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Departamento de Comunicação e Arte

LUDOVICO TRAMMA

**O MÉTODO DE SFILIO E A
SENSIBILIZAÇÃO DA MÃO ESQUERDA
DO VIOLINISTA**

**SFILIO'S METHOD AND THE
AWARENESS OF THE
VIOLINIST'S LEFT HAND**

Dissertação apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Doutor em Musica ramo Performance realizada sob a orientação científica do Professor Doutor David Wyn Lloyd, Professor Auxiliar Convidado do Departamento de Comunicação e Arte da Universidade de Aveiro e coorientação da Professora Doutora Ana Torres, Professora Auxiliar Convidada Departamento de Educação da Universidade de Aveiro.

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Palavras-Chave

Sfilio; Sentido do tato; Violino; Pressão; Sensor; Conscientização.

Resumo

A postura do corpo no ato de tocar o violino é absolutamente o "mais antinatural" (Oddone, 2002). Um dos problemas mais frequentes nos violinistas e os violetistas é a pressão excessiva dos dedos da mão esquerda na escala, sendo necessária, para a otimização da técnica da mesma mão, uma boa gestão entre os músculos agonistas e antagonistas. A revisão da literatura sobre os Métodos de violino redigidos entre o século XVIII e o século XX, e considerados nesta dissertação (Geminiani, Campagnoli, Ferrara, Buya, U.V.I., Curci, Sfilio, Kreutzer, Baillot, Rode, De Beriot, Alard, Galamian, Spohr, Flesch e Ševčík) evidenciou uma carência de exercícios específicos para melhorar a sensibilização dos dedos da mão esquerda em termos de contração e relaxamento.

Entre todos os Métodos, apenas um - escrito por Francesco Sfilio, violinista italiano e professor do século XIX - contém interessantes *esercizi muti* (exercícios mudos/sem arco) para aumentar a consciência dos movimentos dos dedos da mão esquerda.

Os objetivos principais desta tese são três: verificar se a aplicação de alguns dos exercícios contidos no Método Sfilio, podem ajudar para melhorar a auto-percepção da tensão da mão esquerda e, conseqüentemente, diminuir a tensão mesma; realizar uma pesquisa histórica sobre a figura de Sfilio - excelente concertista e didata italiano, esquecido depois da Segunda Guerra Mundial; verificar se houve alguma correlação entre ansiedade - medida através de testes psicológicos - e tensão muscular.

Os resultados positivos, obtidos na realização deste Estudo Experimental, encorajam ulteriores pesquisas nesta direção, podendo asserir que o 86% dos participantes envolvidos beneficiaram da aplicação do Método Sfilio.

Keywords Sfilio, Sense of Touch; Violin; Pressure; Sensor; Awareness.

Abstract The position of the body in the act of playing the violin is absolutely the “most unnatural” (Oddone, 2002). One of the most frequent problems of violinists and violists is represented by an excess of pressure from the fingers of the left hand on the fingerboard, rendering necessary the most efficient use of left hand technique and thereby optimal management between agonistic and antagonistic muscles. A literature review of the principal violin methods between the XVIII and XX centuries comes under consideration. This review has, in turn revealed a dearth of specific exercises that would alert the left hand in terms of contraction and relaxation. Between all the methods considered there is at least one – written by Francesco Sfilio, an Italian violinist and pedagogue from the XX century – that contain interesting “mute exercises” (*Esercizi Muti*) without the bow, that heighten awareness of the left hand finger movements. The principal objectives of this thesis are threefold: to verify whether some of the exercises of Sfilio’s Method help to improve the self-awareness of tension in the left hand and consequently diminish it; to furnish an historical/biographic portrait of Sfilio – excellent performer and pedagogue, largely forgotten after World War Two; to verify if there is a correlation between anxiety, by way of psychological tests and muscular tension. The positive results, obtained during the course of an Experimental Study, encouraged further studies in this direction, showing that 86% of the participants involved benefited from the application of Sfilio’s Method.

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CHAPTER 1. INTRODUCTION

1. INTRODUCTION

The action "to play an instrument" is very complex both in psycho-emotional (Seashore, 1938; Zatorre, 2005) and in physiological terms (Pascual-Leone, 2001; Gaser & Schlaug, 2003) because it requires a whole range of muscular micro-synchronisms that contribute to a given precision of gesture.

In the specific case, the body position in playing the violin is absolutely the most "unnatural" (Oddone, 2002). Oddone also affirms that to play requires always a muscle contraction and relaxation, to control the violin and the bow, and to press the strings with the left hand. In a special way, one of the most frequent problems of violinists is represented by excessive tension of the left hand, which inevitably passes also to the muscles of the forearm, arm, of the neck and the back, consequently affecting the arm and the right hand (the hand of the bow).

Oddone always said that the study about technique, in order to obtain a correct posture to play the violin, can be compared to an "artificial" Method (as something consciously studied and therefore not instinctive) that translates these unnatural movements into something natural, allowing one to have an adequate agility without too much strain on the body.

The most frequent reminder that a violin teacher addresses to a student is, without doubt, "to relax the left hand" and "not to create tension in the thumb". But, if it is true that they are the most frequent requests - based on the life experience of the Author, and also on the perception of many colleagues with whom the Author had the opportunity to speak about this - these same comments do not show a proposed resolution of the problem. Therefore, it happens that when the teacher draws attention to this difficulty, the student manages for a short time to go some way towards dissolving a little tension. But in the absence of an adequate solution in the face of difficulties such as the "double strings" (Thirds, Tenths, Fingered Octaves), in pieces by Bach¹ or Paganini², inevitably one will fall into the grip of "tension". If this tension - both in the professionals and young students - will not be properly

¹ Johann Sebastian Bach (Eisenach, 1685-1750) composer, organist, harpsichordist and teacher of German baroque choir, Lutheran, is widely considered one of the greatest geniuses in the history of music. He worked a wonderful synthesis between the German style (of which there were, among others, Pachelbel and Buxtehude) and the works of Italian composers (especially Vivaldi), many of which are transcribed songs, especially assimilating the *concertante* style. His work formed the sum and the development of various compositional trends of his time.

² Niccolò Paganini (Genoa, 1782-1840), Italian violinist, composer and guitarist, one of the most important representatives of romantic music. Continuation of the Italian school of Pietro Antonio Locatelli, Gaetano Pugnani and Giovanni Battista Viotti. He is considered one of the greatest violinists of the nineteenth century, both for mastery of the instrument for the innovations made in particular to the *staccato* and *pizzicato* with left hand.

controlled and adequately managed, there will arise physical discomfort or muscle aches, proportional to intensive practice. These are symptoms that occur more frequently when students approached exam dates (or, in the case of professional musicians, before important concerts), periods in which they intensify their practicing, during holiday seasons when performers may be in increased demand, or when an amateur decides to intensify study (Butler & Norris, 2011 cited in Tubbs *et al.*, 2015).

1.1. Motivation

A previous literature review made by the Author, highlights the presence of several studies carried out on the right hand (bow hand), the chin pressure, and the craniomandibular dysfunctions in string instrumentalists.

Some studies were made about bow pressure, bow velocity and position on the string (Young & Deshmane, 2007) using different bowing techniques such as *tremolo*, *spiccato*, *détaché* and *martelé*.

An interesting study was made about different coordination strategies of individual violinist performers, measuring bowing movements in performance, with three different categories (amateurs, violin students and established professional violinists) (Demoucron & Causse, 2007). A study by Askenfelt (1986) measured the bow motion and the bow force in violin playing on the string (bow pressure).

Another study talked about how to measure the position and force parameters most relevant to violin bowing technique (Young, 2003).

In respect of other aspects such as, for example, the prevention of neck and shoulder injury in violinists, one finds studies that measured the chin pressure on the chin rest during the performance (Okner, Kernozek & Wade, 1997) and about the improvements in chin rest for violins (Halko, 1949), about force generated between the left mandible of violinists and the chinrest of the violin (Obata & Kinoshita, 2012), and about the craniomandibular dysfunctions (CMD) in violin players (Steinmetz, Ridder & Reichelt, 2006).

On the contrary there is a lack of studies regarding left hand pressure on the strings. So far the Author found only one researcher (Grosshauser, 2008; 2009; 2010; 2012) who has shown interest and sensibility about the left hand pressure on the strings.

Unfortunately, both in music education and in professional contexts we do not pay much attention to the perception to the two opposite sensations: left hand contraction and

relaxation. Therefore, young people (when they will perhaps become future professionals) with difficulties will successfully develop a sensory capacity that the Author believes is extremely important to achieve the best results with the least possible effort.

Starting from personal experience, in the first instance as a student, and then as a professional chamber musician and orchestral player, and also as a teacher, the Author observed that many students and professionals who are playing mainly in the context of an "Opera Orchestra" - often working in areas with reduced dimensions – suffer musculoskeletal pains caused by incorrect posture (Tos, 2005).

Studies envisaged (Fry, 1986; Nourissat, Chamagne & Dumontier, 2003) show that "at least a third or half of the problems of instrumentalists can be traced to diseases with specific diagnoses that are normally found in the normal population (acute and chronic tendonitis, nerve compression syndromes, arthritis, etc...)" (cited in Tos, 2005).

The remaining problems (Lederman, 2003; Parry, 1998; Joubrel, Robineau, Petrilli & Gallien, 2001) must be best classified as a syndrome of overuse or syndrome of "mishandling" of the upper limbs, and these are referred to in "excessive" or "misuse" of the muscles (Tos, 2005). In fact, incorrect posture and excessive muscle tension continues over the years - starting from school education - without "feeling" the body's needs - when it seeks to alert us, manifesting symptoms such as fatigue, tingling, a little pain or discomfort – these could degenerate into complex diseases, which are then difficult to treat.

Although musicians are not usually seen as a professional risk category, they are subject to a variety of problems arising from high physical and psychological demands of their profession.

The problems that can arise are multiple and of different levels of seriousness: tendinopathy, tennis elbow, carpal tunnel syndrome, inflammation of the muscles and the flexor tendons of the hand and wrist, shoulder pain and muscle stiffness of the neck and trunk (Chong *et al.*, 1989; Fry, 1986; Norris, 1993).

One can deduce that all these problems should not to be taken lightly. On the contrary, these problems mentioned above should be a subject of great concern by teachers, dealt and treated quickly to prevent serious negative impacts on the future and the career of the young violinist.

The absence of adequate knowledge of the pupils (and sometimes professionals) regarding the physiology of our body and about the serious problems that might result from

ignoring these symptoms, often leads people to a path of “no return” or, at least, to situations of such disrepair that they cannot make a complete recovery.

In this sense, the presence and competence of a teacher are essential because during adolescence, the body is normally elastic and robust, being able to tolerate and compensate for these tensions, contractions, twisting and so on. This means that the young student has a tendency to undervalue the symptoms mentioned above and to believe that these signals are an integral and indispensable part to achieve a good performance, a dear price to pay.

Rather, the consequences may lead to inconvenient situations creating feelings of helplessness, inadequacy, and consequently uncertainty in the musicians even until feelings of loathing towards the instrument and a loss of enthusiasm and serenity (Borgna, 2002).

The same thing goes for the instrumentalist, who every day is measured by the charm of music, experimenting on himself the bond which is established between his ability to express and his own sense of temporality, between physicality of the instrument, which “prolongs its voice and the return of their existential gesture” (Cappagli, 2005:16).

In this capacity the integration of the desires of expression and the bodies physical demands, depend on the success or the failure, the joy of playing or the anguish or the inability to live harmoniously with oneself.

Therefore, the instrument as a means of work and creativity becomes the merciless mirror of the Self – a shelter or enemy through which to view not only themselves, at this point, but also the entire social and cultural context in which the practitioner must provide the instrumentalist product (Cappagli, 2005).

1.2. Principal aims

Considering the psycho-physical well-being of the individual should have priority over any other aspect and considering that the activity of the orchestra player (especially the opera orchestra when the performance normally has a duration of no less than three hours) confines himself to spend many hours a day in a chair - often without ideal conditions - knowing our body and knowing how to "compensate" for unnatural activity is something of paramount importance.

These activities that the Author of this thesis has the honor of realizing for over twenty years and that happily allowed him to be in contact with many prestigious musicians, also allows the Author to affirm that, despite their high level, they are not exempt from the physical problems of a muscular-skeletal system.

Consequently, one of the objectives of this thesis is to reflect also on the educational component and also how to try to understand and eventually to solve these kinds of problems and, above all, how to prevent them.

During ten years and thanks to the Author's teacher, M° Giulio Franzetti³, it was possible to come into possession of an Italian violin Method and Treatise written in the thirties by Francesco Sfilio (1876-1973). About this violinist, we find no mention of him in the history of music and the encyclopaedias.

Through a careful analysis of his Method /Treatise and personally experimenting with some exercises, following the newly acquired information with great care and trying to perceive every detail, the Author realized that he benefited from them, in terms of flexibility, sensitivity, and awareness.

Therefore, one of the objectives of this dissertation has been to ascertain if the application of this Method (especially some exercises contained in it) could help in the prevention of muscle-skeletal diseases due to the tension of the left hand. I.e. through the structural application of this Method, there may be tested the efficacy of some exercises and in order to understand and to verify if, when applying them daily, they can help violinists to optimize the performance, obtaining the maximum result with the minimum effort possible through a lower pressure of the left hand.

Moreover, the information and the news about the historical and personal figure of Sfilio are scarce and even controversial. Therefore another important objective of this thesis is historical research. The idea is to find the material that could help us to define his main characteristics, also through the invaluable interviews with Sfilio's former students that are still living, as well as to bring to light a small piece of the history of Italian music of the twentieth century.

Another objective, finally, but no less important, is to check whether there is a correlation between the tension of the left hand and the state of anxiety.

³ Giulio Franzetti, born in Brescia in 1930, graduated from the Conservatory "Giuseppe Verdi" in Milan with F.Tufari, he perfected his studies with G. Enescu in Paris and later in Vienna. At twenty-two, in the role of first violin, with the *Quartetto di Milano* won the Geneva International Music Competition, with this line up has played concerts in Italy and abroad. He was a member and soloist, for twenty years, of the *Virtuosi di Roma* directed by Renato Fasano and as a result of *Solisti Italiani*, making numerous tours around the world. He was Concertmaister of the *Teatro alla Scala* Orchestra in Milan and the *Orchestra Filarmonica della Scala*, the latter he was a founding member and member of the Board of Directors. He joined the concert activity as a teacher: he was professor of violin at the Conservatory of Turin and Parma and then at the Conservatory of Milan. He was part of the group of "tutor" European Orchestra founded by Claudio Abbado and the "Mahler Youth Orchestra".

The Author thought that it was interesting also to verify if the application of Sfilio's Method could improve a lesser state of anxiety in performance. At the moment, any study was conducted to demonstrate if the application some violin method could help in lesser muscular tension.

In the next Chapter II a literature review about the muscle-skeletal problems in musicians, with particular reference to the violinists, is presented.

***CHAPTER 2. MUSCLE-SKELETAL PROBLEMS IN MUSICIANS – A LITERATURE
REVIEW***

2. MUSCLE-SKELETAL PROBLEMS IN MUSICIANS – A LITERATURE REVIEW

2.1. Concept of tension, relaxation and contraction.

The term “tension” derives from the Latin *tensio-ōnis* (Calonghi-Badellino, 1972) indicating the action and the result of the tension, to stretch and to pull.

The relaxation, from the Latin *distensio-ōnis* (Calonghi-Badellino, 1972) is understood as the contrary of tension and as such points out the transition from a state of contraction to one of relaxation. The “tension” term is also used figuratively, as in a state of intense excitement or anxious expectation (Courts, 1942) that, most of the time, corresponds to a state of muscular tension as well.

It therefore follows that, in a moment of performance that can cause emotional tension, we can have also a muscular tension that we could call “contraction”, a word derived from contracting, which in turn comes from the Latin *contractio-ōnis* (Calonghi-Badellino, 1972) conceived as "draw in self" and then withdraw, shrink or shrivel.

Muscles, in fact, are made up of cells that have the ability to contract and then reduce in the direction of their length. They also have the ability to return to their own original position (Cassese, 2012).

2.2. Muscular contraction

Muscle contraction is a physiological response, chemically, in reply to various types of phenomena. Just think of the simple shiver, which is an involuntary and rhythmic contraction of striated muscle used from the body to produce heat and, consequently, to increase the heat of the body as well.

Some studies had been shown that the muscle over-activity is often accompanied by anxiety (Sainsbury & Gibson, 1954). A study by Wolff (1948 cited in Sainsbury & Gibson, 1954) recorded the activity of the neck and the scalp muscles of anxious patients and demonstrated that headache disappeared when the anxiety diminished). Also Holmes and Wolff (1952, cited in Sainsbury & Gibson, 1954) found that conflict, insecurity, feelings of hostility frustration, and guilt, provoked over-activity of the trunk muscles.

The muscles are able to convert the chemical energy produced by Adenosine Triphosphate, better known as ATP⁴, a molecule consisting of a core, called adenosine, where are linked three molecules of phosphoric acid (Cassese, 2012).

The act of playing implies the emotional and physiological involvement (Pascual-Leone, 2001; Ostwald, Baron, Byl, & Wilson, 1994). Therefore, the muscle answer and awareness of this response will be extremely important in order to achieve performing optimization.

To know the basics of movement and the anatomical and functional principles, it is then essential to be able to programme a motor activity (Cassese, 2012:12).

Moreover one must not forget that the plasticity of skeletal muscle - that is the ability to vary the contractile properties of scaled variables and motor needs (Bottinelli & Longa, 2010) - is very important. This means that adequate training could help to meet the various needs of performing.

2.3. A literature Review

Starting with an experience of over twenty years of professional life, as a performer and teacher, the Author states that the lack of body awareness is a real problem and is widespread amongst musicians.

Many studies about the musician's muscle-skeletal diseases have been made (Hoppmann & Patrone, 1989; Zaza, 1998; Lederman, 2003; Bruno *et al.*, 2006; Wu, 2007; Pascarelli & Hsu, 2001; Foxman & Burgel, 2006; Bragge, Bialocerkowski, & McMeeken, 2006; Hagberg, Thiringer & Brandström, 2005; Joubrel, Robineau, Pétrilli, & Gallien, 2001; Pak & Chesky, 2001; Schuele & Lederman, 2004; Kaufman-Cohen & Ratzon, 2011).

In fact, one can find many studies about muscle-skeletal and neurological diseases that plague professional musicians - orchestral musicians, pianists, singers, professional students and so on (Lockwood, 1988; Bejjani, Kaye & Benham, 1996; Lederman, 1989; Parry, 1998; Bragge, Bialocerkowski, & McMeeken, 2006; Abreu Ramos & Micheo, 2007; Steinmetz *et al.*, 2014).

⁴ Adenosine triphosphate (ATP) is an important biological molecule, discovered by three biochemists (Dr. John Walker, Dr. Paul Boyer and Dr. Jens Skou). These biochemists won the Nobel prize for Chemistry in 1997.

These problems are so considerable and reach such a point that they limit the quality of performance and, in some cases, require a cessation of professional activity. According to Lederman (2003), in an important study with 1353 musicians, the incidence of these diseases affects more than 90% of professional musicians: muscle-skeletal disorders in 64%, peripheral nerve problems in 20%, and focal dystonia in 8%.

In addition, it is recognized by the *National Institute for Occupational Safety and Health* (NIOSH)⁵ that the main risk factors are inconsistent postures and repetitive movements (Converti, 2005).

These osteo-neuro-muscular pathologies affect not only professional musicians but musicians in training such as students of Conservatory, High schools and Music Academies.

In this regard it is important and appropriate to quote a letter of Ruggero Ricci⁶ directed to young musicians:

... Tuttavia non fu che quando sono stato costretto a smettere di suonare a causa di seri problemi alla cervicale e alla spalla che ho scoperto un fatto essenziale riguardante il modo di suonare di Paganini ... La pressione del mento, aumentata dalla carica emotiva a cui si è soggetti quando si suona davanti al pubblico, diventa fonte di tensioni. La mandibola, il collo, le spalle, la schiena e perfino i denti ne risentono ... (Ricci cited in Borer, 2012:11).

... However only when I was forced to stop playing owing to serious problems in the cervical and shoulder, I discovered a crucial fact about the way to play the works of Paganini ... The pressure of the chin, enhanced by the emotional charge to which we are subjected when one plays in front of the public, becomes a source of great tension. The chin, neck, shoulders, back and even teeth can be affected ... (Ricci cited in Borer, 2012:11).

