz Liszt-Stiftung's complete edition of the composer's works.

But I am skeptical of pianists who tout their pedagogical lineages. Certain pianists always seem ready to trace their heritage, teacher by teacher, back to Liszt, Czerny, and Beethoven, as if to indicate something more than a highly rarified form of "Chinese whispers" – often evoking a veritable *Reinheitsgebot* for what seems the sole purpose of rationalizing a narrow approach to repertoire selection and performance practice. Instead, I connect Basile to Debussy, Liszt, and Busoni to suggest the opposite: an outward-looking, adventurous attitude towards the instrument shared by a diverse array of composers and performers similarly enamored with the sheer sonic possibility and physicality of pianistic sound. Their attitude underlies a certain philosophy towards playing, writing for, and thinking about the piano that has led not to aesthetic paralysis and stylistic atrophy but to radical changes in compositional and performance practice.

In my early twenties, I specialized in the performance of music considered "difficult" (by myself, and other performers and listeners as well): the works of Arnold Schoenberg (1874–1951), Milton Babbitt (1916–2012), Pierre Boulez (b. 1925), Brian Ferneyhough (b. 1943), and Michael Finnissy (b. 1946), as well as their American protégés such as Jason Eckardt (b. 1971). I was drawn to their music's complexity and saw it as an aesthetic strength. I was also curious to know what attracted listeners and performers like myself to this repertoire, and what distinguished us from others who found the same music needlessly opaque and ungratifying, even punishing. By that time, I had studied at the Eastman School with David Burge (1930–2013), a student of the reclusive virtuoso, Pietro Scarpini (1911–1997) known for his performances of Busoni and Scriabin. Compared to his colleagues and contemporaries in the world of the conservatory, Burge was remarkably open-minded when it came to the music of his own time. Yet he dismissed the music of Ferneyhough and Wolfgang Rihm (b. 1952) as "self-indulgent complexity and sonic violence carried to an unnecessarily cruel level of intensity," and the piano music of Babbitt as "the product of intellectual tabulations rather than the expression of human feelings … One begins to think of these pieces as calculations in sound rather than as music" (Burge, 1990: 245–249). I found the differences in our attitudes towards the musical

experience – how we perceived what the same musical environment might afford us, in terms of sensory, emotional, and intellectual stimulation – profound. In the 1990s, as a doctoral student at Columbia University, I investigated the psychological processes of listeners engaged with what I defined as "the Complexity repertoire" (Nonken, 1999). This body of music included works exhibiting extremes of dissonance, metric ambiguity, vertical and horizontal density, and other characteristics that could be shown, in the parlance of cognitive psychology, to render their events and processes relatively challenging to identify, define, and recall.

In my doctoral dissertation, I asked:

> Can specific factors be identified as responsible for our perceptions of certain musical works as more complex than others? If these factors can be identified, can they be shown to render the perception of these works different in kind from the perception of tonal works? Finally, if the perception of these more complex works can be shown to possess distinguishing characteristics, can the musical experience … be modeled in a precise manner reflective of psychological reality and the aesthetic experience?
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> (Nonken, 1999: 1)

In the 1990s, still pursuing research in music perception, I began to perform works by composers of the New York School, such as John Cage (1912–1992), Morton Feldman (1926–1987), Alvin Lucier (b. 1931), and Christian Wolff (b. 1934). This repertoire demanded performance practices different in kind from those required by that of the Second Viennese School and New Complexity composers. Cage, Feldman, Lucier, and Wolff were associated with the "downtown" aesthetic, an umbrella term that referred to the movements that emerged from lower Manhattan in the 1960s: a self-described "alternative" scene that saw itself as carrying on the American experimental tradition of Carl Ruggles (1876–1971) and Henry Cowell (1897–1965), while embracing elements of conceptualism, minimalism, and performance art (Gann, 2006). I toured with this music while continuing to perform that of Boulez, Babbitt, and Schoenberg, all associated with the "uptown" style – "uptown" referring not just to the bastions of classical and contemporary music located above 57th Street such as Columbia University and The Juilliard School, Carnegie Hall and the Metropolitan Opera, but also to the American development of European musical traditions, specifically the legacy of Schoenberg and his students. At the time, it was unusual for a pianist to perform works representing both "uptown" and "downtown" aesthetics. In the 1980s, new music performance in New York was dominated by pianists associated with the "uptown" scene, such as Ursula Oppens, Marc Ponthus, Chris Oldfather, and Alan Feinberg, and those more committed to "downtown" composers,

