

György Kurtág's *Játékok*: a tool to learn the piano

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Abstract György Kurtág's *Játékok* for piano, piano duet or two pianos, produced with the pedagogical collaboration of Marianne Teöke, consists of eight books. The first is published in 1979 by the publisher Editio Musica Budapest. This Work in Progress marks the renaissance of the composer; the pseudo-pedagogical work "suggested by children playing spontaneously with the piano" is designed to enable "familiarization with the processes and the thought of contemporary music, from the first contacts with the instrument", and also with "pleasure in playing" and "joy of movement-daring". Each book proposes to compare two types of complementary writing, and an explanatory note presents the elements of musical language: pianistic, correlating sign and musical and instrumental gesture, highlighting this search for "gesture-sound" at the heart of Kurtág's thought. We have chosen the specific theoretical frameworks of didactics, more particularly the didactics of music, together with the methodological tools of activity analysis, to examine the experiments undertaken by these young pianists to explore the meaning of their musical experience by the acquisition of the technical gestures written in the *Játékok*. Our methodology is based on video recordings of autonomous practice sessions of young pianists aged from 8 to 12 years old, followed by a simple self-confrontation interview. We ask about their musical realization, about what is to be done (the task) and what has been done (the activity) in order to understand the process that leads from the technical gesture to the musical gesture. In this paper, we propose to present some results on the relation between task and activity in piano learning, to understand how certain technical gestures learned in the *Játékok* context are transferable in other musical situations, and to describe some pedagogical paradoxes existing in some of these games. This work of didactic analysis of the pianistic activity allowed us to observe indicators that elicit and trigger activity. It shows that certain exercises, certain parts, require the presence of a teacher so that the child understands what is prescribed. These data indicate the principles of the acquisition of gestures that allow the young pianist to develop a sensitive and musical discourse.

Keywords Didactic, piano, musical learning, pianistic gesture, performance process

Introduction

In 1973, when Hungarian composer, pianist and pedagogue György Kurtág embarked on the *Játékok* ("Games"), emerging from a "very long period (many years) of [creative] paralysis and repeated crises" (Kurtág, 2009). It was Marianne Teöke, dedicatee of the first four volumes of the *Játékok*, who was the source of their creation, which the composer experienced as a rebirth: "the *Játékok* were a new opus 1" (*Ibid.*, 86). György Kurtág wanted to write a series of works that allowed pianists to discover the enjoyment of a game, the enjoyment of movement, in order to develop the initiative and the freedom of the performer (*Ibid.*). The object of these collections was to "move around without fear [...], with speed over the whole space of the keyboard, at the very outset of the learning process..." (*Ibid.*). Thus, Kurtág composed *Jeux*, a set of short pieces for the piano for 2 hands, 4 hands or two pianos accompanied by explanatory notes, of which the first 4 volumes were published in 1979³. One of the concerns of the musician was that the beginner should be made sufficiently aware of notation in order to understand what should not be taken seriously and what should indeed be "taken seriously" (*Ibid.*). For, musical notation is on the one hand a constraint, since it is supposed to represent, through symbols, graphics, the musical will of the composer that

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³ A second set *Entrée de journal intimes, messages personnels* was published in 1997 (vol. 5 & 6), 2003 (vol. 7) and 2010 (vol. 8).

must be complied with, as well as providing a wealth of information for the interpreter, On the other it is a space for the play, for the freedom of the imagination. For the musician and likewise for the pedagogue, it serves as a prescription which determines the tasks and activities to be realized in order to give life to the signs as sound and music to the signs set on paper. The study of the relation between notation-prescription (signs describing pitch, duration, intensity, even timbre and space) and the activity of the young pianist should make it possible to understand how the music takes possession of their fingers. We therefore assume that Kurtág's notation (explanatory note and score) in *Jeux* guides the instrumental and musical gestures of the learner both explicitly as well as implicitly.