An interesting view is that of Fry (1986), whereby musicians who are most afflicted by diseases of the muscle-skeletal system, belong to an age group between 30 and 35 years; this is an age during which the ambition and competition are perceived as being stronger.

Fry (1986) again affirms that in a study involving 485 musicians of symphony orchestras, 38% of them reported feeling pain at the level of the cervical, 8% dorsal level and 49% at the lumbar level. Fry (1988:573) proposes five stages of severity-dependent manner, location of pain, appearance and disappearance, and interference with daily activities (Figure 1):

⁵ The National Institute for Occupational Safety and Health (NIOSH) is the U.S. federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.

⁶ Ruggero Ricci (1918-2012) was an American violinist, son of Italian immigrants. At the age of ten Ricci gave his first public performance playing works by Wieniawski and Vieuxtemps. He gained a reputation for being a child prodigy, and at the age of eleven, he gave his first orchestral performance, playing the Mendelssohn violin concerto. Ricci, in 1947 was the first violinist to record the complete 24 Caprices op.1 by Paganini.

Table 2. Overuse syndrome - grading of severity

Grade 1	Pain in one site on causal activity
Grade 2	Pain in multiple sites on causal activity
Grade 3	Pain with some other uses of the hand, tender structures demonstrable, may show pain at rest or loss of muscle function
Grade 4	Pain with all uses of the hand, post activity pain with minor uses, pain at rest and at night, marked physical signs of tenderness, loss of motor function (loss of response or control), weakness
Grade 5	Loss of capacity for use because of pain which is continuous, loss of muscle function, particularly weakness, gross physical signs

Figure 1. Fry Overuse syndrome – grading of severity.

<http://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC1291799&blobtype=pdf> (Accessed 18th November 2013).

Brandfonbrener (1990), Zaza and Farewell (1997) have shown, among so many musicians, that women and string players are significantly affected by the *playing-related muscle-skeletal disorders (PRMDs)*.

A study by Lockwood (1988) of approximately 2000 musicians from orchestras showed that 75% had, at least, one medical problem enough to prejudice a performance.

Middlstadt and Fishbein (1988, cited in Joubrel *et al.*, 2001) in a study of 48 professional orchestras, members of ICSOM (*The International Conference of Symphony Orchestra Musicians*⁷), affirm that 76% of 2212 musicians interviewed, answered that they have had problems caused by their work: of these, 66% had talked about problems of muscle-tendon (in most cases in the upper limbs), and 36% reported at least four problems of a certain severity.

Another study, conducted by Joubrel *et al.*, (2001) showed that among the 141 musicians analyzed, 76.6% had a disease of the locomotor system, with this differentiation:

⁷ Founded in 1962, the mission of International Conference of Symphony Orchestra Musicians (ICSOM) is to promote a better and more rewarding livelihood for the skilled orchestral performer and to enrich the cultural life of our society. <http://www.icsom.org/index.php> accessed June, 26 2015: 4 p.m.

- 58.1% of cases of overuse syndrome (a set of disorders owing to repeated efforts that go beyond the possible physiological tissue);
- 5.7% of cases of functional dystonia;
- 17% of cases of tunnel syndrome (syndrome, radial and De Quervain's disease, in Gazzetta, 2002:9).

Manchester and Flieder (1991) in a study involving 205 music students found problems mainly related to the hand and the wrist in 46% of cases, problems with the forearm in 23% of cases, problems with the elbow in 11% of cases and, in 16% of cases, shoulder problems.

From all this, it seems clear that the problems related to the fact of playing an instrument are real and tangible, along with the fact that real and concrete attempts have been made to solve the same problems, as we shall see in the following section.

2.4. Attempts to solve the problems

In order to solve the problems concerning muscular tension and to increase the awareness of the reaction of the body in normal and stressful situations, two devices have been made. In the following sections we will see how electromyography (EMG) and biofeedback (BFB) in the music domain are used.

2.4.1. Electromyography (EMG)

Electromyography (EMG) is a neurophysiological method used for studying the peripheral nervous system (PNS) from a functional point of view. It is a reliable method able to give information on the functionality of the peripheral nerves and muscle. The exam consists of the stimulation (through electrical stimuli) of peripheral nerves and recording their effect on the muscles supplied by that nerve (Mills, 2005).

One of the first studies with EMG application was by Morasky *et al.* (1981). They studied the application of electromyography (EMG), which measures the electrical activity of muscles, to reduce the excess of tension in the left arm of the string players. With this experience the musicians, during playing learned to reduce greatly the muscle tension in the hand and arm, resulting in a greater facility of execution.

Another study analyzed the variation in the *trapezius* muscle activity of string musicians performing the same piece in two different sessions separated by a ten-week interval (Fjellman-Wiklund, Grip, Karlsson, & Sundelin, 2004) showing that this method may be used to analyse individual differences when performing and can be useful to evaluate how to intervene, and to improve the musicians well-being.

In fact, in the successive study, Fjellman-Wiklund, Grip, Karlsson, & Sundelin (2004, Part II), after an 8 week training program with Basic Body Awareness Therapy (Basic BAT), the musicians claimed positive changes in breathing, muscular tension, posture control and concentration mainly during practice sessions.

From some positive results, Visentin and Shan (2011) through the review articles from 1973 to 2010 affirmed that the EMG application remains, so far, too low and should be encouraged because the positive results in skill analyses, in teaching and learning and in remediation and prevention of injury are promising.

However, the application of this system turns out to be not so easy because the musician must be connected to a device through many wires that show the excess of tension. Therefore, this method, being partly invasive, can be applied only in specific circumstances, and with the aid of highly specialized personnel.

Also the Author of this thesis, as violinist, participated as a studied subject in a work at the engineering laboratory of the neuromuscular system (LISiN) of Polytechnic of Turin (2014) - under the guidance of Dr. Roberto Merletti⁸ and Dr. Francesco Petracca⁹ - on the electrical activity of muscles of the shoulder and right arm during the movement of the bow across the strings. The exam involved the muscles of the shoulders and back by means of the application of electrodes on the scalp to pick up electrical signals produced by the activity of the underlying muscles. The exam, lasting about two hours, was not invasive and was not painful.

⁸ Roberto Merletti (1945), is currently Professor of Engineering of the neuromuscular system at the Polytechnic of Turin. He created the Research Center Lisin, a research laboratory of the Department of Electronics and Telecommunications at the *Politecnico di Torino*. The activity of LISiN concerns the study of the neuromuscular system by analyzing the skin's electrical signals produced by voluntary muscle contractions or induced by electrical stimulation, to diagnose the early onset of muscle diseases in order to create prevention. http://www.lisin.polito.it/ver_it.htm accessed June 20th, 2015: 3 p.m.

⁹ Francesco Petracca, born in Turin (Italy) in 1989, in 2008 he got his degree from the Scientific High School G. Bruno of Turin, and in October 2013 he graduated in Biomedical Engineering at *Politecnico di Torino*. Since December 2013, he is working at LISiN in the fields of EMG signal analysis and applied research, studying muscle activity in musical string instrument players. His research involves also the study and the interpretation of EMG signals simulated by mathematical models. http://www.lisin.polito.it/people/people_uk/petracca_uk.htm accessed June 20th, 2015: 3 p.m.

However, despite the reliability of the examination, it is very difficult to apply in daily activities, because the examination needs the doctor's presence. Therefore it would follow that it is impossible to think in any autonomous application of EMG in order to self-evaluate one's own status.

2.4.2. Biofeedback (BFB)

Another system, used for the reduction of the emotional and consequently physiological problems, is Biofeedback (BFB).

Biofeedback, also known as biofeedback training, is essentially a technique of self-monitoring with the purpose of providing the person who uses the means to regulate one's own emotional responses, trying to optimize the mental approach to the provision eliminating stressor elements.

The biofeedback machinery operates on two levels:

- At the somatic level, considering amendments to the autonomic and neuroendocrine response to stressors (LeVine & Irvine, 1984);
- On a psychic level, allowing the person to make cognitive evaluations and learning to manage stressors (Dragulin, 2011).

Biofeedback helps the individual to self-regulate certain physiological functions by means of employing certain electronic equipment which is capable of detecting these functions and referring to the same information (feedback), which is able to increase the awareness of physiological responses thereby activated.

The next Figure 2 explains the biofeedback process and the typical biofeedback system:

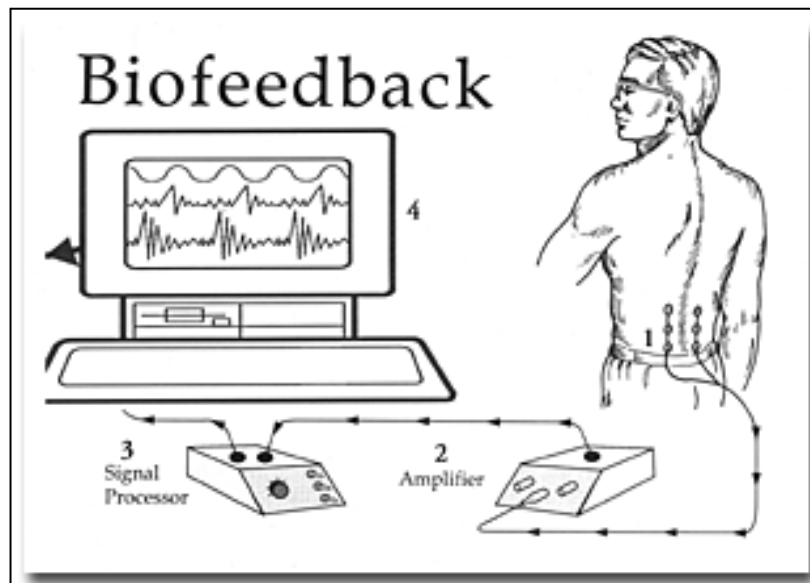


Figure 2. Scheme of function of the Biofeedback process (adapted from: <http://www.behavmedfoundation.org/introductory-information-about-biofeedback-and-psychophysiology-and-biofeedback-neurofeedback-equipment/> accessed May 14th, 2015: 5 p.m.)

As one can see in Figure 2, in the case of muscle tension, the sensors situated on the skin picked up a physiological signal (1). The signal is sent to an amplifier (2) which processes it (3) and transforms it into an image that is displayed on the monitor (4). The subjects undergo biofeedback, using the display to recognize the relationship between sensations and actual levels of physiological function and can learn to manage them.

The physiological signals frequently recorded for biofeedback include:

- respiration;
- heart rate;
- muscle tension;
- sweating;
- skin temperature;
- brain waves.

Since the topic of this thesis is focused on left hand tension, it is this aspect that is of more interest in what concerns muscle tension.

The muscles make electricity, and when they become more tense, they make more electricity. When a muscle is under tension, one may note that the signal gets higher (more electricity) and has a different wave form as displayed in Figures 3 and 4:

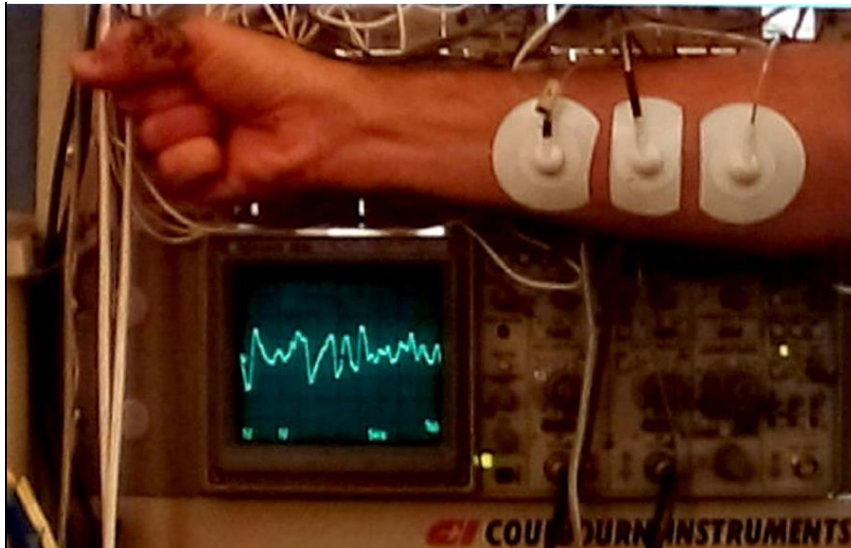


Figure 3. Biofeedback: Recording Muscle tension (copyrighted by Dr Richard A. Sherman rsherman@nwinet.com accessed May 23rd, 2015: 1 a.m.).

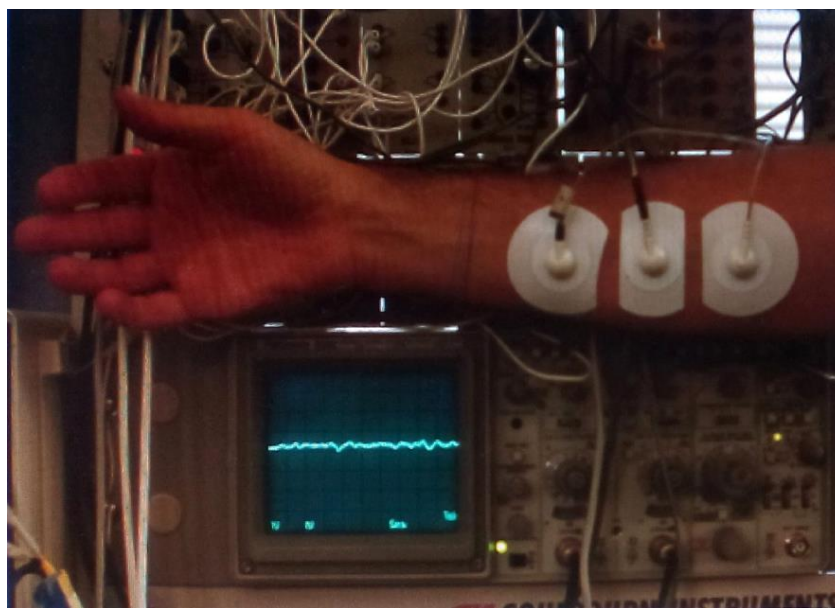


Figure 4. Biofeedback: Recording Muscle tension (copyrighted by Dr Richard A. Sherman rsherman@nwinet.com accessed May 23rd, 2015: 1 a.m.).

That is why the subject, increasing his own body awareness and of physiological responses, learns to take the greatest possible advantage from them (Manili & Ferrari, 2002). Besides this, learning actively about their physiological answer (muscle tension, heart rate, etc.), the subject will tend to repeat the behaviour that entailed relaxation: the subject learns to play with positive feelings and, with time, can learn to encode and store them, to use them when it seems necessary and appropriate (Cassese, 2012). This implies, of course, also the ability

to improve control of their internal emotional states and increases the prospects of self-control in situational anxiety-provoking whose meaning is perceived as psychological, rather than the physiological consequences, being mainly responsible for the adrenocortical stress-related disorders (Cassese, 2012:143).

On the real effects of biofeedback, a study with nine violin and viola players by LeVine and Irvine (1984), also stating that further studies would be needed to verify the true effect, regardless of a possible placebo effect, shows that EMG biofeedback was found to be an effective pedagogical tool for removing unwanted left-hand tension. Improvement occurred rapidly and persisted throughout a 5-month follow-up period (LeVine & Irvine, 1984:161).

In the field of sports medicine, there are an incredible number of studies carried out on tension and relaxation. The interest for musicians being considered as high-performance athletes however, is a relatively recent development: in fact, for a long time musical performance was not considered as an activity that included a complex muscular system in motion.

However, the emotional system, as we have seen, acts on the muscular activity as well. So it follows that an activity that "excites" (such as playing during a public performance) can be an activity generating tension. To use the other's words (Kenny & Ackerman, 2009: 390):

Musicians are like athletes because both require superior sensory-motor integration (Altermuller *et al.*, 2000), neuro-muscle-skeletal skill and many hours of training and practice to achieve mastery (Tubiana & Amadio, 2000).

In fact, the nervous mechanism regulates the power developed by a muscle through the modulation of the type, number and frequency of discharge of the motor units. This same mechanism allows the muscle to be used for different motor tasks, realizing itself in a very short time, even during a single contraction (Bottinelli & Longa, 2010).

At the beginning of the muscular performance, the body contracts a debt of energy (or oxygen) to reintegrate the consumed ATP (Bandini-Buti, Odescalchi, & Spaltro, 1968). These aspects are important for the athlete as well as for any motor activities, such as being required to play, an activity considered among the most complex for human beings who require the concomitant activation of different brain areas (Zatorre, Chen, & Penhune, 2007).

In this sense, the choice of this topic for the Author is very important. Consequently, in order to verify whether there is a possible solution to these problems, and especially if one can implement prevention strategies through constant use of a violin Method, the Author decided to continue the research through a literature review.

The Italian and foreign Methods for violin that are translated into the Italian language – written from the seventeenth century until the mid-twentieth century – are here analyzed and presented as the most renowned and utilized in the context of the Italian academic world (Italian Conservatories and Institutes of Music) during the twentieth century: Francesco Geminiani (1687-1762), Bartolomeo Campagnoli (1751-1827), Bernardo Ferrara (1810-1882), U.V.I. Unione Violinisti Italiani (written between 1930 and 1947), Alfeo Buja (?-?), Alberto Curci (1886-1973), Francesco Sfilio (1876-1973); Rodolphe Kreutzer (1766-1831), Pierre Marie François de Sales Baillot (1771-1824), Jacques Pierre Joseph Rode (1774-1830), Charles Auguste De Beriot (1802-1870), Jean-Delphin Alard (1815-1888), Ivan Alexander Galamian (1903-1981); Louis Spohr (1784-1859), Otakar Ševčík (1852-1934), and Carl Flesch (1873-1944).

The Author decided to proceed in this review to examine each Method's usefulness in gaining a greater awareness of left hand contraction and relaxation.

CHAPTER 3. VIOLIN'S METHODS - A LITERATURE REVIEW

3. VIOLIN METHODS: A LITERATURE REVIEW - ITALIAN AND FOREIGN METHODS

3.1. Introduction

During the last six or seven years, the Author of this thesis has undertaken a reading and analysis regarding Italian and foreign Methods that are among the most well-known and utilized in music academy institutions in an attempt to see if there is any useful information in them that helps to prevent or resolve the tension of the left hand, increasing the “proprioceptive” capacity (and to improve the awareness).

Therefore, considering the huge number of violin Methods written so far, the Author has chosen to consider some of the most well-known Italian and foreign Methods translated into the Italian language or, at least, those most widely used in the Italian Conservatories and Institutes of Music during the twentieth century.

These Methods have been divided by period and nationality on the basis of experience acquired by the Author during more than thirty years of study and professional life - as a teacher and as a performer.

The following paragraph presents a succinct overview about the characteristics of the Methods in question, written between the seventeenth century until the mid-twentieth century, focusing attention primarily on holding the violin (posture), and the left hand.

Regarding the Italian Methods, we may consider the following in the Table 1:

Table 1. Italian violin Methods considered

Francesco Geminiani	(1687-1762)
Bartolomeo Campagnoli	(1751-1827)
Bernardo Ferrara	(1810 -1882)
Alberto Curci	(1886-1973)
Alfeo Buja	(? - ?)
Unione Violinisti Italiani (U.V.I.)	(1930-1947)
Francesco Sfilio	(1876-1973)

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In the Table below are listed the other Methods, more important in the violin literature, that refer to the French, German, Bohemian, and Austro-Hungarian Schools, from the eighteenth century until the mid-twentieth century (Table 2).

Table 2. Methods concerning the French, German, Bohemian, and Austro-Hungarian Schools.

FRENCH	GERMAN	BOHEMIAN	AUSTRO-HUNGARIAN
Rodolphe Kreutzer (1766-1831)	Louis Spohr (1784-1859)		
Jacques Pierre Joseph Rode (1774-1830)			
Pierre Marie François de Sales Baillot (1771-1824)			
Charles Auguste de Bériot (1802-1870)			
Jean-Delphin Alard (1815-1888)			
		Otakar Ševčík (1852-1934)	Carl Flesch (1873-1944)
Ivan Alexander Galamian (1903-1981)			

In the next two sections, a brief analysis of Italian and foreign Methods will be presented.

3.2. Italian violin Methods

3.2.1. Francesco Geminiani¹⁰ (1687 - 1762)

The caption that we find on the cover of this Method (Figure 5) is quite interesting because it is directed not only to violinists: *The Art of playing on the violin Containing All the Rules necessary to attain to Perfection on that Instrument, with Great Variety of Compositions, which will also be Very Useful to those who Study the Violoncello, Harpsichord et Composed by F. Geminiani op. IX.* (Edition, London Printed for the Author by J. Johnson opposite Bow Church in Cheapside MDCCLI).