such as Joseph Kubera, Kathleen Supové, Lisa Moore, and Anthony de Mare. I learned a great deal from all these players, whose tastes and abilities far exceed the way they have sometimes been characterized by critics and peers. Labels of "uptown" and "downtown" and the prejudices they carried were used across the country alternately to praise and disparage performers as well as composers, even in areas where the geographical distinctions were meaningless. As performers often in the press, we were stereotyped in terms of our apparent allegiance to one aesthetic or another, and not only in New York. In 2001, I was caricatured by a midwestern critic in a manner reflecting the mindset of the time: "She is a specialist, she doesn't play the classics in public, and she doesn't seek out Downtown Manhattan composers influenced by rock, ethnic music, Minimalism, or performance art. Nonken is an Uptown practitioner of big-brain music in a Western classical tradition tracing from Schoenberg to Webern to Elliott Carter, Milton Babbitt, Charles Wuorinen, and their students" (Strini, 2001). Influential critics fueled the perception of an irreconcilable antagonism between "uptown" and "downtown" performers, composers, and audiences. A *Village Voice* reviewer went so far as to equate aesthetic and stylistic differences with aspects of morality, associating aspects of "real evil" with the "uptown" aesthetic (Gann, 1998). Yet I found the depiction of the musical-aesthetic experience as somehow revolving around these two poles needlessly restrictive and not reflective of my own psychological reality. It seemed that all musics had the potential to offer, to any listener, invaluable experiences of liberation: freedom from the clock-time that governs our daily life, freedom from attributions of meaning, freedom to experiment with artistic interpretation, and freedom to experience the environment in terms of the "unfathomable particularity of a sensuously given" (Seel, 2005: xi). By experiencing this form of personal liberation in musical contexts – in all musical contexts – we learn to think and feel in new ways, gaining insight into our own existence.

Regardless of the repertoire that I performed, I found the same questions continued to haunt me. I only found satisfying answers to them in considering the active musical engagement of listeners and their relationships to different musical environments along ecological lines. Whether we are discussing Ferneyhough's *Lemma-Icon-Epigram*; Cage's *4′33″*; Messiaen's *Catalogue d'oiseaux*; or the piano études of Liszt, Scriabin, and Debussy, we can describe all of these works as offering the listener a sonorous environment for exploration. How any listener navigates the environment depends on how that listener perceives its affordances and interprets them, objectively (in terms of sounding reality) and subjectively (in relation to more personal factors, such as associations, memories, and inferences). Ecologically conceived, the pianist's role is to create

that environment for the listener and beckon towards possible paths of exploration by defining those affordances, which may comprise timbral-harmonic complexes and elements of rhythm and density, as well as thematic and motivic structures.

After developing my own ecological approach to performance and interpretation, it was no small pleasure to discover the work of the spectral composers. In 1998, New York was witness to "Rendezvous: Masterpieces from the Centre Georges Pompidou and Guggenheim Museums," an exhibition made possible by the temporary shuttering of the Pompidou Center for renovation. The exhibit, held in the main galleries of the Guggenheim, was grand even by New York standards, featuring works by Picasso, Brancusi, Chagall, Duchamp, Delaunay, Kandinsky, Matisse, and others never before seen together. As a once-in-a-lifetime event, "Rendezvous" was promoted as a realization of André Malraux's conception of the *musée imaginaire*. Supported by the Cultural Services of the French Embassy and the Association Française d'Action Artistique, the exhibition was accompanied by cultural events designed to offer a glimpse of the contemporary French musical scene. These included the first concerts in America dedicated to music of the spectralists, featuring national premieres of works by Tristan Murail, Gérard Grisey (1946–1998), Hugues Dufourt (b. 1943), Marc-André Dalbavie (b. 1961), Philippe Fenelon (b. 1952), and Jacques Lenot (b. 1945). French performers imported for the occasion included the pianist Dominique My and Ensemble Fa, the soprano Donatienne Michel-Dansac, and the clarinetist Pierre Dutrieu, accompanied by, as the Guggenheim's press office announced, "two sound engineers of the internationally acclaimed IRCAM [Institut de Recherche et Coordination Acoustique/Musique] Institute of Paris." Two New York-based ensembles were also presented: Ensemble Sospeso, directed by composers Joshua Cody and Kirk Noreen, and Ensemble 21, the group of which I was pianist and Artistic Director. Ensemble 21's program featured music of Grisey, Murail, Philippe Hurel (b. 1955), and Philippe Leroux (b. 1959). Our performance of Grisey's *Talea* was the final performance of his music in his lifetime. He died unexpectedly a few days later.

