How could a composer come to write "rational" melodies? For one must not lose sight of the fact that there is something of a contradiction between these two juxtaposed terms. "Melody" in common parlance implies the song of the soul, the inmost expression, a living and free reality that transcends the very structures that produced it. Without doubt any melody is partially rational in its construction, but not totally rational, and in the last analysis, the thrust of its direct expression liberates it from all formal constraints. Here, on the contrary, rationality invades everything and defines each melodic movement. The succession of notes in each of the twenty-one pieces is subject to rules that can be expressed in a mathematical formulation. So where is the soul in all that? Has modern music lost this on its path of evolution?

Tom Johnson, born in 1939 in Greeley, Colorado, belongs to a generation of American composers who founded musical minimalism. We know that this term was first applied to the visual arts, notably to Donald Judd, Robert Morris, and particularly Sol LeWitt, whom Johnson recognizes as an influence. In music, at the same time, the composer of the *Rational Melodies* was always fascinated by the practices of La Monte Young, or of Phill Niblock, both of whom work with tiny variations within a static sound continuum. He testified often to this in his reviews in *The Village Voice* between 1972 and 1982. But his own writing—and the word "writing" is important here—is rooted rather in "repetitive" music, still expressed in traditional notation, and based on rhythmic pulsations and defined scales (just what is necessary for writing "melodies"). One might add that Johnson already demonstrated a certain taste for repetition in the composition course of Elliott Carter at Yale in 1960–61, where he did his exercises in serial composition with static elements that were not at all in the spirit of this music. It was natural then that several years later, in composing, for example, *An Hour for Piano* (1971), he aligned himself with repetitive minimalism.

However, the following years have shown more and more clearly that it is not the repetition in itself that interested him, but rather the idea of music as a process. Steve Reich applied this idea brilliantly in his phase pieces, and proposed a formulation for this in his famous article of 1969. But after 1975, while the same Reich distanced himself from the radicalism of his first works, and younger American composers came out with music that was lusher, more expressive, even sentimental, Johnson insisted on the unrelenting rigor of formalized processes with, for example, the 60-note Fanfares for Four Antiphonal Trumpets (1975), or Trinity (1978), or Eight Patterns for Eight Instruments (1979). The Rational Melodies, composed in 1982, may be regarded as the outcome of this research, first of all by their sheer quantity, but also by the fact that they summarize brilliantly and clearly procedures from the past, present, and future, which together characterize his work: combinations of cycles of different lengths (I, IV, XI, XVII, XVIII), permutations (VII, X), the paper-folding or "dragon" formula (II, XIX), other automata (XVI, XX), or self-similar structures (XIV, XV). Moreover, the composer generously explains the techniques used in each piece in his notes at the end of the score, published by Editions 75, for which he is the editor.

These explanations, however, are sometimes quite unnecessary, because the logic of the works from this period often remain sufficiently simple to be perceived directly in listening. If one thinks of the sculptures of Donald Judd or Sol LeWitt, one remembers that in minimalism the structure is generally quite evident, with a total fusion of structure and appearance: nothing superfluous, nothing inexplicable (even though the work as a whole remains totally unexplained). Johnson's music adopts this form of obviousness, of simplicity, if you like. It has the audacity of simplicity. Take *Rational Melody No. 1*, for example. The melody sweeps over four notes, not more (as in *The Four Note Opera*, 1971), rising and descending in symmetrical moves, disturbed only by varied rhythmic groupings that are strictly ordered: 1+5, 2+4, 3+3,

¹ Published in Holland by Het Apollohuis in 1989 under the title *The Voice of New Music*, now available online at www.editions75.com.

² Steve Reich, "Music as a Gradual Process," *Procedures/Materials*, Marcia Tucker and James Monte, Whitney Museum of American Art, New York, 1969.

4+2, 5+1, 6. All this forms the first phrase, at the end of which one note remains, isolated, secondary, obliging the cycle to start all over from this new point of departure. The game reproduces itself seven times, after which the loop is looped, and the piece closes itself on its initial note. On reading this brief analysis, one realizes that attempting to describe verbally such a melody takes more effort than understanding it directly by listening. It is a bit like those board games where one gets lost in the initial explanations, but where everything becomes quite clear once one begins to play the game.