In the foregoing, we referred to certain concepts (notions) that are still rarely used in research into musical pedagogy in France (prescription, task, activity). These notions belong to the scientific fields of didactics and the ergonomics of activity, much studied in the sciences of education and grouped together in the field of the theories of activity (Vergnaud, 1990, Chevallard, 1985, Brousseau, 1998, Pastré, 2011, Clot (1999), Clot et Faïta (2000), et al.). Our study is founded on this theoretical framework and our ergo-didactic approach attempts to understand and to explain the links between task and activity based on an example taken from Kurtág's Games, drawing on the characteristics of the didactic game (Brousseau, 1998; Sensevy, 2007). Our hypothesis is that the notation of these works serves more to accompany than guide the young instrumentalist as she elaborates the pianistic game aimed at producing musical expression. It will be tested by crossing the methodologies of research into musical didactics (Marchand, 2009; Terrien & Leroy, 2011; Terrien, 2015;) with the ergonomics of teaching activity (Amigues, 2003; Clot & Faïta, 2000; Saujat, 2002; Joshua and Felix, 2002; Espinassy, 2009; Espinassy and Terrien, 2017). Based on didactic game indicators in the context of the didactic triplet and on a re-examining and discussion of the didactic approaches desired by Kurtág in this work, our video analysis tools enable us to propose results that explain the impact of the notation-interpretation relationship concerning young learner-musicians, and to better understand certain learning mechanisms.

1. Theoretical framework

The theoretical framework on which we base our work is taken from the field of didactics and ergonomics of the activity of teaching, which, with other researchers in the educational sciences of the laboratory for *Learning didactics assessment and training* of Aix Marseille University (EA 4671 ADEF), we term in France an ergo-didactic approach. From the field of dialectics we take the notion of didactic triplet (Chevallard, 1985; Sensevy and Mercier, 2007; Terrien, 2015), the notion of didactic game and didactic environment (Brousseau 1998; Sensevy, 2007) and in a more limited use the notion of didactic transposition (Chevallard, 1985; Vergnaud, 1998; Brousseau, 1998; Terrien, 2006) and from the field of the ergonomics of the activity of teaching the notion of prescription (Daniellou, 2002; Amigues, Félix & Saujat, 2008; Amigues, 2009; Espinassy, 2009) and the notions of task and activity (Leplat and Hoc, 1983; Clot 1999; Saujat, 2001; Goigoux, 2007). But research in the pedagogy of music also creates its own notions, that of musical gesture when we speak of intensity, nuance, expressiveness (Hoppenot, 1981; Renard, 1982; Matthieu, 2004) and that of instrumental gesture when referring to tonic-muscular movement (Cadoz, 1999; Schmidt and Lee, 1999, Desmurget, 2006). Our study falls within the broad framework that we call didactic musicology (Terrien, 2016, 2017).

We use the term prescription to mean "an attempt at unrestricted prediction and control, both as to what is to be done and as to how to do it" (Daniellou, 2002, 9). Prescription usually results from a reflection on how to perform an action after studying the various possible ways of doing it. In the narrow sense, prescription is the rule for carrying out a task, for doing what is to be done, but it may also consist in any statement, instruction or indication conveyed in writing or orally to a pupil or group of pupils, in other words stating what has to be done. But such prescription is polymorphic and contains a good deal of the implicit, not only because it is badly formulated, but because it fails to say everything about what is to be done and how to do it in other words the know-how. In the case studied below, we will analyze the consequences of the explicit and implicit in the prescriptions given (explanatory note and musical score) upon the young pianist's learning process. We shall study how she carries out her training in the light of what she takes the prescription to mean.