For the next five years, it seemed that wave upon wave of French new music came crashing into the New York harbor. The year following the success of "Rendezvous" witnessed "IRCAM@Columbia," a second festival bringing proponents of the spectral attitude, as well as technologies associated with IRCAM, to New York. The opening night offered Ensemble 21's portrait of the British composer Jonathan Harvey (1939–2012), featuring the piano solo *Tombeau de Messiaen* (1994); chamber works with piano, such as *Nataraja* (1983), *Song Offerings* (1985), and

The Riot (1993); and the electroacoustic classic *Mortuos plango, vivos voco* (1980). The next evening, Ensemble Sospeso presented works of Murail and Magnus Lindberg (b. 1958), the Finnish composer and pianist who had worked with Grisey. As part of the festival, local composers were invited to take part in free workshops devoted to cultural programming, compositional technique, and software, which offered a chance to mingle with Boulez and members of IRCAM's administrative wing: Laurent Bayle, Eric De Visscher, and Andrew Gerzso. Mikhail Malt and Manuel Poletti, IRCAM technicians, presented workshops at historic Prentis Hall, the site of the former Columbia-Princeton Electronic Music Center (CPEMC). The week-long session ended with an all-Boulez program presented by the Ensemble Intercontemporain at Carnegie Hall's Weill Hall. All the composers were present. It was apparent to many of us in the new music community that the spectral attitude had "arrived." Over the next decade, the composers strongly influenced by spectralism became constant presences in the city, with Lindberg as composer-in-residence at the New York Philharmonic; Murail as Professor of Music Emeritus at Columbia University; and Kaija Saariaho (b. 1952), a composer strongly influenced by Murail and Grisey, as Composer's Chair at Carnegie Hall. During the 1990s and early years of the twenty-first century, the exchange between performers and composers of spectral music spanned the Atlantic, with particular resonance in New York. A brief history of this era, as well as the personnel engaged in this exchange, reveals how a contemporary movement achieves critical mass, effecting changes in both compositional and performance practice.

The year 2003 saw another landmark in spectral music's American reception: the month-long "Sounds French," a second festival organized with support from the Association Française d'Action Artistique. The Festival coincided with a low point in French–American political relations, stemming from the American invasion of Iraq earlier that year. In February, Dominique de Villepin, the French minister of foreign affairs, had condemned America's aggression in Iraq at the United Nations, receiving thunderous applause, and anti-French sentiment was now reaching a critical level in the States and touching upon concert life. Stars of the Metropolitan Opera Angela Gheorghiu and Roberto Alagna canceled performances because of concerns about the war and terrorism, and there were worries about the timing of the Festival itself. Despite negative press, "Sounds French" proceeded as planned, featuring performances of works by Dufourt, Grisey, Hurel, Leroux, Philippe Manoury (b. 1952), Gérard Pesson (b. 1958), Jean-Louis Florenz (1947–2004), Thierry Escaich (b. 1965), and Bruno Mantovani (b. 1974); a retrospective of French electronic music focusing on

the Groupe de Recherches Musicales (GRM), Luc Ferrari (1929–2005), and Pierre Henry (b. 1927); the world premiere of *Timbre, Espace, Mouvement* by Henri Dutilleux (1916–2013), with the New York Philharmonic led by Mstislav Rostropovich; Boulez and the Ensemble Intercontemporain at Carnegie Hall; and the premiere of the chamber opera on texts of Gertrude Stein, *To Be Sung*, by Pascal Dusapin (b. 1955). As part of "Sounds French," I presented a recital of Murail's complete piano music at Miller Theatre, featuring the premieres of *Comme un oeil suspendu et poli par le songe …* and *Les travaux et les jours*, the latter of which I had commissioned with the support of the Fromm Music Foundation.

At the time, promoting a nationalist vision of what music was and could be, De Visscher summarized the French perspective: "Our interest is in the logic of sound itself, in sound as an object, not as an expression of something" (Kriesberg, 2003). De Visscher might have liked to claim that the sense of sound as an object, a breathing organism and not the musical representation of something else, was a uniquely contemporary Gallic delicacy. But the conception of sound as neutral material and the inherent mutuality between sound and listeners in the musical environment can be traced to the nineteenth century, to protospectral attitudes shared by representatives of the French, Austro-Hungarian, and Russian traditions. Aesthetic preferences, particularly those that appeal to the existence of psychological universals, transcend geographical distinctions.

Throughout the twentieth century, composers, pianists, and listeners sharing certain priorities have been drawn to the piano and to one another's work, much as I was drawn to the spectralists. One sees in their interactions the kinds of elective affinities discussed by Goethe in *Die Wahlverwandtschaften* (*Elective Affinities*; 1809). Goethe's novel, written at the same time as his *Zur Farbenlehre* (*Theory of Color*), explored via a biological metaphor the forces that underlie complex and personal social relations (Goethe, 1960: 34–39; Brodsky, 1982). Like many of the composers discussed in *The Spectral Piano*, Goethe was an artist fascinated by science. Borrowed from the sciences, the term "elective affinity" refers to the tendencies, or preferences, of certain chemicals to bond with some chemicals and not others. Goethe applied this concept to the relationships forged between his characters, who found their interactions directed by a seemingly irresistible inner gravity. "The first that we notice about all living creatures is that they have connections with one another," explains his character, The Captain. "It certainly sounds curious when one says something which is taken for granted anyway: but it's only when we are fully clear about what is known that we can step forward to the unknown" (Goethe, 1960: 33). A few pages later, The Captain clarifies.