The word "game" is important here. The music certainly develops in a logical process, following a rigorous formalism, but something playful coexists with this rigor. The durations of the pieces are rather short, in such a way that the question of time, in all its seriousness, is not primary, as it can be with other kinds of minimalist music—including Johnson's own *The Chord Catalogue* (1986)—that entered into the reverie of the long duration. Above all, the listeners are engaged as accomplices in their ability to perceive and follow the rules of the game, different for each piece, often smiling with satisfaction when they really understand and can predict the succession of notes. One has the impression of hearing a composer who amuses himself, and who does so most seriously, for a game is not a game anymore if the rules are not respected. This entertainment dimension marks a clear difference with the repetitive music of the late sixties and early seventies, which has something hypnotic, something that surrounds you in an effect of cosmic depth. With the *Rational Melodies*, the dominant mode is lucidity, the curiosity of listening and thinking. Despite the geographical and esthetic origins of the composer, their playful character brings them perhaps all the closer to the games of Oulipo, "l'Ouvroir de Littérature Potentielle," founded in France in 1960 by François Le Lionnais and Raymond Queneau, literary games in which formal constraints play a capital role.

To bring Johnson back to the avant-garde stream in New York, out of which he came, another dimension of his work must be mentioned: the theatrical dimension. It is not a question here of theater as such, but of a certain theatricality that developed in the sixties via happenings and performance art, in a way that was often multidisciplinary. The work of Johnson carries heavy traces of this, right from the first piece in his catalogue, Action Music IV (1968), followed a bit later by Scene for Piano and Tape (1969), and continuing in more recent pieces like A Time to Listen (2003) or Same or Different (2004). Numerous compositions use texts, most of the time written by the composer himself, and strikingly, most of the time taking the form of commentaries on the music. A theatricalization of the musical object is put into operation by this textual distancing. This manner of working was used with maximum effect already in 1971 with The Four Note Opera, where the five soloists pass their time saying, in song, what the music they are singing is all about: "There are only forty bars in this duet. This is the second bar. There are only forty bars in this duet. This is the fourth bar . . . " Things move along about the same in later operas, whether it be the Riemannoper (1988) or Una Opera Italiana (1991, 2006). Moreover, numerous instrumental pieces use verbal explanations, such as Eggs and Baskets (1987) and Narayana's Cows (1989). Radio pieces, a form valued by Johnson precisely because of the possibility it offers to combine sound art with commentary, fall regularly into the Johnson catalogue, ever since he settled in Europe in 1983. In a certain way one may say that even pieces of "pure music" like the *Rational Melodies* retain something of this tendency to make a commentary. Through the obviousness of their form, they are at once both music and commentary on music. They come to us staged by their own form, and they seem to challenge our power of perception by saying at each point, "Do you understand how I am working?" The omnipresence of game rules in these melodies, the literal way in which their logical principles are heard, or in short, their truly rational character, makes us perceive them as a discourse on the infinite possibilities of musical composition as game.

For all that, one must not conclude that this music is purely intellectual, purely conceptual. Even if the structure of each piece is totally rational, totally explainable (a rare thing in music), Johnson's art, like that of all composers, does not really make sense until it is transformed into sound. The interpretations of the *Rational Melodies* by the ensemble Dedalus particularly remind us of this. The musicians, with all the

sonorous characteristics of their playing and their instruments, and of the recording itself, flesh out these logically constructed melodies, which through sound, touch the listener with their rhythmic animation, their movement, their stopping points, their harmonic colors. The musical logic is frequently made evident by Dedalus's choices of nuances, phrasing, tempo, and orchestration, as for example in *Rational Melody No.* 8, where the instrumentation becomes thinner as the rhythm accelerates, making us feel the counting on several levels, and clarifying that this one melody virtually contains an entire polyphony of tempos. The varied sound colors are well considered, as when Denis Chouillet uses the toy piano instead of the piano, or in the third melody where each five notes of the scale is orchestrated differently, or in No. 16 where three instruments play in three different tempos, reminding us a bit of the heterophonic textures of Chinese music—an association suggested by the scale as well.

All this, one will say, is the contribution of the Dedalus musicians, who are so creative in their way of transforming these monodies into ensemble music, and who, in doing so, give a sonorous reality to structures that by themselves are abstract. This is of course true, but sound and listening intervenes already before the music is interpreted. From the lessons he took from Morton Feldman at the end of the sixties, Johnson is pleased to remember the essential teaching, the advice to "let the music do what it wants to do." This can be heard as an anticipated encouragement to use mathematical logic to compose, a method that in fact leads to detaching oneself from the development of the composition. But this must be understood also as an injunction always to keep the ears open, something Johnson certainly does at his piano, trying all sorts of logical possibilities, and retaining only those that produce an interesting sound result, surprising and *alive* (do we perhaps find here once again the "song of the soul"?). Feldman also insisted on the necessity of finding just the right sound, and it is this that Johnson also does when he carefully gives each piece a particular scale, a meter, and a register, for clarifying the structure, and simply to make the music *sound good*.