The notion of task, often linked to that of prescription, is a goal to be achieved under certain conditions (Leplat, 2000). It is the work to be carried out to meet the wishes or expectations of a prescriber: the teacher or the designer of the method. In this case, the expression "prescribed task" is used. When it also concerns the actor (the pupil, the learner), the expression "effective task" is used. In the observed situation, the student becomes familiar with the prescription and interprets it in her own manner. Hence, it is a "redefined task" (*Ibid.*). This makes it possible to observe the activities of the partners in a didactic situation. The task to be undertaken in the case of our study is the interpretation of the pieces *Flowers we are ...* (1a) and *Flowers we are ...* (1b).

For didacticians (Reuter et al., 2007, 11), the notion of activity "refers to everything that the didactic subject implements in the performance of a task". For ergonomists, who borrow their definition from work psychology (Leplat, 1997) and the activity clinic (Clot, 1998), it is part of the theory proposed by Leontiev (1976) following the theses of Vygotski. Activity includes all that a subject does but also what they decide not to do. Its history starts at an earlier point and cannot then be reduced to what is merely seen (the action). It is imprescriptible and depends on the relation that the subject maintains with the didactic environment in which the activity is conducted (Amigues, 2003, 8).

All three notions, prescription, task and activity, are key notions in didactics and ergonomics. They are also integrated with other elements of didactic theory such as the didactic triplet, they may also be linked to didactic games that occur in any learning situation (Chevallard, 1985; Brousseau, 1998; Sensevy & Mercier, 2007).

On the didactic level, all teaching situations are covered in the didactic triplet combining mesogenesis (learning in terms of environment), topogenesis (learning in terms of distance or relation to knowledge) and chronogenesis (learning in terms of time, duration). These notions have been described at length in numerous works on the didactics of disciplines (Chevallard, 1985; Raisky and Caillot, 1996; Brousseau, 1998; Sensevy and Mercier, 2007) and in the didactics of teaching music (Terrien, 2006, 2015). The notion of game (Brousseau, 1998; Sensevy, 2007), whose characteristics will help us to analyze the didactic situation, is linked to that of the environment (Brousseau, 1998; Joshua and Felix, 2002). The game involves the teacher and the student, and they both succeed together. In other words, the teacher wins when the student has managed to carry out the exercise. This situation is made possible if the didactic environment is organized in such a way that the pupil can carry out the task asked of them. In this case, there is a state of didactic devolution, that is to say that the pupil performs the task assigned to her or him unassisted (Brousseau, 1998, 51). So

much for the brief recapitulation of the main notions of the theoretical framework that we shall now use in the study of this situation.

2. The purpose of the study

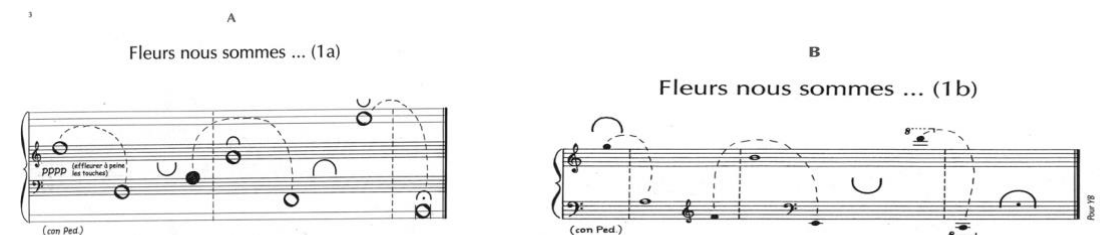
Our study is based on the first collection of *Játékok (Games)* by Kurtág. The composer gives graphic design a key role in *Games* and, though "the musical text is not to be taken literally", [...] it is important [nonetheless] be very attentive to its development, to the quality of the sounds and silences." (Kurtág, 2004). By way of help, "the semiographic solutions adopted by Kurtág quickly convey the constructive peculiarities of events, they mark the units of articulation and through a ratio of analogical correspondence they show the dynamics of gestures required to produce sound profiles. [...] Events of equal durations are represented by equal symbols and, as in the case of silences [...], the various duration of the sound elements are represented by various symbols which are not related in terms of precise mathematical relationships, but instead linked just by the relative terms 'longer' or 'shorter' " (Melis, 2009, 144). With the help of the graphic image, the student intuitively grasps the spaces to be passed through (through ascending or descending movements), the temporal progression (the indications of length being reinforced by the spaces left blank between two notes or clusters), the sound mass is described by circles of clusters either inked-in or left empty. "These graphics make it possible to conclude that there exists a precise correlative ratio between the graphic representation of the notation, the mental representation of the sound structure and the motor coding necessary for sound reproduction" (Melis, 2009, 144).