> Those natures, which on meeting, grasp each other quickly and affect each other mutually, are known as related. This relation is striking enough in the case of the alkalis and acids which, although they are in opposition to one another and perhaps just for that reason, seek and seize each other, modify each other, and form a new body together in the most decisive manner … Thus a separation and a new combination have taken place, and one now believes that it is justifiable to apply the word elective affinity, because it really does look as if one kinship was preferred to the other and chosen before it.
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> (Goethe, 1960: 35–36)

Goethe's biological metaphor mirrors Murail's evocation of a phototropism drawing him to Olivier Messiaen (1908–1992), his teacher and mentor (Nonken, 2013). "Phototropic" is a term used to denote the process by which a plant instinctively turns to the sun. Phototropism is a dynamic process of stimulation and sustenance; in a mutual relationship, the sun directs the plant's growth, and the organism grows in response to the light. I suggest that Debussy oriented himself towards Liszt, Messiaen and Scriabin towards Debussy, Murail towards Messiaen – and in my own time, Fineberg towards Murail, Campion towards Grisey, even Murail towards Liszt – in an unbroken chain of artists, like organisms to the light, seeking nourishment. Biological metaphors seem to blossom in describing a self-professed ecological attitude towards music. Examining these elective affinities, described by Dufourt as "mysterious bridges," I will suggest how compositional and performance traditions evolve.

To a great extent, the history of composers and performers has been determined by elective affinities, drawing composers to their materials, and performers and listeners to the particular experiences that they offer. What drew me to the music of the spectral composers, or to see my own interests mirrored within it? Certainly, I was entranced by the kinds of musical processes and transformations they explored, which seemed immediately accessible yet neither obvious nor pedantic. I sensed their extremely sensitive treatment of my instrument, particularly in how it was allowed to resonate and breathe in a manner that reflected a profound understanding of its mechanism and the temporal nature of its timbral color. In terms of how the piano's registers and pedals were deployed, their use of the instrument was artful. Even more so, in terms of the specific and sometimes idiosyncratic notation of their scores, their approach to the performer was both challenging and respectful. In its sonic conception and graphic representation on the page, the music elegantly confronted the temporal issues of resonance with which pianists grapple every moment at the keyboard. All pianists deal with the uncertainties and disorders that come from the nature of our instrument: its legendary decay, its unstable and idiosyncratic

tuning, how different registers speak in various ways, and how every instrument seems to resonate somewhat curiously, amplifying certain frequencies and muting others, in relation to its own inherently flawed construct and the peculiarities of the space in which it resides. We live with an instrument scarcely improved over the course of the twentieth century, and we often lament its idiosyncrasies – and the daily reactions of wood, felt, and metal to heat and humidity that variously impede the best efforts to make music. Upon reading Grisey and Dufourt and exploring the work of those who followed the first generation, I was heartened to find a group of composers who considered these aspects of instrumental reality – the instrumental body, and the physical reality of how sound works – as defining aesthetic concerns. They engaged with the phenomena of the piano in real time, demanding from the performer spontaneity and the ability to respond with alacrity to the instrument in time and space. For me, their works were transcendent in performance because of, and not in spite of, the eccentricities of the instrument.

In the nineteenth century, Goethe's work exploring the subjective and objective aspects of perception and how they theoretically might govern human behavior and experience provoked many scientists, not least Hermann von Helmholtz (1821–1894). In his papers "On the Scientific Researches of Goethe" and "Goethe's Anticipation of Subsequent Scientific Ideas" (1853 and 1892, respectively), Helmholtz took issue with Goethe's mistrust of causal relations and inability to articulate a precise or definite theory. Like others at the time critical of Goethe's interdisciplinary endeavors, Helmholtz characterized him as a dilettante and located an ominous "threat of subjectivity" in his work (Hallet, 2009: 191). His hostility to Goethe's fundamental perspective – that of an artist inspired by scientific discovery yet not wholly committed to the empirical endeavor and the construction of airtight theories – presaged the uneasy marriage of art and science, and the tensions to be faced by those conducting interdisciplinary research from inherently artistic perspectives.

I have sensed these tensions. In *The Spectral Piano*, I attempt to show the positive benefits of the interaction between art and science, illuminating the kinds of musical projects that could never have been realized without the exchange among those involved in fields of artistic and scientific inquiry historically nonaligned. Like Eric Daubresse and Gérard Assayag, I seek to demonstrate how independent artists, "each through his own preoccupations, has caused advances in research and has succeeded in constructing a musical project which could not have been realized without the back and forth between creative evolution and scientific or technical research" (Daubresse and Assayag, 2000: 64). I proceed as a pianist