One sees then that these melodies are "rational" first of all because of history, the history of a certain minimalist music that places emphasis on the notion of processes, processes allowing musical forms to develop according to their internal logic, independently from capricious subjectivity. It is then the individual invention of Johnson, who carries on this process, but in a way that is more playful, more detached, and at the same time more thoroughly than with his predecessors: For him, in fact, the rationality goes further than in even the most radical works of Steve Reich, Philip Glass, or Frederic Rzewski. Distributing the notes becomes more and more a matter of mathematics, as if music and mathematics are the same thing—a heritage of an avant-garde that took cross-disciplinary procedures seriously, as when John Cage translated a star map into music.³ Of course, these melodies are rational in their conception, and their form results from a group of rules derived from logic or mathematics, not from an intrinsic musical "logic," but from a way of thinking exterior to the music. However, since they are nonetheless *music*, that is to say that they are first heard inside the composer, then interpreted and heard by others, the rationality does not represent their entire existence anymore. The body comes into play, the sensitivity is touched, and the infinite and complex interplay of associations and emotions intervenes as in any other musical experience. Reactions of listeners on leaving concerts of Johnson often provide proof of this.

Despite all, these melodies really are rational and this rationality is audible. The very special compositional method that gives them birth confers on them a profile, a personality, a completely unique way of moving and behaving in time, which is the mark of a true style. There is repetition, mechanical movement, stubborn and simplistic automatism that becomes almost funny at times, but there is also something solid, sure, inevitable, and full. And finally one sometimes also feels—listen to the sixth melody for example—that the

³ Atlas Eclipticalis, 1961

eminently human playing of the musicians is strangely infused with something else, something we do not control.

A truly successful work always has a good title, something Johnson proclaims himself. The title of the *Rational Melodies* is excellent. At once concise, literal, incontestable, it is neither void of humor nor of provocation, and it triggers with clairvoyance a whole problematic area that is at the heart of the esthetics of its author. After 1982, he wrote many other "rational melodies," though giving them other names: *Infinite Melodies* (1986), *Formulas for String Quartet* (1994), *Tileworks* (2002–2005). The collection recorded here, let's repeat it, occupies a key position in the evolution of Johnson's music. It is this, without doubt, which with the cooperation of Dedalus, gives the *Rational Melodies* the honorable and rare distinction of a piece of contemporary music that has been interpreted three times, very differently, on three different CDs.

-Gilbert Delor

Gilbert Delor completed his doctorate in 2001 with the first musicological study ever written about Erik Satie in French. He has also written articles for the Continuum Encyclopedia of Popular Music of the World. He is currently working on a book about Tom Johnson.

Composer's note

The ensemble Dedalus began some ten years ago and I remember with great pleasure their informal monthly concerts at the city hall of the third arrondissement in Paris. They played compositions by composer members of the group, but also scores they liked by James Tenney, Christian Wolff, and Pascale Criton. As the years went by I also remember good interpretations of some of my own compositions, such as *Eight Patterns for Eight Instruments, Talking, Counting Fives,* and *Narayana's Cows.* The ensemble never sought subsidies, and never had regular sponsorship from a cultural center. This was a labor of love, an opportunity to play the music they really wanted to play.

As the years went by, Dedalus evolved a large repertoire, but perhaps the composition they programmed the most frequently was the 21 Rational Melodies. At first they played isolated melodies as solos, or with two or three instruments in unison, but gradually they played them all, and kept finding new ways to do so. They would exchange phrases as antiphonal ensembles, or some instruments would play only the long notes, or someone would play along a fifth higher, or some would only play the beginnings of the phrases while others played the whole phrases, or only the endings. As the musicians became more and more familiar with the structure underlying these little melodic machines, they even found ways to play in different tempos and remain in unison at the same time. I never intervened in their rehearsals and only rarely offered reactions after a performance. It was clear that this was a rare and authentic case of group orchestration, and that it was best that the composer keep out of the way.

After programming the complete *Rational Melodies* four or five times, this became a kind of trademark for the Dedalus sound, so it became clear that this should be their first CD, and I was delighted to cooperate however I could. Finally the recording session was scheduled at La Muse en Circuit in Paris, on October 6, 2008, engineered by Daniel Deshays, and everyone was delighted with the result.