2.1. Organization and disposition

The organization of the book, the set of exercises and repertory present the originality of juxtaposing two types of writing. The left-hand page (A) "hosts an undifferentiated material" (Kurtág, 2009, 187), that is to say, the "avantgarde" game modes (cluster, glissandi, etc.) and their characteristic graphics. "The note does not matter, what matters are rather the gesture and approximate register" (*Ibid*), the composer informs us.

The right-hand page (B), numbered identically with page A, proposes "notes defined" (Kurtág, 2004, I) on traditional staves.

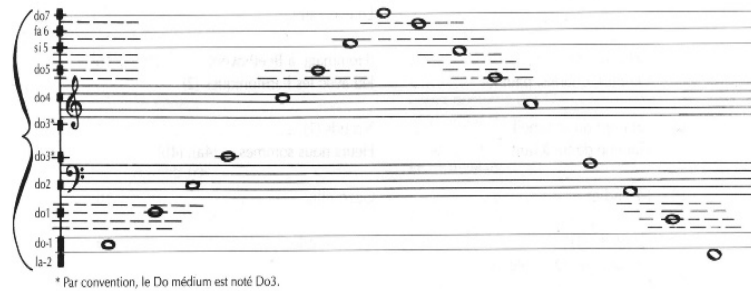
If "pages A form a continuity together (ditto for pages B)" (*Ibid*) and if pages A and B can be played independently, these latter are nevertheless complementary. The example of the two versions of "Flowers we are ... (1a)" and "Flowers we are ... (1b)" on pages 3A and 3B illustrates this complementarity perfectly and highlights the "search for gesture, for sound-gesture" ⁴ at the heart of Kurtág's thought and approach, seeking to connect sign and musical and instrumental gesture.



2015 of Valérie Haluk (a French pianist who had worked in the Franz Liszt Academy in Budapest, with Kurtág himself and was a pedagogical contributor to the French edition of *Játékok I*).

III. 1. : György KURTÁG, *Játékok I*, “ Flowers we are... (1a)”, page 3A
et “Flowers we are... (1b)”, page 3B.
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A table of tessituras, "figur[ing] the entire keyboard without transpositions of octaves, with red lines at the ends" (Kurtág, 2009, 186), makes it possible to find one's way on the keyboard (see "Table of tessituras" below, the red lines appearing in gray).



III. 2. : György KURTÁG, *Játékok I*, “Table of tessituras”, page I.
© Éditions Henry Lemoine

The words of Kurtág in his preface to *Játékok* then take on their full meaning: "Let the musical graphics take effect and exert their influence upon us. They inform us about the progression in time of the pieces, even for the freest of them " (Kurtág, 2004, I).



2. 2. "Flowers we are ... (1a)" and "Flowers we are ... (1b)": explanatory note




SIGNES UTILISÉS

I - Signes indiquant la durée des sons et des silences


1) DURÉE DES SONS

Les signes blancs (○) indiquent généralement des valeurs longues et les signes noirs (●) des valeurs plus courtes. Ces durées sont relatives. Elles dépendent du tempo choisi pour chaque pièce.





 = très long
 = long

Signes affectant la durée des sons :  = très prolongé  = prolongé  = écourté

Echelle de durée des sons par ordre décroissant :



2) SILENCES


  = pause très longue (point d'orgue)  = long  = court

III - Signes indiquant les différents modes de jeux


2) CLUSTERS

a) avec une étendue approximative

Le signe fait référence au mode de jeu. Les notes qui composent le cluster sont indiquées par les altérations. (Si les altérations ne sont pas précisées, elles peuvent être librement choisies).