¹⁰ Francesco Saverio Geminiani (1687-1762), Italian violinist and composer, was a pupil of Alessandro Scarlatti, and then of Carlo Ambrogio (Ambrosio) Lonati, and finally of Arcangelo Corelli. From 1707 he replaced his father at the Palatine Chapel of Lucca, and became concertmaster and conductor of Opera of Naples. After a brief return to Lucca, in 1714 he went to London where his brilliant performances gave him a great reputation in a short time.



Figure 5. The cover page (facsimile) of Geminiani's Method for violin op. IX (adapted from http://imslp.org/imglnks/usimg/4/42/IMSLP05501-Geminiani_art-of-playing.pdf accessed November 19th, 2013: 11 a.m.).

This Method was published in 1751, handing down to posterity the art of Arcangelo Corelli (1653-1713), his teacher. The work is widely cited by contemporary musicians and several editions have appeared in English and French but there does not exist one in the Italian language. The Method is divided into twenty-four examples, separated into theoretical explanations and practical music examples (twelve compositions). Example number one is divided into five sections (A-B-C-D-E) where the letter B is represented by the Geminiani chord shown in the following Figure 6 below:



Figure 6. The chord by Geminiani, adapted from *Il violino nella storia* (Porta, 2000:37).

This chord is often mentioned in the history of violin pedagogy as the functional structure for the relationship of finger to string:

To place the first Finger on the first String upon F; the second Finger on the second String upon C; the third Finger on the third String upon G; and the fourth Finger on the fourth String upon D. This must be down without raising any of the Fingers, till all four have been set down; but after that, they are to be raised but a little distance from the String they touched; and by so doing the Position is perfect (Geminiani, 1751:1).

Geminiani affirms that this chord is indispensable for the correct posture of the left hand. About the chromatic scale this author prescribes the use of the following fingering: 1,

2, 3, 4; 1, 2, 3. In fact Geminiani does not favour the sliding of fingers as 1-1, 2-2, 3-3, and so on.

About the change of positions Geminiani affirms that

... in which Care is to be taken that the Thumb always remain farther back than the Fore-finger; and the more you advance in the orders the Thumb must be at a greater Distance till it remains almost hid under the Neck of the Violin (Geminiani, 1751:2).

Always about the positions

Il Maestro conclude con la regola di tener ferme le dita il più possibile e con la raccomandazione di apprendere le nuove diteggiature studiando con la sola mano sinistra, senza usare l'arco (Porta, 2000: 38).

The Master concludes with the rule to still hold the fingers as much as possible [on the fingerboard] and with the recommendation to learn new fingerings studying only with the left hand, without using the bow (Porta, 2000: 38).

With Geminiani's work, are founded the basics of a solid Italian School, which were later expanded by: Francesco Maria Veracini (1690-1768), Pietro Antonio Locatelli (1695-1764), Giuseppe Tartini (1692-1770), Gaetano Pugnani (1731-1798), Francesco Galeazzi (1738-1819), Bartolomeo Campagnoli (1751-1827), Giovanni Battista Viotti (1755-1824). These Methods in turn profoundly influenced all foreign schools: from Louis Spohr (1784-1859) of the German school, to Pierre Marie François de Sales Baillot (1771-1824) and François Habeneck (1781-1849) of the French school.

Also Leopold Mozart (1719-1787) who has, in turn influenced the German school, refers to application of the Geminiani chord for the correct left hand posture.

... on place le premier doigt sur le fa de la corde de mi, le deuxième sur le do de la corde de la, le troisième sur le sol de la corde de ré, et le quatrième ou petit doigt, sur le ré de la corde de sol, sans en soulever aucun avant qu'ils ne soient tous en même temps et correctement places aux endroits que l'on vient d'indiquer (L. Mozart, 2014:56).

... the first finger is placed on the F note of the E string, the second finger on the C note on the A string, the third finger on the G note of the D string, and the fourth finger or little finger on D note of the G string, without lifting any of them before they are all simultaneously and correctly placed in the place that one has just indicated (L. Mozart, 2014:56).

3.2.2. Bartolomeo Campagnoli¹¹ (1751 - 1827)

¹¹ Bartolomeo Campagnoli (1751-1827) Italian violinist and composer, after studied with Pietro Nardini, embarked on a concert career that led him to major European cities. For example, in 1776 he obtained the position of concertmaster at the court of the bishop of Freising and, four years later, he was appointed Musical Director of the Duke of Courland. In 1797 he became concertmaster at the Gewandhaus in Leipzig besides receiving the title of Kapellmeister of the court in the town of Neustrelitz.

Campagnoli wrote in 1797 the *Nuovo metodo della meccanica progressiva per suonare il violino*, Op. 21. In the following Figure 7, one can see the cover of the Edizione Ricordi, 1852.



Figure 7. The cover page (facsimile) of Campagnoli’s Method for violin op. 21 (adapted from http://japanese.imsip.info/files/imglnks/usimg/6/65/IMSLP59950-PMLP122896-Campagnoli_Violin_Method_ok1.pdf Edizione Ricordi 1852, accessed November 19th, 2013: 04 pm).

Campagnoli’s Method is divided into four parts, distributed in 132 progressive lessons for 2 violins, and 118 Studies for violin solo preceded by an Introduction: The Mechanism - The way to hold the violin and its handling:

Preceduto dalle regole e dall’ applicazione delle Lezioni e Studi per servire di lume agli Allievi o Dilettanti (Campagnoli, 1797:1)

Preceded by rules and the application of Lessons and Studies to serve to enlighten Students and Amateurs (Campagnoli,1797:1)

The four parts showed in the following Table 3 are:

Table 3. Summary of the Campagnoli Method.

Part I	Part II	Part III	Part IV
Elements of Music	Intervals and Embellishments different exercises bowing	About Seven principal positions	Scale perfect violin Harmonics Sounds Temperament Overtones Chromatic scale Enharmonic equivalent

The characteristics of this Method, especially regarding how to hold the violin with the closed position, and with the left elbow resting on the body one can see in the following Figure 8.



Figure 8. The picture from Campagnoli's Method for violin op. 21 page 3 (adapted from http://japanese.imslp.info/files/imglnks/usimg/6/65/IMSLP59950-PMLP122896-Campagnoli_Violin_Method_ok1.pdf accessed November 19th, 2013: 04 pm).

The position of the violin and other characteristics of the Method, concern the extension of the left hand fingers and the changes of position from the movement of the wrist, without the use of the forearm. In evaluating these characteristics, it is important to keep in mind that during Campagnoli's time, there were neither chin nor shoulder rest.

La chiarezza dell'esposizione è esemplare, e così pure la gradualità e la qualità del materiale musicale che accompagna l'allievo dalle prime arcate sulle corde vuote alle più ardue difficoltà (Porta, 2000: 69).

The clearness of exposition is exemplary, as well as the way the material is gradually built up with quality which accompanies the progress of the student, from the open strings to the first bowing, up to the most arduous difficulties (Porta, 2000: 69).

In this Method, it is possible to find a suggestion about how to contract and to relax the muscles of the left hand fingers. It advocates not to lift the fingers too high, and to keep them very close to the string, and not press them too much (useless expenditure of energy). The thumb is placed to the opposite side in front of the second and third fingers as shown in the following illustration (Figure 9):

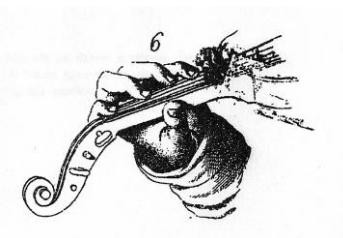


Figure 9. Picture from Campagnoli's Method for violin op. 21 page 5 (adapted from http://japanese.imslp.info/files/imglnks/usimg/6/65/IMSLP59950-PMLP122896-Campagnoli_Violin_Method_ok1.pdf accessed November 19th, 2013: 04 pm).

However, there is no evidence in this Method of specific exercises to prevent and solve the muscle-skeletal problems of the violinists.

3.2.3. Bernardo Ferrara¹² (1810-1882)

The Method *Lo Studio del Violino elementare e progressivo* Editore Milano Gio. Canti first edition 1858 (shown in the Figure 10) Edizione G. Ricordi Milano reprint 1983, by Ferrara is divided in six books.



Figure 10. The cover page (facsimile) of first edition of *Lo Studio del Violino elementare e progressivo compilato e praticato da Bernardo Ferrara Professore al Regio Conservatorio di Musica in Milano* (http://imslp.org/imglnks/usimg/4/44/IMSLP65021-PMLP37344-Ferrara_Lo_Studio_del_Violino.pdf accessed November 11th, 2014: 11 am).

The work is extensive and, in the opinion of Enzo Porta (2000) as well as for the Methods of the authors such as Luigi Tonelli (1765 c.a.), Raffaello Frontali (1845-1916), Eugenio Cavallini (1806-1881), Ferdinando Giorgetti (1796-1867) Guido Papini (1847-1912).

Ferrara's Method is negligent in relation to the gradual factor of technique evolutions. Porta says also that:

... La tecnica troppo spesso si identifica con le scale e gli arpeggi ... il materiale di studio è vario, quello musicale fortemente condizionato dall'opera italiana (Porta, 2000: 91).

¹² Bernardo Ferrara (1810-1882) Italian violinist and composer. Born in Vercelli, at the age of twelve, he was admitted to the Conservatory "G. Verdi" in Milan, where he studied violin and viola with A. Rolla, and harmony with V. Federici, and G.B. Piantanida and composition with F. Basily. In 1828, still a student, he was commissioned to direct an opera at the *Teatro Civico* in the City of Vercelli, on the occasion of the visit to the city of King *Carlo Felice*. On October 4th. 1829, after nearly eight years of study, he obtained the first prize of honor as a performer and the diploma of teaching and composition with a symphony composed and directed by him. Then in 1832 he began teaching activities and replaced A. Rolla as violin teacher at the Conservatory of Milan. Simultaneously he also accepted the position of first violin in the orchestra of the *Teatro alla Scala*. In 1835 he won the competition for the first violin at the *Cappella Ducale* of Parma and attracted the interest of N. Paganini, a deep admirer of the young violinist from Vercelli. Affected by deafness, in July 1861 he was forced to permanently stop his activities.

... the technique identifies too often only with scales and arpeggios ... the study material is varied and the musical material is strongly conditioned by the Italian opera (*Porta, 2000: 91*).

3.2.4. Alfeo Buya

The *Nuovo Metodo di Violino con la Teoria del Tetracordo*, A. & G. Carisch, Milano 1923 (Figure 11), is a very varied and gradual work, similar to the Curci and Unione Violinisti Italiani works.

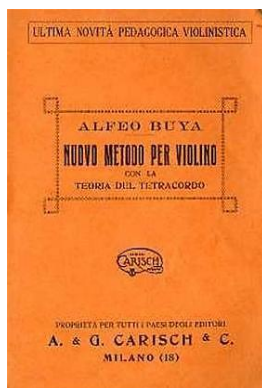


Figure 11. Alfeo Buya: The cover page (facsimile) of first edition of *Nuovo Metodo per violino* (adapted from the personal Library of the Author).

This Method can be compared to a really detailed manual, starting from beginner level to advanced level. For the right hand technique of the bow, Buya divides the bow into eight parts; for the left hand he uses the tetrachord¹³ theory (*Porta: 2000*). The author shows that he knows intimately the work of foreign contemporary masters, such as his teacher, the French violinist Lucien Capet (1873-1928), and the Hungarian violinist Joseph Joachim (1831-1907).

The division of the bow and the theory of the tetrachord, are the basic features of this Method, which contains many technical exercises that are indeed effective, but it is largely devoid of musical material, almost in contrast to other romantic Methods of the same historical period.

Despite the completeness of the Method's specific exercises, in what concerns awareness of the contraction and the relaxation of the left hand fingers – these are not to be found.

¹³ The tetrachord (from Greek τετραχόεδον) was the fundamental element on which was developed the ancient Hellas music system. It consisted of a short scale of four successive sounds which formed a series of two tones and a semitone, contained in an interval of the perfect fourth.

3.2.5. U.V.I. Unione Violinisti Italiani (1930-1947)

La Tecnica del Violino Edizione, Ricordi - Milano, 1935 (Figure 12), is the result of the contribution of different musicians, was drawn up between 1930 and 1947 in response to a demand of a revival of the Italian violin school; it was also the will of the fascist regime that required a gradual change of the teaching equipment to include foreign, above all of French Methods, used during that period (Kreutzer, Rode, Dont) as is evident from the ministerial programs of State Music Conservatories .

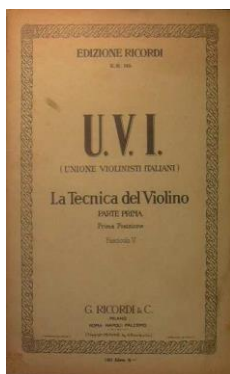


Figure 12. U.V.I. : The cover page edition 1918 of the *La Tecnica del Violino Divisa in cinque Parti*, Edizione Ricordi (kindly given by *Biblioteca Nazionale Centrale, Firenze*).

The Professors of Italian Conservatories of Music who participated in the realization of this Method were among the most renowned violinists of the time: Marco Anzoletti (1866-1929), Angelo Consolini (1859-1934) Mario Corti (1882-1957), Gerolamo De Angelis (1858-1935), Romeo Franzoni (1857-1941) Gaetano Fusella (1876-1973), Francesco de Guarnieri (1867-1927), Adolfo Massarenti (1856-1920), Enrico Polo (1868-1953), Remy Principe (1889-1977), Federico Sarti (1858-1921), Arrigo Serato (1877-1948), Riccardo Tagliacozzo (1878 - ?) and Franco Tufari (1884-1965).

Of the five parts of the Method, only three were published, articulated as showed in the following Table 4:

Table 4. Summary of the U.V.I. violin Method.

FIRST PART	SECOND PART	THIRD PART
Fascicle I <i>Esercizi preliminari</i>	Fascicle I <i>Seconda posizione</i>	Fascicle I <i>Uguaglianza e Velocità. Scale, esercizi, Arpeggi, ecc.</i>
Fascicle II <i>Meccanismo e la ginnastica dell' arco</i>	Fascicle II <i>Terza posizione</i>	Fascicle II <i>Salti della mano sinistra e dell' arco</i>

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Fascicle III <i>Esercizi cromatici alla prima e alla mezza posizione</i>	Fascicle III <i>Quarta posizione</i>	Fascicle III <i>L' Arco</i>
Fascicle IV <i>Abbellimenti e trilli alla prima e alla mezza posizione</i>	Fascicle IV <i>Quinta posizione</i>	Fascicle IV <i>Il Trillo doppio, il Tremolo, gli Armonici semplici e doppi, il Pizzicato</i>
Fascicle V <i>Corde doppie</i>	Fascicle V <i>Sesta, Settima e Ottava posizione</i>	Fascicle V <i>Abbellimenti a doppie corde, ecc.</i>

In this Method there is interesting material, but one could say "neutral". There is no information that describes how to deal with and how to create ways to solve technical problems. The authors had decided to reduce the technical exercises to a minimum in contrast to the complex European Methods (Porta, 2000).

Also in this Method, one does not meet explanatory indications about resolving problems regarding contraction and relaxation of the left hand.

3.2.6. Alberto Curci¹⁴ (1886 - 1973)

The work of Curci, *Tecnica fondamentale del violino*, Edizione Curci Milano (1962), is divided into six parts (Table 5) of which the last one is divided into two volumes. The cover page is shown in the next Figure 13.



Figure 13. The cover of Curci's Method (adapted from the personal library of the Author).

¹⁴ Alberto Curci (1886-1973), Neapolitan violinist grew up in a cultural environment that favored his natural artistic talent. He was initiated very early in music studies and was admitted to the Conservatory of *San Pietro a Maiella* of Naples, where he studied with Angelo Fermi, a pupil of H. Vieuxtemps and CH.- A. de Beriot. He graduated at the age of eighteen and continued his studies in Berlin with J. Joachim. This encounter allowed him to soon undertake a brilliant career as a soloist and chamber music player. He was also active as a teacher and composer, and he translated into the Italian language the following books: *The Art of Violin playing* by Carl Flesch, *Beethoven's works* by Szigeti, and *Notes de violinist* by Szigeti.

Chapter 3: Violin Methods: A literature review – Italian and foreign methods

Table 5. Summary of the Alberto Curci violin Method.

FIRST PART	SECOND PART	THIRD PART	FOURTH PART	FIFTH PART	FIFTH PART
				Volume 1°	Volume 2°
<i>Produzione del suono</i>	<i>Staccato</i>	<i>Preparazione al saltato</i>	<i>Il Cromatismo</i>	<i>Cambiamenti di posizione</i>	<i>Quarta, Quinta, Sesta e Settima posizione</i>
<i>Arcate sciolte</i>	<i>Divisione dell' arco in sei parti</i>	<i>I coloriti</i>	<i>Il saltellato</i>	<i>Accordi</i>	<i>Scale e Studietti vari</i>
<i>Formazione degli intervalli</i>	<i>Studi in forma di duetto</i>	<i>Vari studi in forma di duetti</i>	<i>Accenti</i>	<i>La mezza</i>	
<i>Prima Applicazione delle dita (semitono tra il 2° e 3° dito).</i>	<i>Terza applicazione delle dita (semitono tra 3° e 4° dito)</i>	<i>Scale e arpeggi vari</i>	<i>La mezza</i>	<i>posizione</i>	
<i>Il Legato</i>	<i>Quarta</i>		<i>Il martellato</i>	<i>Il picchettato</i>	
<i>Seconda applicazione delle dita (semitono tra primo e secondo dito)</i>	<i>applicazione delle dita (semitono tra il capotasto e il 1° dito e tra 3° e 4° dito).</i>		<i>Il portato</i>	<i>Gli abbellimenti</i>	
<i>Piccola suite di tre pezzi</i>	<i>Quinta applicazione delle dita (Tritono, cioè tre toni fra le quattro dita).</i>				

Alberto Curci left out the approach of the violin and general posture, but he made emphasis on the significant relevance of the production of sound (bowing technique).

In the preface to Curci's Method, he points out that among all violin Methods of the 19th century, there is an absence of suitable material for primary education in violin teaching and also an absence of careful progressive sharing of educational materials.

The names of Sevcik, Flesch and Steinhausen, and their didactic works appear in Curci's Method, from which Curci follows the physiological and the scientific concepts of these authors. With these others, Curci discloses new technical and pedagogical conceptions, introducing new ways on how to teach the violin today. In addition, the author of this Method writes at the end of the preface:

Per ultimo desidero ricordare che nessun Metodo darà mai frutti sperati se l'allievo non vien ricondotto frequentemente su quanto ha già studiato. La "ripetizione" quando è fatta con intelligenza è il mezzo più efficace per progredire (Curci, 1952: 1).

As a last wish, I would like to remind that no Method will produce the desired results, if the student is not transported frequently back on what he has already studied. The "repetitiveness", if done intelligently, is the most effective way for young violinists to progress (Curci, 1952:1).

The opinion of the violinist/researcher Enzo Porta (1931) about Curci's work is:

The Method, with its exercises, appears to be extremely slow and gradual. The exposition is clear and excellent, but the steps are so slow that they may create mental fatigue in the students (Porta, 2000).

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In relation to the contraction and relaxation of the left hand fingers, we do not encounter any recommendations.

3.2.7 Francesco Sfilio (1876-1973)

3.2.7.1. *Nuova Scuola Violinistica Italiana*

The first edition of the Sfilio's Method *Nuova Scuola Violinistica Italiana* was drafted and published in 1934, when Sfilio was fifty-eight years old. The work is structured in two volumes: the first intended for beginners with the title "*Metodo per principianti*"; and the second for professionals, entitled "*Tecnica superiore dell'arco e della mano sinistra*" (Figure 14).

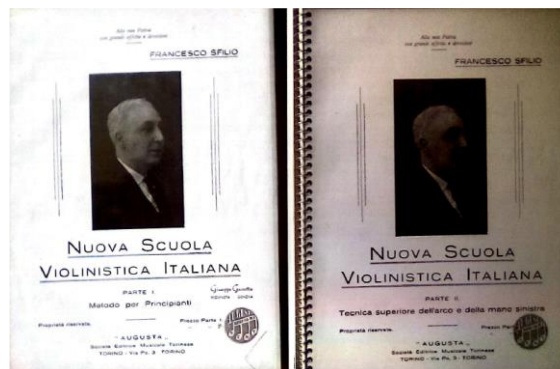


Figure 14. The cover of the first edition of Sfilio's Method - Part I and II -, Società Editrice Musicale Torinese "Augusta", 1934 (adapted from the personal library of the Author).