I am particularly pleased, because the result is so different from the solo flute recording of Eberhard Blum (Hat Hut, 1993) and the solo clarinet recording of Roger Heaton (Ants, 2006). It is not just another interpretation, but a case where interpreters have added so much insight to the music that the music itself has grown. When I was composing this music around 1982, I really thought I was simply writing melodies, but now these little pieces, though remaining melodies, have become something much more, something I would never have imagined. They have become what you hear on this CD.

Tom Johnson, born in Colorado in 1939, received B.A. and M.Mus. degrees from Yale University, and studied composition privately with Morton Feldman. After fifteen years in New York, he moved to Paris, where he has lived since 1983. He is considered a minimalist, since he works with simple forms, limited scales, and generally reduced materials, but he proceeds in a more logical way than most minimalists, often using formulas, permutations, predictable sequences, and various mathematical models.

Johnson is well known for his operas: The Four Note Opera (1972) continues to be presented in many countries. Riemannoper has been staged more than thirty times in German-speaking countries since its premier in Bremen in 1988. His largest composition, the Bonhoeffer Oratorium, a two-hour work in German for orchestra, chorus, and soloists, with text by the German theologian Dietrich Bonhoeffer, was premiered in Maastricht in 1996, and has since been presented in Berlin and New York. Johnson has also written numerous radio pieces, such as J'entends un choeur (commissioned by Radio France for the Prix Italia, 1993), Music and Questions (also available on an Australian Broadcasting Company CD) and Die Melodiemaschinen, premiered by WDR Radio in Cologne in January 1996. His latest orchestra score, 360 Chords, was premiered in July 2008 by Musica Viva in Munich.

The Voice of New Music, a collection of articles written 1971–1982 for The Village Voice, published by Apollohuis in 1989, is now in the public domain and can be downloaded at www.editions75.com. Self-Similar Melodies, a theoretical book in English, was published by Editions 75 in 1996. Johnson received the French national prize in the Victoires de la Musique in 2001 for Kientzy Loops.

Dedalus is a contemporary experimental music ensemble with repertoire based on scores with flexible instrumentation, particularly American music of the sixties and seventies. Dedalus is the only ensemble in France to have given serious attention to composers such as Frederic Rzewski, Jo Kondo, Antoine Beuger, James Tenney, Christian Wolff, Cornelius Cardew, Terry Riley, and Tom Johnson. Dedalus is a collective, and their arrangements, orchestrations, and interpretations are all collaborative. The personalities of the musicians and their varied musical experiences bring together the discipline and precision of classical music, the liberty of improvisation, and the energy of rock.

Guitarist Didier Aschour studied at the National Music Conservatory of Paris, and was an award-winner of the Yehudi Menuhin Foundation and scholarship holder at the Darmstadt Summer Courses for New Music. Well known for his work on microtonal guitar, he has played and created works by Harry Partch, James Tenney, Clarence Barlow, and Pascale Criton. Since 1996, he has directed the Dedalus ensemble and played with numerous other contemporary music ensembles. As a composer, he has written extensively for dance and video, often creating particular acoustical systems that question the relationship of music and sound phenomena.

Flutist **Amélie Berson** is the dedicatee of numerous works, in particular the Italian compositions she recorded with Didier Aschour in 1995. She was a prize-winner of the Yehudi Menuhin Foundation in 1992 and held scholarships at the Ferienkürse für Neue Musik (Darmstadt) in 1992 and 1994. A founding member of the Dedalus ensemble, she has played at the Modern Art Museum in Strasbourg, the contemporary music festival in Evreux, the Montpellier Opera, the Cervantes Institute, the Finnish Institute, the Péniche Opéra, and the Théâtre le Proscenium, and in stage works at Evreux, Avignon, the People's Theatre, and the Théâtre des 2 Rives in Rouen.

Eric Chalan completed the course in double bass at the Conservatoire National de Region de Paris in 1995, and since then has worked with the orchestras of Paris, Rennes, Avignon, and Metz, as well as with contemporary ensembles such as Ensemble InterContemporain and Dedalus. At the same time he plays with tango groups and works regularly with the composers/interpreters Gerardo Jerez le Cam, Tomas

Gubitsch, Gustavo Beytelmann, Juanjo Mosalini and Osvaldo Calo. His taste for diversity pushes him to also accompany singers (Agnès Jaoui, Angélique Ionatos, Julia Migenes), actors, and dancers, and to take part in various new jazz (contrabande) and contemporary classical groups.