 = avec la paume, éventuellement avec les cinq doigts

IV - Autres signes

 = les deux notes ne sont pas liées mais appartiennent à la même unité et doivent être réalisées dans un même phrasé.

III. 3. :György KURTÁG, *Játékok I*, Extract from the explanatory note. © Éditions Henry Lemoine

For the present study, we have selected examples from "Flowers we are ... (1a)" and "Flowers we are ... (1b)" (Kurtág, 2004, 3A, 3B). The explanatory note familiarises the pupil with the prescriptions written by the composer for this work, in particular regarding the signs of duration of sounds and silences with their longer or shorter extensions. These values apply to both sounds and silences equally.

The clusters, that is large empty or filled circles to be "played with the palm, possibly with all five fingers" (Kurtág, 2004, 3A, 3B). In "Flowers we are ... (1a)", the clusters indicate both an approximate extent and the corresponding pattern: play on the white keys, on the black keys or on both, depending on the alterations preceding the clusters. When no alteration is specified, the notes may be freely chosen by the young pianist.

The dotted lines indicate that though the two notes are not linked, they "belong to the same unit and must be performed in the same phrase" (Kurtág, explanatory note).

The whole must be played "(*con Ped.*)".

The two pieces (1a and 1b) differ somewhat in graphic representation. The first one indicates the pitches with large circles arranged on the two staves, marked by a clef (top: treble clef, below: bass clef), gives some indication of nuance (pppp), and of movement ("barely touch the keys"), whereas the second is written with distinct notes, key changes within each staff, and octaviations in the treble and bass.

As we may see from the explanatory note, the prescription is both explicit, giving precise indications as to pitch, duration, intensity, and at the same time broadly implicit, allowing each student a choice as to how to interpret the data. Concerning the pieces (the tasks), while the written score complies with the prescriptions indicated in the explanatory note, it issues the student with a two-fold instruction (actually a paradox), namely to play the piece in accordance with the prescriptions of the explanatory note, and yet to do so each in their own way, according to each one's possibilities, each one's understanding of the prescriptions. Each piece, each task, must to be redefined by the student and he can play what is asked of him, in spite of the explanations given by the explanatory note. The implicit dimension of a musical score needs to be ascertained, even if it sets out to be "simple".

3. Methodology

Our methodology is based on the observation of two video sequences of a 9-year-old student who has been practising the piano for two years and has taken music classes (music harmony) for three years.

During the making of these video sequences, the student is left alone with the score, the explanatory note and a piano for 20 minutes. It is filmed from a three-quarters angle from behind in a fixed plane, which allows us to observe the movements of the pupil on the piano, and sometimes even their eyes, as they look at the score or the explanatory note lying at hand on the music stand of the piano, which serves as instrument.

The process of analyzing these videos is linked to the framework in which our experiment takes place. Left on her own with the score, the explanatory note and a piano, the young pianist is therefore in a devolved situation, a notion that we defined above. The object is to analyze the data to allow us to understand and to explain how Flora sets about carrying out, in the time allocated, the work that enables her to play the piece. Methodologically, we refer both to Brousseau's didactic situation theory (1998) and to ergonomics to study the activities involved in discovering a musical piece, while retaining the analytical scales specific to didactics: macro / meso / micro (Tiberghien and Malkoun, 2007). In the words of our colleague C. Marlot:

We thus move away from the logic of the "proof", based on inductive methods and generic classifications, to turn to one which aims at a certain "pragmatics of interpretation" by enquiring more closely into singular cases and making their contexts more explicit. (Marlot, 2008, 98)

Our analysis is based on the scenes that depend on the learning games, and on some episodes characteristic of the manner of regulating their activity adopted by the student. Drawing on the epistemological foundation of the methodological approach, this consists in a close dialectic between theoretical questioning and video data, which is quite near to the idea of combinatorial ethnographic inquiry (Dodier and Baszanger, 1997).