The first volume consists of exercises with open strings and changes of strings, then continues with exercises in different left hand positions and shifting positions and finishes with a study in sixteenth notes by Franco Alfano¹⁵, to show how the 24 bow strokes work.

The second volume, that we will consider because of its relevance in respect of this dissertation, is divided into two sections. Both the sections are introduced by some letters from various eminent Italian musicians such as Ottorino Respighi (1879-1936), Franco Alfano (1876-1954), Gino Marinuzzi (1882-1945), and Enrico Pierangeli (1908 - 1978).

This second volume is divided into two parts: the first section is predominantly theoretical while the second part is practical.

¹⁵ Franco Alfano (1875-1954) Italian composer, studied in the Conservatory of Naples and then in Leipzig. Best known today for his opera *Risurrezione* (1904) and above all for having completed the opera *Turandot* by Puccini in 1926.

The theoretical part is divided into four sections organized as shown in the following Table 6.

Table 6. Theoretical exercises of Sfilio's Method *Nuova Scuola Violinistica Italiana*.

RIGHT HAND	LEFT HAND	MUSICAL INTERPRETATION	USEFUL NOTES
The Sound	Method of holding the violin in positions	Rhythm	Terms describing movements-their meaning
Method of holding the bow	Intonation	Forms of instrumental music	Fingering
Method of drawing the bow	Change of position	The Fugue	The parts of the violin
Recovery of the bow	Method for learning the perfect intonation of chord and double stops	The Sonata	Dimensions
Changing strings	The <i>Portamento</i>		
To accent	The <i>Vibrato</i>		
To avoid the initial accent	The <i>Glissé</i>		
Double stops	The Harmonics		
To play on three or four strings at the same time	Left hand <i>Pizzicato</i>		
The <i>Staccato</i>			
The <i>Picchettato</i>			
The <i>Saltellato</i>			
<i>Balzato</i> legato or <i>Saltellato</i> on the four strings			
The <i>Gettato</i>			

In the preface by Francesco Sfilio, one can read:

Premesso che lo studio è nella mia scuola inteso non già come una serie di ricerche, ma bensì di applicazione di quanto io stesso ho già trovato attraverso lunghi anni di esperienza nell'insegnamento, è necessario che chi si dedica allo studio del violino sia dotato di pazienza e riflessività.

Sapere, innanzitutto, con certezza la maniera di ottenere ciò che si vuole basandosi su di una tecnica sicura teorica e pratica; rendersi conto esatto delle manchevolezze sia dell'arco che della mano sinistra, per poterle correggere con facilità. Evitando perdita di tempo e uno studio scoraggiante e faticoso.

... nella mia scuola invece ogni difficoltà è spiegata come pure è spiegato il modo per superarla e, a differenza di tutte le altre scuole dall'allievo non si pretendono doti eccezionali ... Concludendo, ho la ferma convinzione che quanto esposto in questa nuova scuola possa rendere facile lo studio del violino ... (Sfilio; 2002:46).

I should first of all state that in my school, study is not seen as a series of theoretical studies, but rather an application of what I myself have discovered through long years of teaching experience. Those who devote themselves to the study of the violin must possess patience and the ability to reflect.

One must know, above all, how to obtain the desired execution, with the help of the technique that has firm theoretical and practical foundations; to be aware of shortcomings, both in bowing and the left hand, so they can be corrected with ease, avoiding fruitless effort and disheartening, exhausting study.

How to improve awareness of the violinist's left hand through Sfilio's Method

... in my school, on the other hand, every difficulty is explained, together with the Method of overcoming it, and in contrast to all the other schools, the pupil is not expected to possess exceptional gifts... In Conclusion, I am firmly convinced that the Method expounded by my new school greatly facilitates the study of the violin ... (Sfilio; 2002:46).

Since the focus of the thesis deals with the problems of the tension, pressure and awareness of left hand, it was taken into consideration the following sections:

- Method of holding the violin in position;
- Intonation;
- Change of positions.

About the Method of holding the violin in position, one finds the following interesting phrase:

Il violino si deve tenere tra la clavicola e la mascella, cercando di alzare il più possibile la clavicola affinché la presa sia sicura. Non è conveniente tenere il violino sulla spalla perché quasi la metà del fondo appoggerebbe su di essa, che farebbe così da sordina producendo un suono velato ... Per quanto riguarda la mano [sinistra], il pollice deve appoggiarsi al manico con la falange superiore, opponendosi a metà altezza tra l'indice e il medio ... Il pollice così posto permette che il passaggio di posizione avvenga con molta facilità ... (Sfilio, 2002: 57).

The violin must be held between the clavicle and the jaw, lifting the clavicle as much as possible to ensure a secure grip. It is not advisable to hold the instrument on the shoulder, as almost half the back of the violin would be resting there. This would muffle the sound ... As for the hand, the upper joint of the thumb should rest on the neck at half its length, midway opposite the index and middle finger ... Placing the thumb in this way, permits the passage from the first and second positions to be carried out with great ease ... (Sfilio, 2002:57).

Regarding the Intonation, Sfilio affirms that the sense of touch is the fundamental element:

... il violino si suona per tatto e quindi l'intonazione è principalmente questione di tatto: l'orecchio non è che un controllo ... (Sfilio, 2002: 50).

... the violin is played by touch, and so intonation is largely a question of touch, the ear serves to check (Sfilio, 2002: 57).

Referring to Change of positions Sfilio suggests to use wrist motion because it is more difficult if the hand is guided by the forearm:

... Dunque come si è visto il cambiamento di posizione altro non è che un movimento del polso ... (Sfilio, 2002: 50).

... it can therefore be seen that the change of positions is nothing more than a wrist movement (Sfilio, 2002: 58).

Finally, about the exposition of this Method, one can say that attention has been paid to problems concerning the left hand tension/pressure and the excessive effort that is often made to play the violin. However, some of the technical aspects listed in Table 7 of the *Nuova Scuola Violinistica Italiana* were better dealt with and explained by Sfilio in the *Alta Cultura di Tecnica Violinistica*, the Treatise published in June 1937.

3.2.7.2. *Alta Cultura di Tecnica Violinistica*

This small Treatise (shown in the next Figure 15) explains and justifies all exercises proposed and it is more theoretical in comparison with the Method wrote in 1934.



Figure 15. The cover of the *Alta Cultura di Tecnica Violinistica* by Sfilio Zecchini Editore, 2002 (adapted from the personal library of the Author).

Sfilio in writing this Treatise benefited from the collaboration of a medical friend, university professor, Pietro Berri¹⁶ and the violin maker Ferruccio Zanier¹⁷.

The announcement of the publication of this Treatise December 20th, 1936 (Figure 16 – Appendix 1) presented as *Il segreto di Paganini scoperto?* (The Paganini secret discovered?), aroused not only some interest but some controversy, too.

¹⁶ Pietro Berri (1901-1979), was professor of medicine at the Royal University in Genoa and vice-president of the Young Genoese Orchestra. About Paganini he published the book *Il Calvario di Paganini* and founded in Genoa the Institute of Paganini studies.

¹⁷ Ferruccio Zanier (1887-1969), Italian luthier, published a pamphlet describing his new Method of constructing violins. Produced about fifty instruments to be worthily associated with the highest Italian art, whether in respect of form, proportions, or varnish.



Figure 16. Article about the publication of the Treatise *Alta Cultura di Tecnica Violinistica, Il Lavoro*, 20 December 1936 (by courtesy of Historical Archive of *Il Lavoro*, Provincia di Genova).

After the appearance of this article, the double bass player Isaia Billè¹⁸ published an article on January 20th (Appendix 2), and on February 21st 1937 (Appendix 4), to dispute Sfilio's theories, and about the secret of Paganini. Billè defended the idea that no Method, without talent, may be effective, and therefore Sfilio's Method could not contain any secrets.

... chi è dotato di qualità superiore e studia, progredisce, ... ; chi invece disgraziatamente ne è privo, rimarrà sempre una rozza da traino; poiché mancandogli la cosiddetta stoffa, né la posizione base, né la spiegazione della tecnica di Paganini, né lo studio del sistema muscolare, né il cromatismo, potranno portarlo alla celebrità ... (De Martino, 2000:66).

... those who have talent and study, progress, ...; unfortunately those who have none, will always remain a towed rough; that's without the so-called fabric, nor the basic position, nor the explanation of the technique of Paganini, nor the study of the muscular system, nor the chromatic, can take him to celebrity ... (De Martino, 2000:66).

Subsequently Sfilio replied with an article published on 7 February of the same year (Appendix 3) where he argues that the content of his Treatise was written based on over twenty years of experience and reflection on how to teach, on how the students learn, on the observations of others' Methods and "finally the carefully analysis of all as it refers to Paganini ". Sfilio also says that the principal objective of this Treatise, wrote at the request of many students, was to encourage pupils who at the first difficulty stop trying, thinking that these difficulties are insurmountable when instead they are not.

Sfilio also affirms that:

La tecnica di Paganini era personale ma non astratta né leggendaria: riposava, cioè, su basi fisiche e fisiologiche come qualsiasi altra attività corporea e merito sommo del Genovese fu quello di aver intuito e saggiato con lungo studio, quali erano le basi fisiche e fisiologiche che meritavano d'essere assecondate senza forzamento della natura e senza inutile sperpero di energia (*Il Lavoro*, February 7th, 1937).

The technique of Paganini was personal but not abstract or legendary: it is founded on physical and physiological bases as any other body activity and the *Genovese* [Paganini]

¹⁸ Isaia Billè, was born in Fermo in 1874. He studied bass at the *Liceo Musicale* Rossini in Pesaro and he became, in a short time, the most famous Italian bass player of his time. He was the first bass at *Teatro alla Scala* in Milan and Rome Opera, and participated in the triumphal American tour under the direction of Arturo Toscanini. He died in 1961.

superlative merit was to have sensed and tested with a long study, what were the physical and physiological basis, which had to be supported without forcing the nature and without unnecessary waste of energy (*// Lavoro*, February 7th, 1937).

It followed that in June 26th 1937, the Treatise was presented to the public through an article by Prof. Dr. Pietro Berri who also edited the preface of the Treatise itself (Appendix 5).

In this article Berri praised Sfilio's intuition and sensibility and that he was farsighted enough to research the physiological part of the violin (although not a physiologist), supporting the nature and key to solving many problems related to the technique. In particular, for Sfilio, awareness of his left hand through the development of the sense of touch and the chromatic scale were the basis of Paganini's virtuoso technique.

Indeed Sfilio presents very interesting exercises, known as "mute exercises", and in this Treatise, in fact, there are some contents that are undoubtedly new, regarding the left hand.

Always searching for Methods with applicable elements pertaining to the aims of this thesis (left hand pressure), it is worthwhile to point out some foreign Methods among those most used in Italian conservatories. Consequently, the next section will examine French Methods by Baillot/Rode/Kreutzer, De Bériot, Alard and Galamian, and those German, Austro-Hungarian Methods by Spohr, Ševčík e Flesch.

3.3. OTHER FOREIGN METHODS (FRENCH SCHOOL).

3.3.1. Baillot¹⁹/ Rode²⁰/ Kreutzer²¹ (1766-1831)

The *Méthode de violon, par Baillot, Rode et Kreutzer, rédigée par Baillot, adoptée par le Conservatoire, Paris, Le Roy s.d.*, (Figure 17), together with the 42 Studies by Kreutzer and 24 Caprices by Rode, is still in use in the Superior Conservatory of Italian Music.

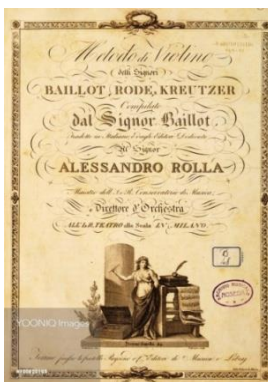


Figure 17. The cover page (facsimile) of the Method by Baillot, Rode and Kreutzer for violin *Metodo di violino delli Signori Baillot, Rode, Kreutzer compilato dal Signor Baillot, tradotto in italiano dagli editori, dedicato al Signor Alessandro Rolla Maestro del R. Conservatorio di Musica e direttore d'orchestra al teatro alla Scala in Milano* (adapted from <https://yoonigimages.com/images/detail/100620169/frontispiece-of-the-violin-method-by-pierre-baillot-pierre-rode-and-rodolphe-kreutzer> accessed November 18th, 2014: 12 am).

This Method is the result of a collaboration between three great musicians and talented French teachers. It was commissioned by Napoleone Bonaparte and was conceived for renewing the interest in the French violin school, in contrast to the excessive use during that period of Italian music, and especially the music by G. B. Viotti (Porta, 2000).

¹⁹ Pierre-Marie-François de Sales Baillot (1771-1842), famous French violinist and composer, studied with A. Reicha and Cherubini. Later, he studied violin under Giovanni Battista Viotti and taught at the *Conservatoire de Paris* together with Pierre Rode (also a pupil of Viotti) and Rodolphe Kreutzer, who wrote the conservatoire's official violin Method (published in the early 19th century). Baillot's teachings had a profound influence on technical and musical development in an age in which virtuosity was openly encouraged. He was leader of the Paris Opera, gave solo recitals and was a notable performer of chamber music.

²⁰ Pierre Rode (1774-1830), French violinist and composer, a favorite pupil of the great G. B. Viotti, was a celebrated performer and violin teacher. He was teacher to the courts of Napoleon I and Alexander I of Russia and from 1795 he taught at the *Conservatoire de Paris*. He composed music for his instrument (thirteen concertos, sonatas, duets and valuable twenty-four Caprices) and with R. Baillot and R. Kreutzer, drew up a violin Method (*Méthode de violon*, 1803), still used. Rode represents the bridge between the Italian school of G. Pugnani and GB Viotti and the Viennese school of J. Böhm, who was his pupil.

²¹ Rodolphe Kreutzer (1766-1831), French violinist and composer, studied violin with his father, and then with J. Stamitz and G.B.Viotti. Violin virtuoso, and acclaimed in many concerts in Europe, was a teacher at the *Conservatoire de Paris* and conductor of the Opéra orchestra. He composed music for violin, chamber music and Opera, and collaborated with P. Rode and P. Baillot to write the famous Method for Violin of the Conservatoire of Paris. L. van Beethoven dedicated to him the famous Sonata Op. 47, known as the "Kreutzer Sonata" (1805).

This Method is basically divided into two parts preceded by an introduction. The topic of the introduction is taken from the characteristics of the violin and its origins. The two parts address “The Mechanism of Violin” and “The Expression”.

In the following Figure 18 one can see the *Articolo Primo*, *Articolo II* and *Articolo V* in which the three authors deal with the way to hold the instrument, the position of left hand and left arm and finger motion.



Figure 18. The *Articolo Primo*, *Articolo II* and *Articolo V* of First Part of Method by Baillot, Rode and Kreutzer (adapted from the personal library of the Author).

Baillot, Rode and Kreutzer suggest to drop the fingers, from the top, to give greater impetus. The finger's weight will change depending on the intensity of sound: light in *piano*, and energetic in *forte*, but always with a lower pressure compare to the bow pressure.

For the left hand position (stance/posture) the chord by Geminiani (see Figure 6) is mentioned.

In any event, while it deals with the left hand, this Method does not propose specific exercises aimed at the prevention or resolution of any problems due to the excessive pressure of the fingers on the fingerboard: there is only some advice.

3.3.2. Charles De Beriot²² (1802 – 1870)

The cover of the *Methode del violon en trois parties*, Paris, Schott 1858; *Metodo di violino, Parte I e II* Edizione Ricordi Editore, Milano 2000, is shown in the following Figure 19.



Figure 19. The cover of the *Metodo per Violino* by De Beriot Edizione Ricordi, 2000 (adapted from personal library of the Author).

De Beriot was a pupil of Baillot and he founded the modern Belgian school. His Method is divided into three parts. In the first part the author digresses to write some brief description and history of the violin. He recommends the students to have a wide knowledge of music theory and the importance of being precise in rhythm and intonation too. There follows some preamble about preliminary physical attitudes, about the motionless of the body and a head “without stiffness”.

De Beriot also writes:

²² Charles-Auguste De Beriot, was a Belgian violinist and composer known for establishing a particular performance style (the Franco-Belgian school) that combined classical elegance with technical virtuosity. He studied at the *Conservatoire de Paris*, with P. F. Baillot; he was the violin soloist at the court of Belgium until 1830, and professor of violin at the Conservatory of Brussels (1843-52). He composed a lot of music for violin: ten concerts, varied arias, studies, etc. He also left a great Method (1858).

... lo scolaro deve riposarsi frequentemente; prima per abituarsi a riprendere con facilità l'atteggiamento metodico, e poi per evitare impazienze nervose e l'intorpidimento che sono inerenti ad una immobilità sostenuta per molto tempo (De Beriot, 2000:5).

... the pupil must frequently take a rest; first to get accustomed to easily return to the methodical attitude, and then to avoid nervous impatience and muscular sluggishness that are related to immobility sustained for a long time (De Beriot, 2000: 5).

Concerning holding the violin, the advice of De Beriot is very similar to those of his teacher Baillot.

Already from the second lesson, De Beriot advocates the use of all four fingers of the left hand, as does the French school of Baillot. The entire first part of the Method focuses on the performance of all scales by applying different bowings. In all the exercises, there is a second violin accompaniment. In addition to the all exercises there are some graceful melodies; the topics follow rapidly one after another methodically and with the main attention given to the right hand (bow).

In reference to the left arm and hand, De Beriot says that the elbow must be located in the middle of the violin, the hand supporting the neck of the instrument not too loosely between the first phalanx of the thumb and the third of the index. He affirms also that the hand must be in a "light and natural position" (De Beriot, 1858:4).

Throughout the Method there are no specific exercises aimed at preventing or solving problems related to left hand fatigue.

3.3.3. Delphin Alard²³ (1815 – 1888)

The frontespiece of the *Metodo completo e progressivo per violino*, Editore Ricordi Milano, 1981 by Alard, is represented in the following Figure 20.

²³ Jean-Delphin Alard, French violinist and composer, from 1827 was a pupil of François-Antoine Habeneck and François-Joseph Fétis at the *Conservatoire de Paris*, where he succeeded Pierre Baillot as professor in 1843, retaining the post till 1875. His playing was full of fire and vigor, and his compositions had a great success in France, while his violin school had a wider vogue and considerably greater value, he was a representative of the modern French school of violin playing.



Figure 20. The cover of Alard's Method first part (adapted from the personal library of the Author).

In the preface to the Method by Alard, Eugenio de Guarinoni (1861-1917) writes:

Alard has a deep knowledge of the violin both theoretically and practically, so it follows that very few, better than him, could write a Method that contained all of the most profound revelations of an art that taught us, how to treat an instrument as difficult and very richly endowed (De Guarinoni, 1981:4).

As far as the posture, the way to hold the violin, and in what concerns the left hand the rules are similar enough to those found in the De Beriot, Baillot, Rode, and Kreutzer's Method:

The violin must be placed horizontally on the clavicle, tilted to the right and resting the chin lightly on the left side of the tailpiece. It should be held through the neck, by the left hand, among the first phalanx of the thumb and the third phalanx of the index finger. It's very important to hold the neck without tightening it too much - not to give rigidity to the wrist, to make the changes of position easily. The elbow must be placed completely under the violin and you have to be very careful that it is not resting on the body (Alard, 1981:7).

The 40 studies, exercises and rules presented in this Method, admirably achieve the aim to gradually lead the student to absolute mastery of the instrument, in as short a time as possible, taking into consideration the difficulties of studying. Besides, this Method introduces the general concepts of knowledge about the violin's construction and its origins, and immediately from the first exercises it introduces the use of the fourth finger of the left hand on the fingerboard.

Alard wrote about the movement of the left hand fingers:

La main doit toujours conserver une grande souplesse, et lever les doigts suffisamment pour leur imprimer une sorte d' élan (Alard, 1981 :13).

The hand must always maintain flexibility, lifting the fingers sufficiently to print a kind of impulse (Alard, 1981:13).

3.3.4. Ivan Galamian²⁴ (1903 – 1981)

The cover of the Method by Galamian *Principi di Tecnica e d' Insegnamento del Violino*, Edizione Ricordi Universal Music Publishing S.r.l., Milano 1991, is shown in the Figure 21.