Denis Chouillet is a pianist, performer, and also a composer. He wrote the chamber opera *Bataille Navale*, a variety of vocal and instrumental pieces and songs, as well as music for dance, theater, and radio and created several works with Elise Caron, Vincent Bouchot, and Fabrice Villard. He was the musical director and pianist in the recent French production of Tom Johnson's *Opéra de Quatre Notes*, has performed works by David Lang and Georges Crumb at the Paris Opera, and performed Luc Ferrari's music in a catch ring in southern Italy. He received the SACD prize as Nouveau Talent Musique in 2006.

Thierry Madiot is an inventor of instruments and a collector of accessories, a trombonist who combines improvised music and written music. Beginning in 2002, he has evolved a specific one-to-one sound art that he calls "sound massages." For eighteen years he has collaborated with the performance space Instants Chavirés near Paris, organizing concerts, performances with Astrolab, Informo, and the festival "ça vaut jamais le réel," doing similar work with "musique action" CCAM in Vandoeuvre. For many years he has performed with Alfred Spirli, ensemble Hiatus, Seijiro Murayama and Pascal Battus.

Saxophonist Pierre-Stéphane Meugé started playing piano at the age of five. He studied saxophone mainly at the Strasbourg Conservatory, where he later became a saxophone teacher and conducted the wind ensemble. In 1988–1994 he was the first saxophone teacher at the "Ferienkürse für Neue Musik" in Darmstadt (Germany). In 1991 he began playing with Xasax, one of the most active saxophone quartets in Europe. He has performed as a soloist in many European festivals, as well as in Japan, Russia, Mongolia, Indonesia, the Ukraine, the U.S.A., Uzbekistan and Kyrgyzstan. From 1994 until 1998, he played with Klangforum Wien, and he currently performs with both 2E2M and Aleph in Paris and Contrechamps in Geneva.

Violinist Silvia Tarozzi took traditional music courses at the conservatory in her native city of Bologna, and then studied early music in France and Italy. Later her interests turned to the contemporary repertoire, which she studied in Venice, at IRCAM in Paris, and with the musicians of the Ensemble Intercontemporain and Klangforum Wien. She currently lives in Paris, where she collaborates with a variety of baroque, electronic, classical, jazz, and rock ensembles and improvising groups. She has also played for the dance company of Sylvain Groud and for the Teatro dell'Argine and has premiered numerous contemporary works.

Fabrice Villard plays clarinets with the Erik Satie and Dedalus ensembles (contemporary music and minimalist music) and frequently improvises with the guitarist Philippe Pannier, often in context with poetry and dance. He teaches clarinet and improvisation in a music school near Paris, and composes music for pedagogical use. He performs with the composers Denis Chouillet, Vincent Bouchot, Martin Moulin, and comedienne Nathalie Duong, and with composer Philippe Leroux he tries to find new musical combinations between improvisation and composition. Villard also writes poetry and publishes books.

Cellist **Deborah Walker** was born in Italy and studied cello at the Istituto Musicale A. Peri in Reggio Emilia, also taking master classes with Marianne Chen, Harvey Shapiro, Enzo Porta, Stefano Scodanibbio, Anssi Karttunen, and Rohan de Saram. In October 2004 she moved to Paris to continue her cello studies with Agnès Vesterman. She played in two theatrical productions by "La Corte Ospitale" working with the composers Tom Johnson and Alfredo Lacosegliaz. Since 2002 she has been particularly interested in improvisation, performing with Markus Stockhausen in Italy and Germany and with Joelle Léandre in a broadcast on Radio France.

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TOM JOHNSON (b. 1939)

RATIONAL MELODIES

DEDALUS
DIDIER ASCHOUR, MUSIC DIRECTOR

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Rational Melodies (1982) 47:14				
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2. II 1				
3. III 2	2:09			
4. IV 1	:23			
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7. VII	2:09			
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9. IX	1:37			
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17. XVII	1:47			
18. XVII	I 1:41			
19. XIX	4:52			
20. XX	1:57			
21. XXI	1:15			

Dedalus: Didier Aschour, guitar; Amélie Berson, flute; Eric Chalan, bass; Denis Chouillet, piano; Thierry Madiot, trombone; Pierre-Stéphane Meugé, saxophone; Silvia Tarozzi, violin; Fabrice Villard, clarinet; Deborah Walker, violoncello