4. Analysis of the video

4. 1. The student

Flora (alias), a young nine-and-a-half-year-old pianist, has been practicing the piano for two years and been following music classes (harmony) for three years. She goes to a French elementary school and is in the *cours moyen 2nd* year (equivalent to fifth grade (U.S.) or year six (U.K.)). In addition to French she speaks fluent Chinese and Vietnamese. She practices on her own every morning for about a quarter of an hour. Her parents support her and oversee her musical studies. Outside school she also practices Taekwondo.

4. 2. The didactic situation

A large classroom with a piano at the conservatory.

Explanatory note to "Flowers we are ... (1a)" placed on the left-hand side on the music stand of the piano

Score: "Fleurs we are ... (a)" placed on the right of the explanatory note on the music stand

White sheet of paper over "Flowers we are (1b)" and under "Flowers we are ... (1a)"

The student is therefore left completely on her own and in a situation of didactic devolution, in other words, she organizes the learning process exactly as she likes.

4. 3. Indicators for the analysis

As mentioned previously, we have chosen to analyze the video using indicators borrowed from the theory of joint action in didactics (Sensevy and Mercier, 2007) that take into account didactic transactions. These links the didactic contract concerning devolved situations (thus here learning to play "Flowers we are ... (1a)" without any outside assistance), to the environment and the learning games (the didactic situation and the rules set by the teacher), but also to the didactic triplet and the didactic quadruplet (define-regulate-institutionalize). In order to identify the interactions between these notions, we have relied on the prescriptive data of the explanatory note on the task as represented by the score, and on the activities developed by Flora, the student pianist, in order to complete the task of learning to play a piece without any assistance.

The session takes 19 minutes and 22 seconds, and is analyzed at three different levels: first a macro level or didactic phase taken in its topogenetic sense, i.e. the relation which the student, in this devolved situation, maintains with the knowledge and knowhow; then a meso level understood as mesogenetic which makes it possible to identify the different scenes that

appear through the video; and finally, a micro level, where the extraction of individual episodes that mark the chronogenesis of the didactic situation takes place.

4. 4. Results

Our analysis shows that the learning process is made up of three distinct episodes. The first episode (0'-4'12) involves the discovery of the material. At this point, and through metacognitive activity, the students employ all their knowledge and know-how in order to perform it by reading, analysing, as well as imagining gestures. This phase lasts almost 4 minutes, and we observe the contribution made by the skills acquired over three years in the musical field – the music read internally, the silent deciphering, and so on, together with the instrumental skills acquired in respect of the instrument, like instrumental gestures, exploration using trial and error (Mialaret, 1991), and finally and finally the initial gestures with the instrument, testing how does it sounds”. During this phase, the student’s actions, the silent reading, the constant shifting between the explanatory note and the score, how her right hand is placed on the keyboard, and the manner in which the movement of the hand is prepared, all point to the student's activity, the choices she makes, the different tests she explores, the hypotheses she seeks to verify by testing them and then finally confirming them.

The second episode (4'12-12'12) can be broken down into three phases. The first (4'12-4'45) is two clusters. During this episode, the young pianist appropriates the relation between the prescriptions (explanatory note) and the task (the musical piece) and she makes sense of it through her experience of the activity. In order to conduct these activities, she makes use of all that she already knows about music and what she has learned from the explanatory note; and she also creates new gestures to accomplish what she assumes the task to require. These actions are the result of trial and error such as lateral movements made across the keyboard. The second phase (4'45-10'17) is the first step in rule-making: Flora confirms these new gestures by reproducing them and she even proposes some musical gestures through her work on the intensities or pitches. It is during this phase that she makes use of the pedal of the instrument to give greater amplitude to the resonance. The final phase (10'17-12'12) of this second episode concerns the execution of the two last clusters. This action leads to a rebalancing of the whole. Every moment in the game is much shorter than the moments of thought that consist in the re-reading of the prescriptions, of the mimed instrumental acts, the to-ing and fro-ing between score and keyboard, the movements up and down the keyboard, and the pre-operative or preparatory gestures preceding the game. The third phase (12'12-19-22) consists in the process of institutionalization. Flora considers that she has acquired the knowledge needed to play the work and performs it entirely several times, while taking the time in the breaks between the performances to come back to the text, that is the explanatory note.