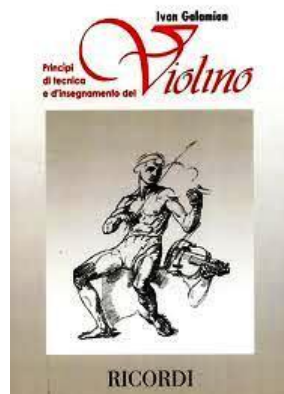


Figure 21. The cover of Galamian’s Method (adapted from the personal library of the Author).

A very extensive and widely used method in the United States, the Galamian School produced numerous excellent violinists including: M. Rabin, I. Perlman, P. Zukerman, E. Fodor besides others. He started writing the Treatise in 1948, concluded and presented it in 1962 after many years of teaching experience. He follows the tradition of the French school.

²⁴ Ivan Alexander Galamian (1903-1981) was an influential Armenian violin teacher of the twentieth century. He was born in Tabriz, Iran, but his family soon emigrated to Moscow, Russia. Galamian studied violin at the School of the Philharmonic Society there with Konstantin Mostras (a student of Leopold Auer) until his graduation in 1919. He moved to Paris, France, during the Bolshevik Revolution and studied under Lucien Capet in 1922 and 1923. In 1924 he debuted in Paris. Owing to some problems with nerves, health, and a large interest in teaching, Galamian decided to give up his concert career in order to teach full-time. He became a faculty member of the Russian Conservatory in Paris, where he taught from 1925 until 1929. In 1937 Galamian moved permanently to the United States of America. He taught violin at the Curtis Institute of Music beginning in 1944, and became the head of the violin department at the Juilliard School in 1946. He wrote two violin Method books, *Principles of Violin Playing and Teaching* (1962) and *Contemporary Violin Technique* (1962). Galamian incorporated aspects of both the Russian and French schools of violin technique in his approach.

How to improve awareness of the violinist's left hand through Sfilio's Method

This Method is divided in six parts as shown in the following Table 7

Table 7. Summary of Galamian's Method.

INTRODUCTION	CHAPTER 1	CHAPTER 2	CHAPTER 3	CHAPTER 4	CONCLUSION:
Deficiencies of some present-day system	Technique and interpretation	The left hand	The right hand	On practicing	A few words for the teacher.

In the beginning of the Method, Galamian writes:

There are many systems of violin playing, some good, some fair, some bad. The system I have tried to present in the following pages is the one that I believe to be the most practical, but I do not contend that it is the only right or only possible one.

Putting the system in the book, even writing a book like this, is a problematical undertaking because no printed work can ever replace the live teacher-student relationship. The very best that a teacher can give to a student is the individualized, unique approach, which is too personal a thing to be put down on paper anyway (Galamian,1962:7).

Concerning holding the violin and its position in relationship to the body, Galamian states that:

Likewise, there should not be any exact rules given to how to hold the instrument (Galamian,1962:13).

He explains that some violinists hold the instrument with the shoulder and the chin; others leave the support of the instrument to the left hand, while the chin takes an active [approach](#) only for some position shifts. Galamian continues asserting that, for a violinist with a long neck, the solution would be to adopt a shoulder rest, and to pay attention to not putting too much pressure on the chin rest and on the tailpiece. In this regard, to avoid this pressure Galamian advises the use of a central chin rest above the tailpiece in the middle of the instrument.

Regarding the left arm, Galamian is contrary to the "old violin schools playing" that required every student to pull the left elbow dislocated versus right, almost in front of the body. This rule, adapted from a violinist with long arms and fingers, can bring the fingers to have an uncomfortable curvature in the G string with consequent awkwardness of all types of movements of the fingers and especially for *vibrato*. Galamian, therefore, in these cases, suggests to keep the elbow back over the left side. On the other hand, a violinist with short

fingers and arms must adopt the "old rule", moving the elbow on the right side (Galamian, 1962).

In any case the fundamental principle is to put fingers of the left hand under the most favourable conditions for the various actions and, consequently, thumb, hand and arm will naturally find the most appropriate position. The elbow, however, is never rigidly set.

Concerning the left hand pressure, Galamian says:

The left hand should not press against the instrument (should not clutch it), since this causes tensions and severely restricts the freedom of the action of the fingers, arm and hand (Galamian, 1962:15).

Moreover he says:

The thumb needs very special attention. It is the part of the hand which is most responsible for excessive pressure and for the clutching of the neck of the instrument. This constriction is one of most common and most serious of faults. Clutching contributes more than anything else to the paralyzing of the functioning of the left hand.

Most players imprint too much force in all left-hand action. They bang the fingers too hard, lift them too high and press them too solidly after contacting the strings. To playing in this manner all of the time is not only unnecessary, but also very harmful (Galamian, 1962:17).

Galamian in conclusion of this chapter asserts:

An easy pressure, sufficient to hold down the strings, is all that is normally necessary (Galamian, 1962:19).

In the chapter of double stops, Galamian recommended:

When two fingers grip too hard, the unnecessary tension easily spreads to the thumb and thereafter to the whole hand. The student must be cautioned never to overpress in double stops if he is to avoid stiffness and cramping of the hand (Galamian, 1962:27).

To conclude the analysis of this Method, about the intonation, Galamian affirms:

The building of good intonation rests mainly on the sense of touch in combination with the guidance of the ear. "The fingers are like blind people who guide themselves through a sightless existence by touching objects which mark their paths from place to place.(Galamian, 1962:19).

3.4. OTHER FOREIGN METHODS (GERMAN AND AUSTRO-HUNGARIAN SCHOOL)

3.4.1. Ludwig Spohr (1784-1859)

The founder of the modern German school, Ludwig Spohr was a prolific and remarkable composer, teacher and conductor. In this Method, of which the cover is shown in Figure 22 he founded the principles of the school of Mannheim²⁵ (German tradition) with the principles of the new European Schools (Italian and French).



Figure 22. Cover page of the Louis Spohr *Metodo per violino* (http://imslp.nl/imglnks/usimg/f/4/IMSLP29906-PMLP30640-Spohr_Violin_School_Italian_text.pdf July 18th, 2015).

His Method *Violin-Schule mit erlauternden Kupfertafek*, Wien, Haslinger 1833; *Scuola di violino*, Milano 1904 is divided in Three Parts. The first part is divided in seven sections, the second in thirteen sections and the third part in five sections. Before this third part there is an Author's preface addressed to parents and teachers. In the first part, Spohr writes a brief history of the violin and its construction, and he presents the chin rest (fiddler-holder) as an indispensable object with which to firmly hold the violin:

The modern style of playing, in which the left hand so frequently changes its positions, makes it absolutely necessary to hold the violin firmly with the chin ... This inconvenience makes the fiddle-holder a perfect remedy; and, besides a means for supporting the violin in a firm and easy manner, presents additional advantages (Spohr, 1850:2).

²⁵ The Mannheim school was formed by a group of 18th-century composers who assembled themselves in the city of Mannheim (German), under the patronage of Duke Karl Theodor (reigned 1743–99), the elector palatine. The Mannheim school consisted chiefly of two generations of composers. The first included Johann Stamitz, who was the founder and inspired conductor of the orchestra, Ignaz Holzbauer, Franz Xavier Richter, and Carlo Giuseppe Toeschi. These men established the supremacy of the Mannheim school and, in their orchestral works, initiated many of the effects that were to popularize it.

In the second part one finds recommendations on how to hold the violin (left hand) and the bow (right hand). The position of the left hand and the left arm is very similar (as found in the Campagnoli Method) but unlike the latter, Spohr avoids the resting of the left elbow on the chest. He advises to leave the left hand in the third position on the rib of the violin and develops some exercises to strengthen and extend the fourth finger of the left hand. For the chromatic scale, Spohr takes a step backward towards Campagnoli, because he realises it with the same fingers (shifting 1-1; 2-2; 3-3). What follows is some exercise to improve the trill, performed also with the fourth finger (Porta, 2000:147). In the last part there is some interesting information and suggestions on style of performing concerts, quartet, orchestra playing and on accompanying. In the appendix Spohr reproduces the concerto n° VII by P. Rode and his Concerto n° IX with some interesting annotations both on a historical, stylistic and interpretive level.

This Method is also interesting; however, there are no specific guidelines to raise awareness of the left hand.

3.4.2. Otakar Ševčík (1852-1934)

The Method by Ševčík (Figure 23) is a work divided in 27 parts of which the last one is unnumbered²⁶.

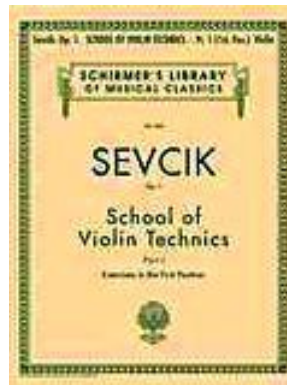


Figure 23. Op. 1 School of violin technique (adapted from the personal library of the Author).

For the left hand Ševčík devotes fifteen works described as follows:

The **Op. 1 School of Violin Technique**, (1881) for advanced students, is divided in four Parts.

²⁶ The copyright of this Ms. is owned by Simrock, Berlin.

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1. Exercises in the 1st position.
2. Exercises in the 2nd, 3rd, 4th, 5th, 6th, and 7th positions.
3. Exercises on the shift combining the various positions.
4. Exercises in double, triple, and quadruple stoppings, pizzicato, and harmonics.

Op. 4 Expansion of the Fingers²⁷ (1999) consisted in 41 examples, and the stretching of the 2nd , 3rd , and 4th fingers.

The **Op. 6 Violin School for Beginners** (1904, Leipzig: Bosworth) is formed by seven books of exercises based on the half tone system, including the *Little Ševčík*, and the melodic notes as the supplement for Op. 6 (1909).

- 1 – 5: Exercises in the 1st position.
- 6: Exercises preparatory to the 2nd, 3rd, and 4th positions.
- 7: 5th position, combining the various positions.

The **Op. 7 Studies preparatory to the shake & Development in Double Stopping** (1898, Leipzig: Bosworth), destined to Slightly Advanced Pupils it is composed by two parts.

1. Exercises in the 1st position.
2. Exercises in the 2nd , 3rd, 4th, 5th, and 6th positions.

The **Op. 8 Changes of Position & Preparatory Scale Studies** (1892, Leipzig: Hug Committee) is for Slightly Advanced Pupils.

The **Op. 9 Preparatory Studies in Double-Stopping** (1898, Leipzig: Bosworth) is also for Slightly Advanced Pupils. The content is:

Exercises in seconds, thirds, fourths, sixths, octaves, tenths, and harmonics.

Op. 11 School of Intonation (1922, New York: Harms).

On a Harmonic Basis for Violin, in 14 parts.

Op. 12 School of Double Stopping (manuscript).

²⁷ (This work remained in manuscript until compiled and introduced by Prof. J. Foltý n of the Prague Conservatoire in 1999). Prague: ARCO IRIS.

Op. 13 School of Arpeggios and Modulations (manuscript).

Op. 14 School of Chords (manuscript).

Op. 15 School of Flageolets (Harmonics) and Pizzicatos (manuscript).

Op. 22 Change of Positions in Single and Double Stoppings (manuscript).

Op. 23 Chromatics in all Positions (manuscript).

Op. 24 Left Hand Pizzicato with Simultaneous Right Hand Arco Technique
(manuscript).

The work of Ševčík is very different from all other violin Methods written at the turn of the eighteen and nineteenth centuries.

... E' un fatto singolare che Ševčík non abbia lasciato, nel su monumentale corpus tecnico, alcuna opera teorica ... l'attenzione e le energie del maestro cecoslovacco sono rivolte a esaurire nel senso più letterale del termine, ogni possibilità combinatoria delle dita, ogni immaginabile colpo d'arco. La sua opera imponente ha quindi un netto impianto scientifico ... (Porta, 2000:161).

.. It's a singular fact that Ševčík has not left, in the monumental technical corpus, any theoretical work ... the attention and energies of the master of Czechoslovakia have turned to run out in the most literal sense of the term, every possibility combination of fingers, every imaginable bow stroke. His impressive work has therefore a clear scientific frame work ... (Porta, 2000: 161).

The work of Ševčík, immense and very complete for what concerns the practical aspects aimed at resolving all the violinists instrumental difficulties, however has not addressed and even referred to the mental aspects that concern coordination, natural movements and specific exercises to increase awareness of left hand pressure.

3.4.3. Carl Flesch²⁸ (1873- 1944)

Below one can see the cover of *L'arte del violino*, 1-2 voll., Edizioni Curci, Milano 1991 (first edition 1924) by Carl Flesch (Figure 24).

²⁸ Carl Flesch (1873-1944), Hungarian violinist, studied in Wien with Jacob Grun and in Paris with Martin Marsick, great theorist, pedagogue and interpreter. Flesch achieved a perfect union between reason and instinct, only after having reached full maturity. As he said: "only in recent years I achieved the harmonized intellect and the emotion" (Keller, 1975: 173 cited in Porta, 2000: 175). But the power of his intellect obliged him to build and write an impressive work, completed in 1920 with an order and logic of rare exhibition on violin art education. Among his pupils were Edwin Bélanger, Bronislaw Gimpel, Ivry Gitlis, Szymon Goldberg, Ida Haendel, Josef Hassid, Adolf Leschinski, Alma Moodie, Ginette Neveu, Yfrah Neaman, Ricardo Odnoposoff, Eric Rosenblith, Max Rostal, Henryk Szeryng, Henri Temianka, Roman Totenberg and Josef Wolfsthal; they all achieved considerable fame as both performers and pedagogues.



Figure 24. The cover of Flesch's Method (adapted from the personal library of the Author).

L'arte del violino consist of two books, the first one is divided in two sections as shown in Table 8.

Table 8. Summary of the first book *L'arte del violino* by Flesch.

FIRST BOOK					
First Part					
General technique					
The instrument	Body posture	The left arm	The right arm	Tone production	
Second Part					
Applied technique					
Practicing in general	Practicing of general technique	Practicing of applied technique	Practicing as a tool for learning	Musical memory	

The Second Volume (Table 9), the “Artistic Realization & Instruction” consists of six sections preceded by an Introduction and with the final appendices.

Table 9. Summary of the second book *L'arte del violino* by Flesch.

SECOND BOOK					
SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
General musical elements connected with performance on the violin	Violinistic-technical elements relating to performance	Personality: human and artistic	Section IV Inhibiting factors affecting public performance	Violin Repertoire and concert programs	Teaching

This Method is one of the few theoretical works that were appreciated and had success in Europe and America. When Flesch began his teaching activities, around 1900, the school was declining and the technical principles they transmitted were obsolete (Porta, 2000).

Nella prefazione l'autore condanna il pressapochismo dei vecchi sistemi e rileva il mutamento intervenuto con l'opera di Ševčík, nella quale tuttavia non viene dato insegnamento alcuno per vincere gli ostacoli di tecnica che possono presentarsi. Ostacoli fisici e psichici non mancano certo nel difficile cammino del violinista: il sistematico lavoro di Flesch mira a fornire i mezzi per la loro eliminazione (Porta, 2000: 175).

The author in the preface condemns the approach and the shallowness of the old systems, highlighting that only in the work by Ševčík were there some real changes, though not enough to provide suggestions on how to confront and overcome the technical problems. Certainly, the difficult way of a violinist abounds with physical and psychological barriers: the systematic work of Flesch intends to provide the means to eliminate them (Porta, 2000: 175).

As far as holding the violin, Flesch recommends to place the instrument over the clavicle and to secure it by the jawbone and by the left hand, and that it should always be lightly held for the movements.

To avoid raising the left shoulder, which creates muscle contractions and as a consequence affects the technique of the left hand, Flesch suggests the use of a little shoulder pad, especially for those who have a long neck and inevitably have to use it. The advantage of not using the shoulder pad allows one to have a more intimate contact with the back of the instrument.

The height of the shoulder pad depends on the space one needs between the violin and shoulder, so every violinist should try to arrange the proper height of the pad until they can hold the instrument in the proper position as firmly as possible. Every violinist, when finding the right height, will be able to hold the violin, easily and without the help of the left hand for at least a minute and a half.

Regarding the position of the violin (in relation to how high or low one should hold the violin) Flesch says that with a low position, the bow should be sliding towards the fingerboard, which changes the sound quality (slightly rounded and not brilliant). On the contrary a very high position would lead the bow to slide towards the bridge, creating a mostly rough and rude sound (Flesch, 1981).

For the use of a chin rest, Flesch stated that

é un inconveniente necessario. Senza di essa il legno della tavola armonica, al punto in cui viene a contatto con la mascella, sarebbe distrutto, con l'attrito e col sudore, in tempo relativamente breve e oltre a ciò gli è impedito di vibrare la produzione del suono ... C'è solo lo svantaggio che essa toglie l'immediato contatto fra la testa e il violino (Flesch, 1991:18).

It is a necessary inconvenience. Otherwise the wood of the violin, with the perspiration and the friction with the neck, would be destroyed more easily. Furthermore, the use of a chin rest

allows the violinist to have a more harmonic sound and consequently a stronger one... The disadvantage is that there is a loss of intimate contact between the head and the violin (Flesch, 1991:18).

Consequently the author affirmed that if there was no problem related to wear of the instrument, it would be ideal to opt to play without chin rest (Flesch, 1991).

Regarding left hand pressure, the focus of this dissertation, Flesch devoted a lengthy chapter on the position of the thumb and fingers in the left hand. He suggested not to use an excessive pressure of the fingers because, besides affecting the sound, it can cause serious irritation of the nerves. In this regard, he cited the violinist Sarasate, who used to play with so light a left hand that the ends of the fingers had no grooves or hardening caused by contact with the strings (Flesch, 1991).

In the very exhaustive paragraph on *vibrato*, Flesch prescribes different solutions depending on the problem to solve. He distinguished three types of "faulty" vibrato: 1. The too tight vibrato (with fingers); 2. The too wide vibrato (with wrist); 3. The too rigid vibrato (with forearm). For each of these problems Flesch proposes solutions which will not be dealt with here.

Concerning the second type of vibrato above mentioned, Flesch suggests a kind of vertical exercise, to help violinists not to use too much wrist motion, suggesting the following exercise (Figure 25) to obtain more flexibility:



Figure 25. Exercise proposed by Flesch to learn the correct *vibrato* without wrist.

... Per conseguenza il primo movimento consisterà nel posare con molta leggerezza il dito come quando si tocca un suono flautino naturale e il secondo movimento nel comprimere leggermente la corda. Da questi due movimenti, eseguiti con celerità l'un dopo l'altro risulta un vibrato delle dita sezionato, che diventa tanto più perfetto, allorché in seguito il dito a poco a poco viene alzato sempre meno (Flesch, 1991: 40).

... Consequently the first movement will consist of placing the finger very lightly, as when one plays a natural *flautino* sound, and the second movement to lightly press the string. From these two movements, performed with celerity one after the other there results a vibrato of the fingers that becomes more perfect, when gradually the finger is lifted less and less (Flesch, 1991: 40).

With this system, Flesch said that he had been very surprised from results, mainly to correct a vibrato that was too wide. He also raise doubts about the utility of this exercise to

help the violinist in order to avoid to lift the fingers too much, and consequently to improve the development of trill technique.

The position change must be made together with the hand and the forearm without the use of wrist: this motion (wrist) is to start only from the fourth position (acute violin position). The pressure of the fingers must always decrease before making the position change and the thumb must always anticipate the changes of position, especially when shifting downwards. Lastly, the extensions are part of these fundamental movements of the left hand, which should be used carefully to avoid problems associated with muscle aches, and Flesch strongly argues against the bad habit of some violinists who believe in miraculous extension exercises, which are useful only if associated with other technical aspects.

In his Method, Flesch also cites his work "*Urstudien*" (Basic Studies) published in 1911 (not yet translated into the Italian language). These "Urstudies" are divided in theoretical and practical parts. In both there are the same suggestions concerning the left hand.

... Tutta la Tecnica della mano sinistra si può ridurre a cinque movimenti primitivi 1. Movimenti di caduta, 2. I movimenti laterali (scale cromatiche ed estensioni), 3. I movimenti di estensione e di piegamento, 4. Il movimento del pollice, 5. I movimenti combinati dell'articolazione del polso e del gomito (Flesch, 1991: 26).

... All the left hand technique one can reduce in five primitive movements. 1. the dropped movements; 2. the lateral movements (chromatic scales and extensions); 3. the extension and bending movements; 4. the thumb movements; 5. The wrist and the elbow combined movements (Flesch, 1991: 26).

Some exercises proposed (mute exercises) for the left hand must be practised "without bow" (Flesch, 1911:7). These exercises should be used only in some circumstances and not habitually. However, according to Flesch, these exercises serves mainly to keep the hand warm and during some environmental conditions when it is impossible to play or make sound (for example hotel rooms or a small artist room very near the concert stage). Therefore they must be used only to overcome the purely mechanical obstacles (Flesch, 1991).

Also by Flesch exists another book *Il problema del suono sul violino* Edizioni Curci Milano (1982) principally related with the problem of sound, but it regards essentially the right hand.

3.5. Conclusion

Starting from this literature review on the principal methods presented here, there is a clear lack of information on resolving the muscle-skeletal problems of the violinists caused by the tensions of the left hand.

Only Flesch, Sfilio and Galamian showed interest in the left hand and its lightness of application to improve better intonation (Galamian), better vibrato (Flesch) and better awareness to optimize the performance (Sfilio).

Among all the Methods considered here one can see that they devoted their attention principally to the right hand (bow) and how to hold the violin.

The exception in Francesco Sfilio's Method and the Treatise is also very interesting for this reason. One can find really interesting solutions for the left hand, with specific exercises to prevent and to solve the problem of tension, and to increase the perception and the awareness of the left hand (*esercizi muti*).

The interest for these "new" exercises motivated the Author of this thesis to dedicate himself to analyze more deeply the Treatise *Alta Cultura di Tecnica Violinistica*. However, before we enter into the analysis of the Method it is appropriate to begin with an historical research section on Francesco Sfilio's life (Chapter IV), along with three interviews with ex students of Sfilio, who are still alive (Chapter V).

CHAPTER 4. SFILIO'S LIFE

4. SFILIO'S LIFE

4.1. Introduction

One of the general objectives of this thesis is to unearth this Method and its author, Francesco Sfilio, that was left for decades almost forgotten, trying to highlight the most important aspects of his Method and, before that, to rebuild the history of his life and his activities as a musician and as professor.

A few years ago, thanks to the violin teacher Giulio Franzetti the Author of this thesis had the opportunity to come into possession of Sfilio's Method, written during the Thirties: *Nuova Scuola Violinistica Italiana*, and the concise book *Alta Cultura di Tecnica Violinistica* (about which we have already spoken).

From that moment on, the Author started a personal investigative approach according to the indications found, trying to understand the features and benefiting from this Method in terms of relaxation and posture.

This Method was "brought to light" again in the year 2000 when, in two articles in the newspaper *Il Secolo XIX* (Appendix 6) by Giorgio De Martino²⁹ and Andrea Casazza³⁰ (Appendix 6), there was announced the discovery of a carpenter, Giuseppe Gaccetta³¹, who had recorded in 1931 at the age of 17, some *Capricci* by Paganini, despite having studied only four years with Francesco Sfilio.

Beginning from 2002, through the reissue of the Method and thanks to Sfilio's pupil Giuseppe Gaccetta, musicians, teachers, musicologists, Italian and foreign journalists began to express interest in the "case of Sfilio".

So far, there is very little information about Francesco Sfilio. In fact his name is not mentioned much in either encyclopedias or music books. Curiosity to know more about him compelled the Author of this dissertation towards making research in some directions, starting from some information encountered on Sfilio's Foundation³² web site.

²⁹ Giorgio De Martino is a writer and pianist. Since 1989 he specializes in the nineteenth century; he worked for Music, *Il Corriere Mercantile*, *Radio Rai Tre*, and other institutions. Since 1993 he has collaborated with the Fondazione Teatro Carlo Felice in Genoa. He wrote a book about Gaccetta's life *Giuseppe Gaccetta e il segreto di Paganini 2001*.

³⁰ Andrea Casazza (Genoa, 1958) is a journalist of *Il Secolo XIX*. He has worked on music criticism, news and culture.

³¹ Giuseppe Gaccetta (Genova 1913-2007) . joiner and violinist, became professor at the age of eighty-seven: he revealed the secret technique of the great virtuoso violinist Francesco Sfilio, and he has the merit of publishing again the *Nuova Scuola Violinistica Italiana* and the *Alta Cultura di Tecnica Violinistica*.

³² <http://www.fondazionesfilio.it/index.htm> founded in Genoa (Italy), was created by the initiative of the master Giuseppe Gaccetta. This is a Foundation dedicated to the important pedagogue Maestro Francesco Sfilio with the objective to continue and to disclose his violinist school, founded by him in 1916. The Foundation Maestro Francesco Sfilio, that recently re-published the two volumes, has the aims of promoting the school and to argue

To this purpose, many inquiries have been made about the professional and personal life of Sfilio and at the Parishes - *S. Filippo Neri* (Genoa), *S. Antonio Abate* (Genoa), *Santissima Annunziata del Vastato* (Genoa), *Santi Vittorio e Carlo e S. Giovanni di Prè* (Genoa), Municipalities and Historical Archives - Catania, Genoa and Sanremo -, High Music Conservatory (Conservatories) - Torino, Milano, Palermo and the "*De Falla*" of Buenos Aires -, and through three important interviews with three ex-pupils of Francesco Sfilio who are still alive, the library in Florence, Rome, *Fondazione Cini* of Venice, *Biblioteca Palatina* of Parma, *Biblioteca Casanatense* of Rome, *Hotel de Paris* of Montecarlo, Opéra de Monte-Carlo, *Archives du Palais de Monaco*, newspapers and historical magazines. Just in this last category, as we shall see later, were put into practice some extracts and exercises of Sfilio.

Before we go into detail of the Treatise *Alta Cultura di Tecnica Violinistica* the Author started to trace the personal history of Sfilio. To begin this research, the first step was to contact the State Archives of Catania and the Municipality of Catania, the city of Sfilio's birth.

4.2. Sfilio's life

From the document shown in Figure 26, obtained through the Archives of the City of Catania, one can deduce that Francesco Sfilio was born in Catania (Italy) on April 29th in the 1876, and died on February 19th of 1973 aged 97 years in Sanremo (Italy). His father's name was Domenico Sfilio and the mother's name was Rosa Micci. Francesco was born in the house located on *Via del Crocifisso della Buona Morte numero 228*.

initiatives directed to promote the study of violin also with the institution of scholarships in order to profit students both in competitions and in public or private schools of music.

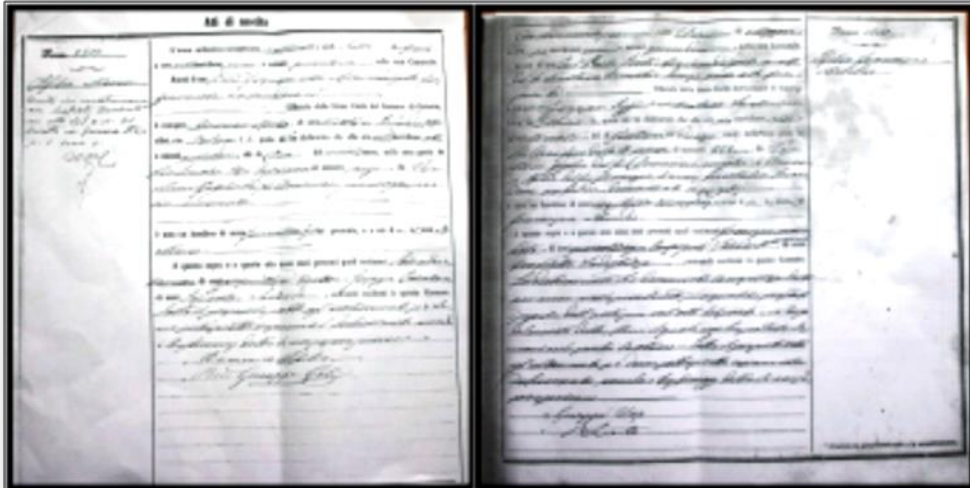


Figure 26. Birth certificates of Maria Sfilio (sister of Francesco) and Francesco Amedeo Sfilio, by courtesy of the State Archives of Catania, September 29th, 2011.

In the following Figure 27, are illustrated the document of birth, death and marriage, obtained through the Archives of the City of Catania.

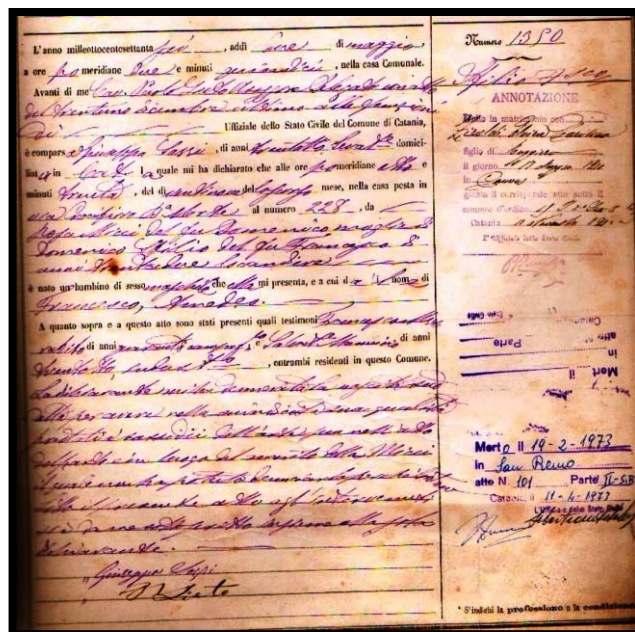


Figure 27. Full copy of the birth, death and marriage certificate of Francesco Sfilio. The certificate was kindly furnished by the State Archives of Catania, July 27th, 2011.

From the document above we see that Francesco Sfilio married on May 17th, 1910 with Elvira Zioldi Carmelina in Cannes (France).

How to improve awareness of the violinist's left hand through Sfilio's Method

Below, Figure 28, shows the certificate documenting the call to military service of Francesco Sfilio.

Figure 28. Document certifying the call to military service of Francesco Sfilio, by courtesy of the State Archives of Catania, July 19th, 2011.

From the previous documents, one deduces that Francesco Sfilio at the age of eighteen, in 1894, was resident in Genoa. From there, the research continued in the State Archives of Genoa wherein the Author was present at the end of July 2011. Unfortunately, in both the State and Historical Archives of Genoa no further information was found about the life of Sfilio.

However, the Author found two marriage certificates in the name of the two sisters of Sfilio: Emilia, born in Agira (Catania, Italy) in 1871, married in Genoa on October 21st, 1897 with Matteo Santapaola, and Maria, born in Catania (Italy) in 1880, married in Genoa on December 4th, 1913 with Umberto Badiali and resident in Genoa.

Following on from that on July 21st, 2011, at the registry office of the Municipality of Genoa, the Author procured information about the permanent address, emigration and family status of Sfilio and was informed that because of extensive damage, caused by historical events and the passage of time, the same office could only produce documents from 1951.

In the following Table 10 one can see a short genealogical tree about the origin of the family of Francesco Sfilio while Figure 29 shows the young Sfilio in 1884 at the age 8.

Table 10. Francesco Sfilio's Genealogical tree.

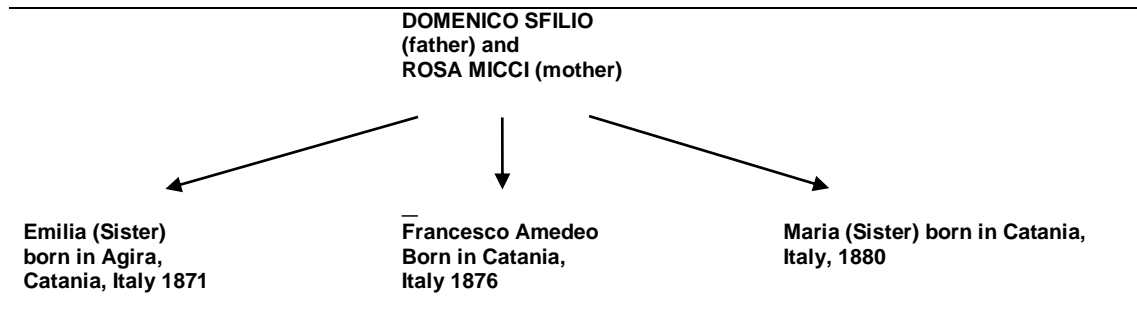


Figure 29. Photo of Francesco Sfilio when he was 8 years old, by courtesy of the Archives of *Centro Studi Musicali Stan Kenton*, Sanremo-Italy. Dedication: *Alla mia cara allieva Maria Borgo quale ricordo Francesco Sfilio anno 1884* (To my dear pupil Maria Borgo remembrance Francis Sfilio year 1884).

It is probable that Sfilio studied in Genoa, where his father, owner of a store in Via da Prè, worked as a wine merchant (De Martino, 2001: 31). It would appear that very soon Sfilio undertook a concert career that led him to play in all of Europe and also it seems that he was a great friend and rival of the violinist Pablo De Sarasate, the great Spanish violinist³³ (De Martino, 2001).

³³ Pablo Martín Melitón de Sarasate y Navascués (1844-1908) was a Spanish violinist and composer of the Romantic period. He began studying the violin with his father at the age of five and later took lessons from a local teacher. He studied under Jean-Delphin Alard at the *Conservatoire de Paris* where he finished studies with the highest honors.

How to improve awareness of the violinist's left hand through Sfilio's Method

In the Method *Nuova Scuola Violinistica Italiana* (Edizione 2002), one finds a letter dated 1904, in which one reads that during a concert in Montecarlo, in the midst of the audience the famous composer Saint-Saens was present who, positively impressed by Sfilio's interpretation, sent him an enthusiastic letter in which he expressed the desire to meet him.

Here below, in Figure 30, one can read the letter by Saint-Saens sent from the *Hotel de Paris Montecarlo* to *Monsieur Francesco Sfilio Hotel des Voyageurs Cannes*.

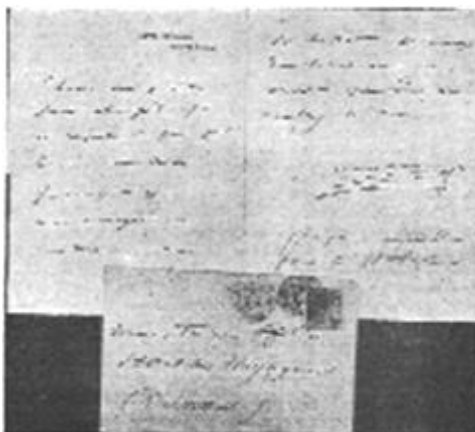


Figure 30. Letter written to Sfilio, from the composer Saint-Saens, after a concert in Monte Carlo in 1904 (Sfilio, 1934:4 second part; 2002:44).

*Tous mes projects sont changées – je ne repartirai pas pour Cannes et Nice. Je ne puis que vous envoyer mes amitiés en vous souhaitant beaucoup de succès avec mes œuvres que vous exécutez si bien. Saint-Saens
Je pars aujourd'hui pour l'Italie*

All my projects are changed - I cannot travel again toward Cannes and Nice. I can send you my regards and I wish you much success with my works that you play so well. Saint-Saens
I'm leaving today for Italy.

We find traces of this concert in the review published in the French newspaper *Le Littoral* of the day February 25th, 1904 (Figure 31) and in the Spanish *La Vanguardia* of March 1st, 1904 (Figure 32). In the both reviews the concert of the violinist Sfilio was presented as a triumph.



Figure 31. Enthusiastic review in the French newspaper *Le Littoral* regarding the concert of Sfilio - February 25th, 1904 (adapted from the personal library of the Author).

Le concert Sfilio-Farga – Le concert donné mercredi dans le Salon de l' Hotel Mont-Fleury par le violoniste Francesco Sfilio et le pianiste Onia Farga avait réuni un grand nombre des auditeurs qui ont applaudi sans reserve les deux jeunes et déjà célèbres exécutants.

The concert Sfilio-Farga – The concert given Wednesday in the Hotel Mont-Fleury by the violinist Francesco Sfilio and the pianist Onia Farga, it brought a large number of listeners who applauded without reserve the two young and already famous performers.

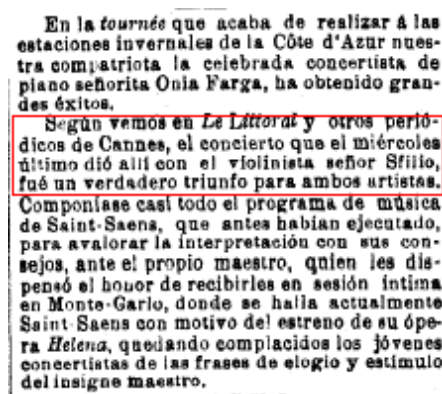


Figure 32. Review of March 1st, 1904 in the Spanish newspaper *La Vanguardia* about the "triumphant" concert of Sfilio of February 25th (adapted from the personal library of the Author).

... Segun vemos en Le Littoral y outros periódicos de Cannes, el concierto que el miércoles ultimo dió alli con el violinista senhor Sfilio, fué un verdadeiro triunfo para ambos artistas.

...As we see in *Le Littoral* and others newspapers of Cannes the concert that was given last Wednesday by Mr. Sfilio, was really a triumph for both artists.

The day after the concert in Montecarlo, Sfilio was invited to play at the hotel the third concerto for violin by Saint-Saens, with the composer himself as pianist. The score was

placed upside down on the stand, but the violinist continued to play anyway. Only at this moment did the composer understand that Sfilio was blind (De Martino, 2001: 31): Sfilio, indeed, at the age of twenty-seven, in 1903, was struck by sudden blindness owing to glaucoma.

In the next Figure we can find written evidence about the concert (February 24th 1910) where Sfilio played the concerto n° 3 op 61 in B minor by Saint-Saens.

The following example carries a copy of the programme from the newspaper *Le littoral* of Cannes (Figure 33).



Figure 33. Notice concert: “February 24th 1910 at 8 p.m. in the evening concert of blind violinist M° Sfilio” on *Le littoral* journal (adapted from the personal library of the Author).

During this concert, Sfilio also played his piece, the *Rapsodie Fantastique* of which, until now, the Author of this thesis unfortunately has been unable to trace the score.

The aspect of blindness, considered extremely important by the Author of this thesis, certainly had strong repercussions on the elaboration of the Method, and one can see successively during the analyses of it the reasons why the Method was developed in such a way.

Continuing with the historical research, we know that Sfilio died in Sanremo (Italy); as a result the research was directed towards to this town. This led to the acquisition of the records from the civil state service of the City of Sanremo; through other documents one

knows that Francesco Sfilio, on April 22nd, 1915, at the age of thirty-nine years obtained the permanent address in Sanremo, in via Matteotti 177.

As has been said, it seems that in 1903, when he was twenty-seven years old, Francesco Sfilio, as a consequence of glaucoma, became blind, but we don't know the exact date. However there were found some articles in the *Le littoral* journal of January 16th, 1909 in which one can read that Sfilio played a concert as "conductor" (Figure 34).



Figure 34. *Le Littoral* journal of January 16th, 1909 (adapted from the personal library of the Author).

L'orchestre sous la direction de M. François Sfilio.

The orchestra under the direction of M. François Sfilio.

However after this notice was discovered, a question arose - how could Sfilio conduct an orchestra if he become blind?

Sfilio continued to play as a soloist for a little longer, as some French historical articles concerning his activities as a performer attest.

In the following example are the copies of four announcements of Sfilio's concerts, all in Cannes, from the years 1908 to 1912 (Figure 35, 36, 37 and 38).

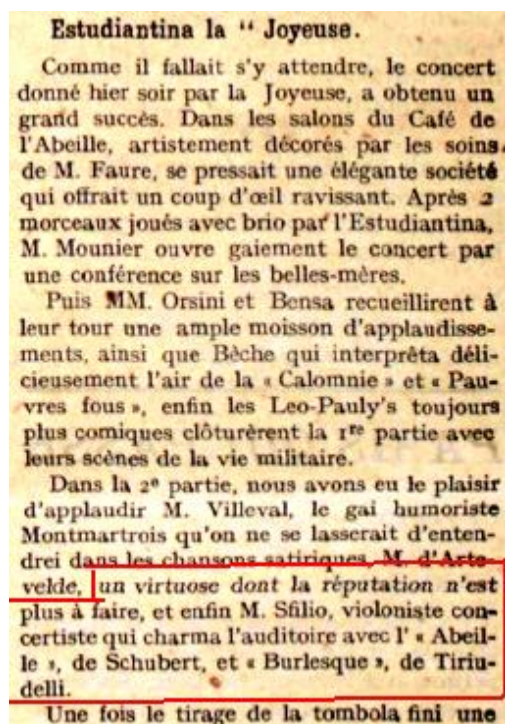


Figure 35. Review of concert of January 27th, 1908 at the *Salons du Cafe de l'Abeille* (adapted from the personal library of the Author).