Flora passes frequently back and forth between the explanatory note, the score, and the keyboard during the game and also between the game’s phases. This activity generally takes place quite independently from the production of sound. She looks alternately at the position of her hands on the keyboard and at the score, trying through this action to give meaning to a task that does not furnish the basis of this activity. Through these gestures she shows how she develops her pianistic activity: by miming, by feeling, by touching the keys on the keyboard, by moving her hands from one side of the keyboard to the other, by clasping her wrists as if to play, without necessarily producing any sound. She elaborates propositions of

musical sense, by testing her previously acquired experiences and by creating new ones when those she already possesses are of no help.

V. Discussion

An analysis of this video sequence shows how the student develops a pragmatic approach in her practice all by herself. This act of didactic devolution, in which students take over the task entrusted to them with the aid of their cognitive resources, confirms the ability of a child to make use of his or her knowledge, skills and abilities in order to perform the prescribed task whatever the implicit nature⁵ of this task may be. This analysis confirms the fact that students in a didactic situation designed for their specific level of competence, can perform prescribed tasks where the implicit proves more important than in any learning situation at school. The teacher must set up this didactic situation in order to allow the student to evolve in their proximal area of development (Vygotski, 1985).

The analysis of this situation also reveals the pragmatic aspect of a music student's approach to this work. Flora first reads the explanatory note, then the score. She goes on to mime certain instrumental gestures, develops them by tentatively touching the instrument, then attempts musical gestures to give a meaning to her work (Mialaret, 1996). Admittedly the training provided by the music teacher, the family or the school, plays a part in the process of acquiring autonomy. Nonetheless the analysis indicates that students do develop their autonomy when left to their own devices.

This study also confirms the importance of the implicit in musical training, and the limits of explanatory notes with a prescriptive purpose. There is a great deal of implicit in the learning of music because the score is not a general prescription. It is true that instrumental acts can be acquired or learned in company with others, and that musical writing and notation can inform about the nature of the musical work, but on the other hand they always yield a partial view only of their reality. It is up to the learner to make the link between what seems explicit in a score (pitch, duration, intensity, etc.) and what is implicit (the activities by which they are expressed), in order to give them meaning, especially a musical meaning. It is the implicit contained in the task that impels the musician to reorganize his or her activities, to adapt them, and to give a meaning to the score.

This study also shows that pupils are capable of preparing their instrumental gesture, not only because this is indicated on the score but also because they have institutionalized certain positions.

This study furthermore also reveals the limitations and even the paradoxes of the didactic work of Kurtag.

For indeed, if *Játékok* is intended for young pianists, the explanatory note that he proposes proves by no means easy to understand. Some of them will require the assistance of the teacher or of an adult to understand it. Then in the context of an autonomous approach, the very idea of using such an approach, together with certain technical terms, musical terms or phrases, appears beyond the reach of children. The same applies to the indications contained in the *Játékok* exercises and in the repertory ("scarcely touching", "*con Ped.*" in "Flowers we are ...", for example).

Besides which the *Játékok* requires a regular and sometimes sustained use of the pedals of the piano. Though the latter are of obvious musical, instrumental and educational interest,

⁵ What must be understood without being explained.

the youngest pianists however may on account of their shorter height and weaker strength encounter difficulties and discomfort with pedals, despite the greater enjoyment they offer. It will be necessary to fit a pedal booster to the instrument to allow them to enjoy fully and comfortably all the vibrations of the instrument.