Sfilio, violiniste concertiste qui charma l'auditoire avec l'«Abeille» de Schubert, et «Burlesque» de Tiriudelli.

Sfilio, concert violinist how he enchanted the audience with the «Abeille» by Schubert, and «Burlesque» by Tiriudelli.

Regarding the composer Schubert, this is a reference to François Schubert (Dresden, 1808-1878). The «L'Abeille» (*The Bee op 13 n°9*) is a *perpetuum mobile*, a virtuoso piece for violin and piano. This piece is often misattributed to Franz Schubert due to the similarity of the two men's names. The other piece, «Burlesque» op. 5, is a composition by Pier Adolfo Tirindelli (1858-1937) not Tiriudelli, as erroneously wrote in the article. This

piece belongs to six compositions: *Six morceaux de concert pour violon avec accomp. de piano.*

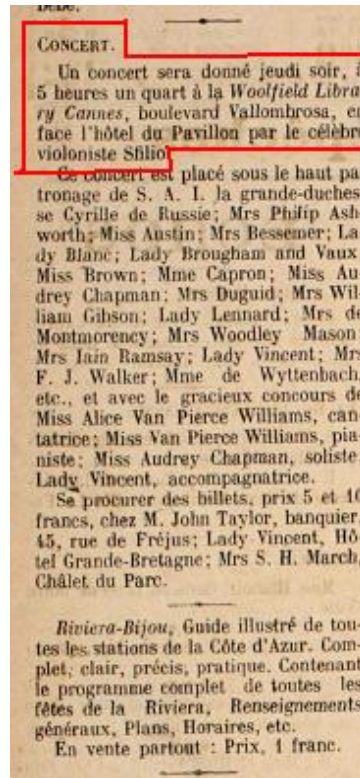


Figure 36. Sfilio's Concert announcement of April 5th, 1910 (adapted from the personal library of the Author).

Un concert sera donné jeudi soir, a 5 heures un quart a la Woolfield Library of Cannes, Boulevard Vallombrosa, opposite the hotel Pavillon par le célèbre violoniste Sfilio.

A concert will be given on Thursday evening at 5:15 in the Woolfield Library of Cannes, Boulevard Vallombrosa, opposite the hotel Pavillon by the famous violinist Sfilio.



Figure 37. Sfilio's Concert announcement of March 31st, 1911 (adapted from the personal library of the Author).

Il Signor Sfilio violoniste virtuose aveugle, sous le patronage de Mgr le Grand Duc Michel de Russie et de Mme la comtesse de Torby, avec le concours de M. A. Crosfield, pianiste solo, et de Miss Elliadi, monologuiste, et de l'orchestre du Casino Municipal, sous la direction de M. Louis Laporte, chef d'orchestra des Concerts Colonne.

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Mr. Sfilio, the blind virtuoso violinist, under the patronage of Archbishop Grand Duke Michael of Russia and Madame the Countess of Torby, with the participation of M. A. Crosfield, solo pianist, and Miss Elliadi, monologist, and the orchestra of the Casino Municipal, under the direction of M. Louis Laporte, conductor of the *Concerts Colonne*.

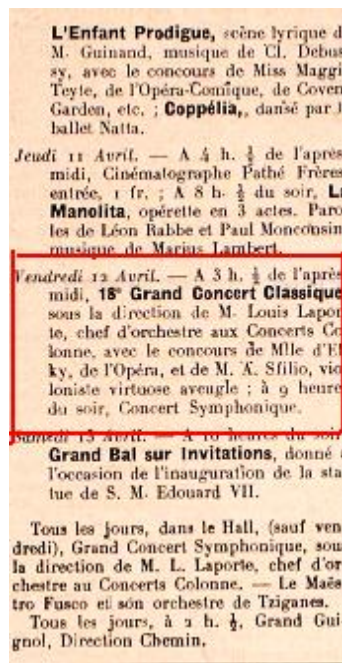


Figure 38. Sfilio's Concert announcement on April 12th, 1912 (adapted from the personal library of the Author).

Vendredi 12 Avril – a 3 h de l'après midi, 18° Grand Concert Classique sous la direction de M. Louis Laporte, chef d'orchestre aux Concerts Colonne, avec le concours de Mlle d'Elky de l'Opéra, et de M. A. Sfilio, violoniste virtuose aveugle.

Friday April 12th – 3h p.m., **18° Grand Concert Classique** under the direction of M. Louis Laporte, conductor of the *Concerts Colonne*, with the assistance of Miss d' Elky of the Opera and M. A. Sfilio, blind virtuoso violinist.

In the announcement we may compare the letter A. instead of F; this is because the second name of Sfilio is Amedeo.

At the same time, Sfilio began to devote himself to teaching. His violin was stolen due to a mishap on the train: it is easy to steal from blind people, especially on a train that ran through Italy during the First World War. Besides his violin, luggage and scores also disappeared. Later Sfilio talked it over with his wife Elvira and it was decided that he would stop playing the violin and devote himself completely to teaching (De Martino, 200: 31).

Sfilio began to gain a reputation for being a good teacher of the violin and so, in 1916, when Sfilio was 40 years old, Sanremo city invited him to open a school for string instruments. In the picture below (Figure 39) one can see some of the pupils of the school.



Figure 39. Picture taken in 1923 of the String School created in 1916 by Francesco Sfilio (by courtesy of the Archives of *Centro Studi Stan Kenton, Sanremo-Italy*).

Certainly, as a consequence of his personal situation - being blind and a sought after teacher -, Sfilio elaborated a Method written in 1934 and a theoretical manual, written in 1937 as a result of numerous controversies, prepared in collaboration with a doctor and a luthier to explain and substantiate scientifically his ideas. Both works, reprinted in 2002, came to us through the intervention of one Sfilio's pupils: Giuseppe Gaccetta.

In the next Chapter V three interesting interviews realized between 2013 and 2015 with three former Sfilio student's how are still alive will be presented to the reader.

**CHAPTER 5. INTERVIEWS WITH SFILIO'S STUDENTS AND IN DEPTH ANALYSIS
OF THE TREATISE ALTA CULTURA DI TECNICA VIOLINISTICA**

5. INTERVIEWS WITH SFILIO'S STUDENTS AND IN DEPTH ANALYSIS OF THE TREATISE *ALTA CULTURA DI TECNICA VIOLINISTICA*

5.1. Introduction

The historical research conducted so far by the Author of this dissertation has led to significant discoveries concerning Sfilio's activities in respect of his qualities as a violinist, conductor and teacher.

All these elements emerged, as we have already mentioned by research in the Parishes - *S. Filippo Neri* (Genoa), *S. Antonio Abate* (Genoa), *Santissima Annunziata del Vastato* (Genoa), *Santi Vittorio e Carlo e S. Giovanni di Prè* (Genoa), Municipalities and historical Archives - Catania, Genoa and Sanremo -, High Music Conservatories - Torino, Milano, Palermo and the "*De Falla*" of Buenos Aires -, and through three valuable (important) interviews with three ex-pupils of Francesco Sfilio: Sandro Panizzi (1927), Giobatta Nino Silvano (1929), and Orazio Marcello Grossi (1932).

Below are listed the main elements and also some personal observations that emerged from these videotaped semi-structured interviews. These interviews were conducted in such a way that they allowed the respondents plenty of freedom in their answers to the questions.

The semi-structured interview format was chosen because unlike those of the structured and unstructured (which includes also the narrative) interviews (Campostrini, 2005) -, the interviewer plays a fundamental role in the direction of the interview, collecting as much information as possible regarding the defined themes that he has attempted to explore, while nevertheless leaving space to the respondent for any digressions.

5.2. Transcribing the interviews

A complete *verbatim* (word for word) transcription was realized. This transcription kept all comments, exclamations, and pauses intact, because any change would have resulted in a "translation" of the text. Moreover, a system of graphic symbols was used in order to be able to record the nonverbal conversation. For this purpose, the following abbreviations or symbols were used, according to Corbetta (1999) and Gianturco (2004):

- LT => researcher / interviewer;

- XX => interviewed;
- line space between the two rounds of word;
- ,. ;! ? => To indicate the intonation;
- [] Brackets for adding facial expressions, laughter, etc.;
- ... => hesitation, brief pauses;
- UPPER CASE LETTER => high volume;
- lower case letter => low volume.

Below are two examples of the transcription of interviews:

- I. O.G. HE PLAYED VERY WELL THE PIECES BY SARASATE!!! [expression of admiration] (Orazio Grossi, 2011).
- II. N.S. ... he played (Sfilio) with the old violin school, without vibrato [he opens his arms] (Nino Giobatta Silvano, 2011).

5.3. Interview Study design and procedure

The questions were divided into four parts.

1. The first included biographical questions to identify the person interviewed, the years of study with Sfilio, how often the lessons were held, how long they had and how much they cost.

2. The second set of questions had to be objective in order to find out how Sfilio worked with students in technical and interpretive aspects. Therefore the questions were formulated in order to know what studies and repertoire were used; if Sfilio exemplified during the class; if he played the violin with shoulder rest and chin rest; if the lessons were accompanied by piano; whether in class Sfilio was referring to the technique of Paganini, as in working posture in general etc.

3. The third part concerned the historical component, and the questions were designed to find out where they carried out the lessons, about Sfilio's instrument and his compositions along with some anecdotal material.

4. The fourth part was intended to reveal something of the human aspects of Sfilio, on his training and his career, his illness, his personal life, his character, and also what were the pros or cons of his teaching method.

5.4. Analysis of Interviews

The analyses of the interviews have been done manually, creating a grid of important and interesting topics and a section devoted to aspects that emerged unexpectedly. The answers of the three subjects were successively compared. Following this will be presented the most important aspects.

5.4.1. Participants : Marcello Orazio Grossi, Giobatta Nino Silvano e Sandrino Panizzi

The three interviewed were born between 1927 and 1932. One of them, Marcello Orazio Grossi studied with Sfilio for about ten years, from 1942 to 1952.

After completing his studies at the Milan Conservatory he served as First Viola with the Orchestra of St. Cecilia in Rome from 1954 to 1990 approximately. He previously worked at the *Orchestra RAI* of Rome, Orchestra of Caracas (Venezuela) and the *Orchestra Carlo Felice* of Genoa. The following images (Figure 40 and Figure 41) shows Orazio as a child, at the age of 10, playing the violin during his First Communion and Confirmation party on May 28, 1942 accompanied on the guitar by Maestro Sfilio.



Figure 40. Francesco Sfilio during the party of First Communion and Confirmation of Orazio Grossi. Sanremo, May 28th, 1942 (by courtesy of Orazio Grossi).



Figure 41. Picture of Orazio Grossi in 1943, aged about 11 years (by courtesy of Orazio Grossi).

Another ex-student interviewed, Giobatta Nino Silvano, studied with Sfilio for about five years from 1950 to 1955 but, although he had already reached a good level of musical training, for family reasons he transformed his love of the violin into a hobby and not as a professional violinist:

... lo lavoravo sempre, anche per quello non potevo dedicarmi tanto (al violino), (Silvano, 2011).

... I always worked hard, for this reason I could not devote myself so much (to the violin), (Silvano, 2011).

The third person interviewed, Sandro Panizzi (Figure 42), known as the “son of art” by talented musicians - father Giovan Battista (1890-1956) and grandfather Alessandro (1860-1930) -, studied with Sfilio just seven or eight months in 1943. He decided afterwards not to continue with the prospect of a career in violin playing as he suffered considerably from stage fright:

... Quando a Torino suonavo col pianoforte, mi sentivo male, prendevo allora un calmante (Panizzi, 2011).

... When I was in Turin and I played with piano, I felt bad, then I took a sedative (Panizzi, 2011).



Figure 42. Picture of Sandro Panizzi in 1954, at the age of twenty-seven (by courtesy of Sandro Panizzi).

The three former students, therefore, have had a temporal relationship of study with Maestro Sfilio in very different ways and circumstances. Consequently, the memories and stories of their experience with Sfilio are also quite different. However, all the interviews have been a valuable source of information that has led the author of the thesis towards further research, still in progress.

It was also interesting to find, in these interviews, the common elements. Below, in the next section, we will talk about these issues.

5.4.2. Important elements that appear from the interviews about Sfilio's lessons

The first thing in common to all three students is the fact that they did not pay Sfilio for the lessons that he gave them. It appears that Sfilio had enjoyed a prosperous socio-economic life. Therefore, he taught for love and not for financial gain:

... Aveva un bel trend di vita. [...]lui mi diceva che si faceva tre vestiti l'anno: inverno, primavera ed estate (Silvano 2011).

...he led a beautiful way of life... he told me that he bought himself three suits every year: winter, spring and summer (Silvano 2011).

One of the characteristics common to the narrative of the three respondents, concerns the rhythm of study imposed by the *Maestro* Sfilio. All of them reported that the work load

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was relentless, and they studied every day continuously from 8.30 to 12.30 and from 14.30 to 17.30:

...TUTTI I GIORNI, LA DOMENICA ERA LIBERA (Grossi, 2011).

...EVERY DAY, ON SUNDAYS WERE FREE (Grossi, 2011).

In this regard, what follows is a letter of Sfilio (Figure 43) of June 20th, 1943, addressed to the father of Sandro Panizzi, already mentioned in the rhythm of study, and in the highlighted section Sfilio writes:

...viene da me due volte al giorno, al mattino dalle ore 8.30 alle ore 12, e al pomeriggio dalle 14.30 alle 17.30.

... he comes to me twice a day, in the morning from 8.30 to 12, and in the afternoon from 14.30 to 17.30.

Laureano - 20. Giugno 1943-~~201~~

Egregio e caro Amico

La ringrazio per la sua squisita
cortesia; il peggio di lei lo porterò al mio ritorno.
Non è affatto necessario che lo pedinino, non è precursore.
Sono lieto di comunicarle che Landino è completamente
santificato. Viene da me due volte al giorno, al mattino
dalle ore 8.30 alle ore 12, e al pomeriggio dalle ore 14.30
alle 17.30. Studia con amore e profitto. Se lei resterà ad
Heidelberg, sino alla fine dell'anno, sono certo di fargli sentire
un primo activate. Landino è un caro ragazzo, e siamo diventati
i due suoi amici che si stimano reciprocamente e si vogliono bene.
Però il grande segreto che è aperto istantaneamente. Trova lo
studio del violino piacevole ed abbastanza facile. Sarà per me
una grande gioia di portarlo al diploma, se solo mi torrà un anno,
questo è il suo periodo di tempo. Questo ha voluto dirgli perché se quale
consolazione gli richiederà il sapere. Fiducioso che la sua salute
sarà al pari della nostra; con affettuosi e stringi cordialmente
le la mano, e la saluto molto affettuosamente.

F. Sfilio

P.S. Consideri questo scritto quale testimonianza delle
mie affermazioni.

Figure 43. Sfilio's letter wrote on June 20th, 1943, probably edited by his wife Olga Carmelina Zirolodi, and addressed to Sandro Panizzi's father. Underlined in red is the phrase pertinent to the schedule of study (by courtesy of Sandro Panizzi).

The individual study of Sfilio's students between 1943 and 1955 took place on a daily basis at the home of maestro Sfilio situated on the street via Matteotti n° 177³⁴, before street Vittorio Emanuele II, n° 31 in Sanremo. After the war Sfilio, at a ripe old age and having been widowed in 1962, taught only a few students. With his last student he cultivated a deep friendship to the point that he was a witness at his wedding. Nino Silvano remembers in this way the attitude of Sfilio, by now tired:

... lui non se la sentiva più di incominciare da zero con i ragazzi, non se la sentiva più moralmente (Nino Silvano, 2011).

... he did not feel up to beginning anymore from zero with the students, he did not feel more morally (Nino Silvano, 2011).

Until that moment, however, Sfilio had carried out his work of teacher with great enthusiasm: it is enough to mention his string school that he created in Sanremo in 1916.

According to the memories of the three witnesses, on 1943 Sfilio divided the rooms of the flat in street *via Vittorio Emanuele* n° 31 into four little environments where the students simultaneously studied and he followed all of them, moving from one room to another, to correct stance and violin position, fingerings, bowing, intonation and all that could be directed to the production of a *suono bello* (beautiful sound).

From these interviews, it is evident that Sfilio always insisted about the emphasis on a beautiful sound and bowing. It seems that all of the Sfilio's pupils distinguish themselves by their "beautiful sound".

It is likely that Sfilio sharpened his sense of hearing to compensate for his blindness – he realized when the bow became crooked through the sound quality.

... Si accorgeva quando tiravo l'arco storto (Grossi, 2012).

...He understood when I drew the crooked bow (Grossi, 2012)

In this regard, the text reported in a letter (Figure 44) sent by Sfilio to his pupil Maria Borgo (1908-1981)³⁵ of June 25th, 1927, written when his pupil had taken the exam of magistracy in violin at the Musical Lyceum of Turin appeals to us:

³⁴ This street *via Matteotti*, until the year 1943 called *Via Vittorio Emanuele II*, and only after the war changed the name (<https://it.wikipedia.org/wiki/Sanremo> accessed on 14 July 2015 14.20 p.m).

³⁵ Maria Borgo von Kleudgen (1908-1981), graduated with honours at the *Liceo Musicale* of Turin. Widowed after a few months of marriage, she devoted herself even more to the music career. She collaborated with the *Orchestra Angelicum* of Milan. In her maturity she returned to work with the *Orchestra Sinfonica* of Sanremo as a soloist and also as concertmaster.

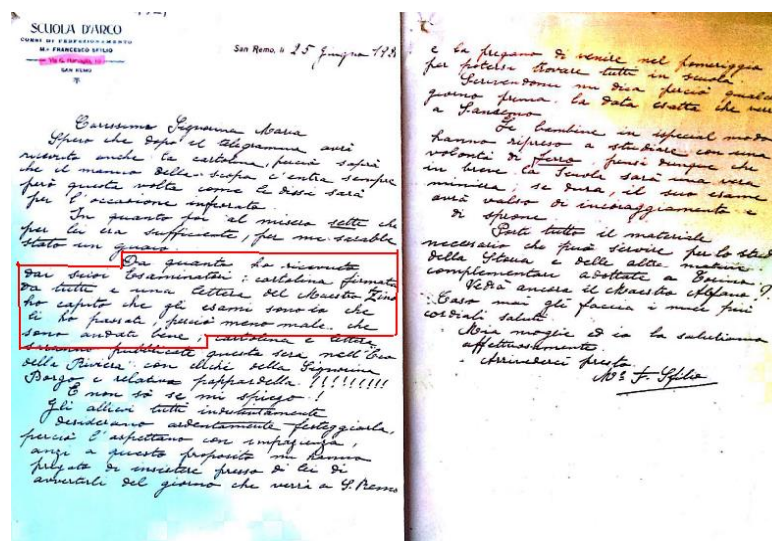


Figure 44. Phrase taken from the letter of Sfilio written to his pupil Maria Borgo on June 25th, 1927 (by courtesy of Centro Studi Stan Kenton).

... Da quanto ho ricevuto dai suoi Esaminatori, cartolina firmata da tutti e una lettera del M° Zino, ho capito che gli esami sono io che li ho passati, perciò meno male che sono andati bene...

...From what I received from his Examiners, postcard signed by all and a letter by Maestro Zino, I understood that I passed the exams, so just as well they were good ...

It is probable - exactly owing to his blindness and, consequently to his reduced mobility and social life, (according to the memory of Grossi,) that he was very devoted to study and research concerning the way to obtain certain results and the transmission of “know how”.

...essendo cieco (Sfilio) aveva tanto tempo da pensare, [per] lui era tutto molto scientifico (Grossi, 2012).

... being blind (Sfilio) had much time to spend to think, [for] him it was all very scientific (Grossi, 2012).

It seems also that Sfilio had the habit to always maintain the bow hairs under tension:

... Quando si accorgeva che io allentavo i crini, perché ogni tanto li controllava con le dita, mi dava sempre delle botte sulla testa (Panizzi, da intervista ecc...2011).

... When he realized that I loosened the bow hairs, because sometimes he controlled them with the fingers, he always tweaked my cheek on the head (Panizzi, by interview, 2011).

In accordance with the memories of the three interviewed it also emerged that Sfilio, during the lessons was in the habit of exemplifying what he asked again of the pupils. The three students also remembered that he himself studied daily.