This analysis also provides information on the didactic level, both regarding didactic transposition and the didactic games to come, in order to enable the student to develop the missing skills. The analysis of this video shows that Flora does not rely - or not sufficiently so - on her short-term or medium-term memory to increase her learning. Although she uses her metacognitive abilities to develop her activities, she seems not to know how to use her memory to rationalize her training, even though she has the ability to do so. It is not unusual for this faculty to be underemployed in musical education, which seems paradoxical when one observes how much musical activities offer opportunities for memory. Thinking about the musical tasks that would enable the student to develop his or her short, medium and long-term memory skills ought to be a didactic challenge which more teachers ought to take up.

Beyond the undisputed interest of the *Játékok*, the observation of the actions of Flora in the realization of "Flowers we are ..." can offer a teacher some useful ideas to pick up. The latter may propose tasks to the learner pianist that lie in their proximal area of development (Vygotski, 1985) and they may promote the most autonomous approach possible by keeping in check their own interventions - or even totally avoiding them - to enable the young musician to set up the necessary processes during the various phases of their task. To this end, sequences of free experiment by the student can be organized. In addition, this model – the foundation for demonstration-type approaches - but also other tools, such as clear instructions, guidance techniques, extrinsic feed-backs, ought to be used in a pertinent way, taking care to keep the learner in the proximal development zone and avoid any detrimental cognitive overload.

The experience of working in total autonomy allowed Flora, a young pianist often unsure of herself, to find the resources necessary to carry out a given task and to become aware of her ability to learn on her own.

She expressed her deep appreciation of "Flowers we are ..." (and more specifically "Flowers we are ... (1b)"). Whether it is the delicate poetry of its title and the imagination that it evokes, the sounds proposed over the whole register of the instrument, or the relative freedom left for its temporal realization, she was moved by the game and wanted to renew the experience, an indispensable condition for her training.

Conclusion

The findings of this initial piece of research, conducted into the consequences of an autonomous process of learning by a pupil, can inform the music teacher about the conditions necessary to realize such a project, and besides inform him about the pupil's metacognitive abilities as well as the scope of Kurtág's pedagogical project. Our study focuses on the relationship between the prescribed task the piece "Flowers We Are ..." and what the student does by way of response to the task. It reveals the considerable number of interactions involved in learning this short piece. For if we consider the learning of this piece to lie in the proximal zone of development (Vygotski, 1985) of the young pianist, the observations that have been made do reveal how significant a part is played by the implicit

within both the prescription and the task. This study shows how the goal of the composer (namely "to discover the joy of the game, the joy of movement, in order to develop the initiative and the freedom of the interpreter" (Kurtág, 2009, 86) is a project requiring the pupil to engage himself in an activity, that is in work that fully engages them. The pupil will gradually grow in confidence and attempt to play with the objects (the explanatory note, the score, piano). But this can only happen after much trial and error, with the eye moving back and forth between explanatory note and score, between score and keyboard and also with the gestures of the hands moving tentatively over the keyboard (based on the ordinary gestures of the learner (Vygotski, 1985), but not forgetting routine and even institutionalized gestures (Meirrieu, 1987). As she boldly attempts to play on the piano, the student begins to produce a proto-music, or bits of organized sounds. It will take some time before she attempts to produce music, that is to say an interpretation of the piece. Following Mialaret (1997), we find that the student is able to construct a musical discourse on the basis of the exploratory trial-and-error process. To do so the student ensures she can master the gestures and, above all, master the relationship between her musical intention and the actual result of her activity as musician and pianist. For it is only after explaining herself and clearing away a great deal of the implicit from the task that the student can grow in confidence and so offer an interpretation of the piece. Thus, through our study light is shed on a part of the process leading the student to express herself musically, that is to make a free interpretation of the piece, in other words to produce music.

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