... aveva l'abitudine a prima mattina di suonare il violino seduto sul divano col sigaro in bocca (Panizzi, 2011).

... He was used early in the morning to play the violin sitting on the sofa with a cigar in his mouth (Panizzi, 2011).

The cigars were bought by Orazio Grossi himself.

... dovevano essere mezzi toscani, morbidi e non scuri (Grossi, 2015).

... they had to be half Tuscany, soft and not dark (Grossi, 2015).

All the three ex-students recalled that he played very well the pieces of the violinist Pablo de Sarasate, and he always paid attention to the body position and the stance. The *Maestro* Franco Tufari (1884-1965) so affirmed to other members of the jury at the end of the execution/exam of Orazio Grossi, on the occasion of his diploma:

...GUARDATE CHE BELLA POSIZIONE HA QUESTO RAGAZZO... E PENSARE CHE IL SUO INSEGNANTE È CIECO!!! (Grossi, 2011).

... LOOK WHAT A BEAUTIFUL POSITION THIS YOUTH HAS ... AND TO THINK THAT HIS TEACHER IS BLIND !!! (Grossi, 2011).

As far as concerns the purely technical aspect, the two students who has studied longer with Sfilio (Grossi and Silvano) declared that Sfilio forced his students to study the scratched/scraped sound (slow bow near the bridge and with much weight), making use of the "bracelets" on his wrist.

It was common for the students to practise exercises with rubber bands too. Sfilio placed one extremity of the elastic to the index finger of right hand and the other on a nail, a door, a handle of a window or any other handhold that was available. The exercises, sometimes even those of Kreutzer, were therefore studied with this elastic. Sfilio did bend the bow up and down in order to develop the *cavata* of sound and the control of the bow in either direction.

Concerning intonation, according to the story of the respondents, he also advocated to make some extension exercises to lengthen as much as possible the opening of the fingers in the left hand. Sfilio also suggested to put a cork between the middle and ring fingers of the left hand, both when one was studying (Grossi, 2015), and during the night (Silvano, 2015) always to widen the opening between the fingers.

Grossi asserted that he has never seen the two books about Sfilio's Method and that the exercises were explained and exemplified verbally.

Grossi, the student who studied the most time with Sfilio, also remembered the Vertical Exercises, the Chromatic Scale, and Position changes with the wrist. Other relevant elements in the teachings of Sfilio, besides those already known, are three of the five elements - closed position of the violin, changes of position with wrist, sense of touch, chromatic scale, extensions of the left hand fingers - foundations of Paganini's transcendent violin technique.

In what concerns vibrato, (according to Grossi's memory), Sfilio suggested to study the trill, considering it essential to achieve a quality vibrato:

... Studia i trilli e ti verrà il vibrato bello (Grossi, 2011).

... study the trills and you will obtain a beautiful vibrato (Grossi, 2011).

Panizzi, the pupil who studied with Sfilio less time than of all three, recalled clearly the change of position exercises with the wrist, and always Panizzi mentioned that he had found many difficulties because he was a student raised by his father and temporarily entrusted to Sfilio. This would seem to indicate that Panizzi may have been a less flexible student in relation to a new way of working.

Among the common features that emerged from the three interviews there is also one regarding Sfilio as a person. The "eyes" and the words of the three students describe him as a generous person and full of humanity.

... era un signore, non si arrabbiava mai (Panizzi, da intervista ecc 2011).

... he was a gentleman, he never got angry (Panizzi, from interview etc. 2011).

... aveva una grossa umanità, e raramente faceva dei complimenti agli alunni. Era sempre duro nel giudicarli. Tutti prendevano 10 e lode (esami conservatorio) ma non li ha mai classificati (Silvano, 2011).

... He had a great humanity, and rarely made compliments to the students. He was always hard in the judgements. They all took diploma with honours (in the conservatory's exams) but he has never classified them (Silvano, 2011).

... Sfilio era come mio padre. Mi ha insegnato tutto, perfino a camminare dritto... Quando ero a Roma e dovevo mettere le arcate o scegliere una diteggiatura pensavo sempre "chissà cosa avrebbe messo Sfilio"... (Grossi, 2015).

... Sfilio was like my father. He taught me everything, even walking straight ... When I was in Rome (orchestra Santa Cecilia) and I had to put the bowing or choose some fingering I always thought "goodness knows what Sfilio would have done" ... (Grossi, 2015).

This humanity of Sfilio, widely recognized by his students was of great use to him when, during the war his house was destroyed, and on that occasion Grossi's family decided to offer him hospitality: Sfilio lived in a flat opposite and he habitually ate the meals together with the family of Orazio.

Nino Silvano, among the students interviewed, was the one who maintained more frequent contact with him and who, even after deciding not to continue his violin studies, continued to have a friendly and loving relationship with Sfilio. In the following picture one can see Sfilio, on the left with his walking stick, who was also the best man at the wedding of Silvano (Figure 45).



Figure 45. Photography wedding of Nino Silvano, pupil of Sfilio (June 18th 1955), where Sfilio was the best man (by courtesy of Nino Silvano).

We do not know much about the last years of Sfilio's life. The three respondents admitted to not having had more contact with this violinist. They also said that they had news of his demise only after a short time. It is unclear if Sfilio had lived in his home until his death, as stated by Silvano and Panizzi, or if he was transferred to a hospice as it transpired from the interview with Grossi.

5.4.3. Summary of interviews

The three respondents were all born between 1927 and 1932 and had a learning experience with Sfilio which was very different in respect of duration and objectives for each one. However they have a very similar opinion about Sfilio as a person: generous, noble of sentiment and very human.

Concerning the technical aspects, the important things that emerged were: the class timetable, discipline and rigor in the study, the exercises with rubber bands, and the exercises to enlarge the left hand, the vertical vibrato and chromatic scales, and passages of changing of position with the wrist.

About the biographical/human part, it seems that Sfilio was rather shy, he did not love to talk with students about him and about his career before becoming blind. So, in fact, many of the results of historical research conducted by the Author of the thesis were unknown to these three former students that were interviewed.

Completing the historical part, and afterwards to present the life of Sfilio and the three interviews, (besides a deeper analysis of the Treatise), was necessary in order to better understand the innovative aspects already met with a first reading of the *Nuova Scuola Violinistica Italiana*.

In the following section an in depth analysis of the Treatise by Sfilio, *Alta Cultura di Tecnica Violinistica*, will be presented.

5.5. Description of the Treatise *Alta Cultura di Tecnica Violinistica*

As was already mentioned (Chapter III), the publication of the *Nuova Scuola Violinistica Italiana* raised some appraisals and some controversies.

For this reason Sfilio, with the collaboration of Berri and Zanier, wrote in 1937 the Treatise *Alta Cultura di Tecnica Violinistica*.

In this little book Sfilio explains, through five key elements (Table 11), the characteristics that, in his opinion, were the salient points of the transcendent technique of Paganini:

Table 11. Scheme of five elements of Sfilio's Method pertaining to the characteristics of Paganini's technique.

Method of Sfilio (Five Elements)				
1.	2.	3.	4.	5.
Violin position	Sense of Touch	Chromatic Scale	Change position with the wrist	Extension of the fingers

1. Concerning **Violin position** Sfilio explains that the left arm should be strongly supported by the body to leave the hand free, promoting lightweight, springing fingers, as shown in the drawings representing Paganini in the act of touching. This is called "closed position violin" with the left elbow on the belly.
2. Talking about **the Sense of Touch**: according to Sfilio it serves for safer tuning: therefore he suggests some silent exercises without the use of the bow, in order to increase left hand sensitivity.

The basic principle of the Method of Sfilio in relation to the sense of touch is the vertical motion (Figure 46) of the fingers which helps to achieve an increased awareness of the relationship between tension and relaxation, which is employing the space between the string and fingerboard. As a consequence it will have a greater control over tuning because the contact point is always the same.



Figure 46. Vertical movement of left hand fingers on the strings.

Because vibrato generates a horizontal movement it can create inaccurate intonation and with the oscillatory motion, when it is not perfectly equidistant and can bring about a sense of faulty intonation in the listener. Only by way of a second step, when the musician has mastered the vertical motion, may be added a small horizontal movement (Figure 47) (which will occur almost spontaneously) that will complement the movement of the vibrato (Sfilio, 2002).



Figure 47. Horizontal movement of left hand fingers on the strings.

3. With respect to the **Chromatic Scale** Sfilio affirms that it is the most important basic element for left hand technique.

Come base della tecnica della mano sinistra io pongo il cromatismo, il quale, dopo quanto ho detto sul tatto, non può essere che il mezzo sicuro per acquistare la perfetta intonazione, e con il quale io impianto i principianti. Infatti, invece di incominciare con la distanza ipotetica del tono che non da alcun punto di riferimento su cui basarsi con certezza, si inizi lo studio cromatico, che per la vicinanza e il sentirsi delle dita l'uno con l'altro darà la minima difficoltà e la massima sicurezza (Sfilio, 2002:23-24).

I suggest that chromatism is the foundation for left hand technique. Together with my remarks on the subject of touch, it is the sure path to perfect intonation, something that I strive to instill in my beginners. In fact, instead of starting with the hypothetical distance of tone, which provides no certain reference point, it is best to begin with chromatic practice, which, through the proximity and interaction of the fingers, will lead to the musician playing with minimum difficulty and maximum sureness (Sfilio, 2002: 22-23).

Sfilio affirms - referring to the autograph of the "*Scala di Paganini*" of Breslavia August 3rd, 1829 (Figure 48) - that this was probably the basis of "Paganini's secret".



Figure 48. Picture taken from the Treatise *Alta Cultura di Tecnica Violinistica* by Francesco Sfilio, adapted from the personal library of the Author.

The prerogative of this scale is the consecutive sequence of fingers. That is, whatever the choice of fingers (example 1-2 or 1-2-3), they must run in this sequence and thereby never "slide" on the fingerboard with the same finger (example 1-1; 2-2 and so on).

Questa diteggiatura ci dimostra perché Paganini poteva eseguire - secondo le unanimità testimonianze - dei passaggi cromatici che sembravano una sfilata di perle tanta era la loro rapidità e la loro sicurezza, senza il minimo smiagolio. (Sfilio, 2002: 26).

This fingering shows us how Paganini could – according to the unanimous testimony of witnesses – execute chromatic passages that were so rapid and sure, without the slightest whining slur, that they resembled a string of pearls (Sfilio, 2002:25).

4. Regarding the **Change of Position** Sfilio affirms that it is accomplished with a wrist motion, while the thumb is static. All this is combined with the three principles of chromatics, the touch and change of position together, promoting a combination of factors that make it easier to play the violin.
5. To conclude this summary, we may read about the **Extension of the fingers**: it takes place through a series of exercises that involve stretching the fingers, rather than moving them through the open palm of the hand. This is somewhat akin to a kind of stretching (Figure 49). Sfilio called this the "guitarist hand."



Figure 49. Drawing by Sir Edwin Landseer (London, 1834, Paganini's left hand). http://www.paganini.comune.genova.it/pdf_doc/archetto2003.pdf accessed May 1st, 2011.

The sense of touch, the second of the five presented elements, is the most important part of the Method for the Author of this thesis, because no one, until Sfilio, explained so clearly as to sensitize the left hand through a systematic series of specific exercises. This element is the real "step forward" in relation to the other Methods, during all the learning processes that have been found and analyzed.

Therefore Sfilio developed a series of exercises which may be considered "original" (which he calls "mute" or silent) which will be analyzed in the next section

5.5.1. Mute exercises

It is very likely that Sfilio's "awareness" about the left hand, was due to his personal history: as we understand he was 27 years old he lost his eyesight in consequence of contracting glaucoma. It was from that moment on that he began to devote himself to teaching, developing aspects that his new physical condition forced him to find. Primarily on analyzing this Method what is more interesting were the exercises proposed in it, unlike all the other Methods found until now, in the opinion of the author, because it focuses significantly on the problem of "left hand technique".

On the next page, in Figure 50, Sfilio introduces some exercises without the use of the bow, only with the left hand. These exercises have as a basis the vertical movement of the finger on the string. Sfilio suggests:

... è bene per la buona riuscita e per evitare la stanchezza non farne più di trenta minuti di seguito (Sfilio, 2002:20).

... for the success of the exercises and to avoid fatigue, to study no longer than thirty minutes at a time (Sfilio, 2002:20).

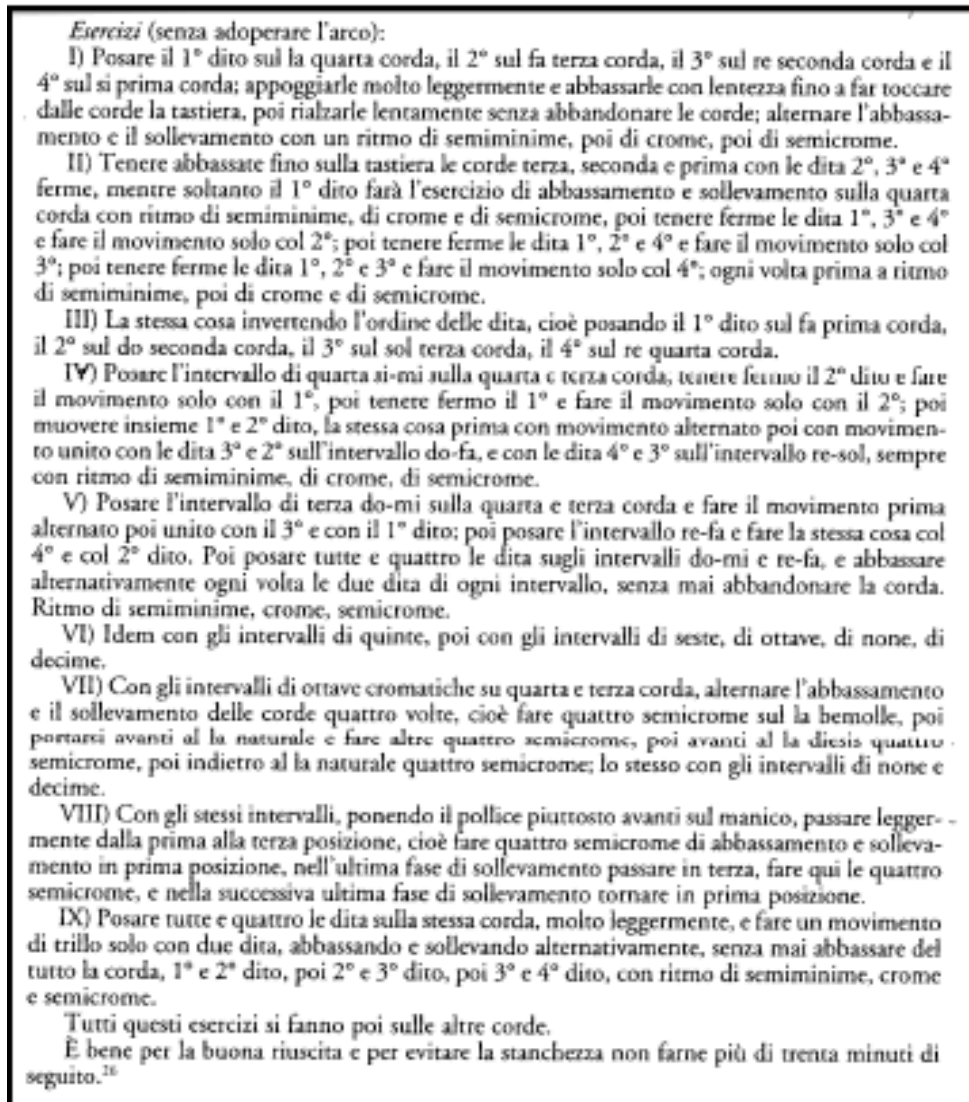


Figure 50. Picture taken from the Treatise *Alta Cultura di tecnica Violinistica* by Francesco Sfilio (adapted from the personal library of the Author).

In the following Figure 51 the Author of this work has "translated" musically what Sfilio describes with words, exemplifying the exercises to be carried out.

Figure 51. Score adapted by the Author of this thesis from the theoretical exercises by Francesco Sfilio contained in the Treatise (adapted from the personal library of the Author).

Continuing in the description of his thoughts Sfilio explains that “intonation is a question of touch rather than hearing” (Sfilio, 2002:20). The sense of touch one obtains through the sensitivity of the fingertips, and the study to acquire this sensitivity must be done with very little finger pressure on the strings, without squeezing the neck of the violin or

stiffening the palm of one's hand. This "lightness", will take place automatically after studying the exercises mentioned above on pressure. He affirms that:

...un esercizio costante secondo questo sistema farà veramente acquistare alle dita quel tatto di cui si è parlato, per cui esse assumeranno in sé la percezione e la padronanza di ogni distanza non solo, ma daranno in ogni caso una sorprendente precisione di intonazione (Sfilio, 2002: 22).

... constant practice using this system will lead the fingers to acquire that sense of touch I have spoken about, as they develop perception and mastery of every distance. It will also produce surprisingly precise intonation for every note (Sfilio, 2002: 21).

The force commonly used to depress the strings during its execution is higher than necessary: this is easily deduced from the fact that the skin of the fingertips harden to form real calluses.

Sfilio suggests that in order to have an idea of excessive pressure, it is necessary to place a finger on one of the four strings of the violin, and press it slowly until it touches the fingerboard: almost a kind of slow-motion simulation of the usual action of the finger on the string when playing. It will be observed that the force, used to lower the string on to the fingerboard, is much lower than that which is normally used during a performance.

Therefore all the energy "saved" can be used for the benefit of velocity and all the movements of the fingers - trills, change of position and vibrato will feel the benefit. The skin of the fingers will not harden as much, with the consequent increase in sensitivity of the finger's touch.

Therefore, from all the historical discoveries about Francesco Sfilio, from the two books of Sfilio regarding the violin technique and on the basis of the three interviews, it was decided to proceed with a pilot study aimed to test and demonstrate scientifically the importance of the exercises (for the left hand) suggested in the Treatise *Alta Cultura di Tecnica Violinistica* by Sfilio.

However, in considering this idea of excessive "pressure" a problem arose. What may be considered "excessive"? How can it be measured?

It was for this reason that the Author of this dissertation began to think about creating a device that would "measure" this pressure of the left hand on the violin strings.

For this purpose it was necessary to create a device that would allow us to measure probable changes (positive or negative) of the left hand pressure on the strings, drawing on the expertise and cooperation of two engineers.

Two devices were created: one of them, however, after a few tests was rejected for some technical failings.

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The next chapter deals with the realization of the devices created specifically for this study, its application in the pilot study and, in general, the Methodology used to collect data that will be analysed later on.

**CHAPTER 6. ACTION RESEARCH: TWO VIOLIN PRESSURE DEVICES - A PILOT
STUDY**

6. ACTION RESEARCH: TWO VIOLIN PRESSURE DEVICES - A PILOT STUDY

6.1. Introduction

We have seen (Chapter II) that the muscle-skeletal disorders in violinists and violists related to the tension of the left hand constitute a real problem with which the musicians confront themselves every day.

The literature review of the most important and used violin Methods (translated into the Italian language) by the Author of the thesis, demonstrate that there exists a lack of exercises intended to make the violinist more aware in terms of relaxation and contraction of the left hand, which is the focus of the present study.

However, the Sfilio Method among all Methods considered (Chapter III) presents new elements compared to the others, with exercises to be carried out without using the bow, with the aim of allowing the instrumentalists to make more conscious movements - in term of contraction and relaxation of the left hand - the objective being to maximize the efficiency of the performance.

In an attempt to scientifically prove the effectiveness of the exercises in Sfilio's Method, the Author of this thesis in collaboration with two friends who are engineers decided to create two different devices with the aim of measuring the finger pressure of the left hand on the fingerboard.

Following on from this in the next section there will be presented a brief description of both sensors: the first sensor realized with the help of engineer Prof. Fabrizio Filizzola– an amateur violinist, and the second with the engineer Prof. Francesco La Gala³⁶, (Appendix 12) Professor at the CNR (National Research Center) of Rome (Italy).

Both sensors were tested with a professional violinist (Pilot Study) in order to choose the best one and to decide the protocol to apply in the experimental study with students.

³⁶ Francesco La Gala was born in Rome in 1969. He obtained his PhD in Theoretical and Applied Mechanics, from 2009 to 2011 he was Director of *Servizio dell'unità tecnica progettazione – costruzione modelli & supporto tecnico generale* and from 2011 till present he is head of the laboratory of measurements and special stages at INSEAN-CNR (test tank) of Rome.

Therefore, in the following Figure 52 there is a summary of the study project of this thesis.

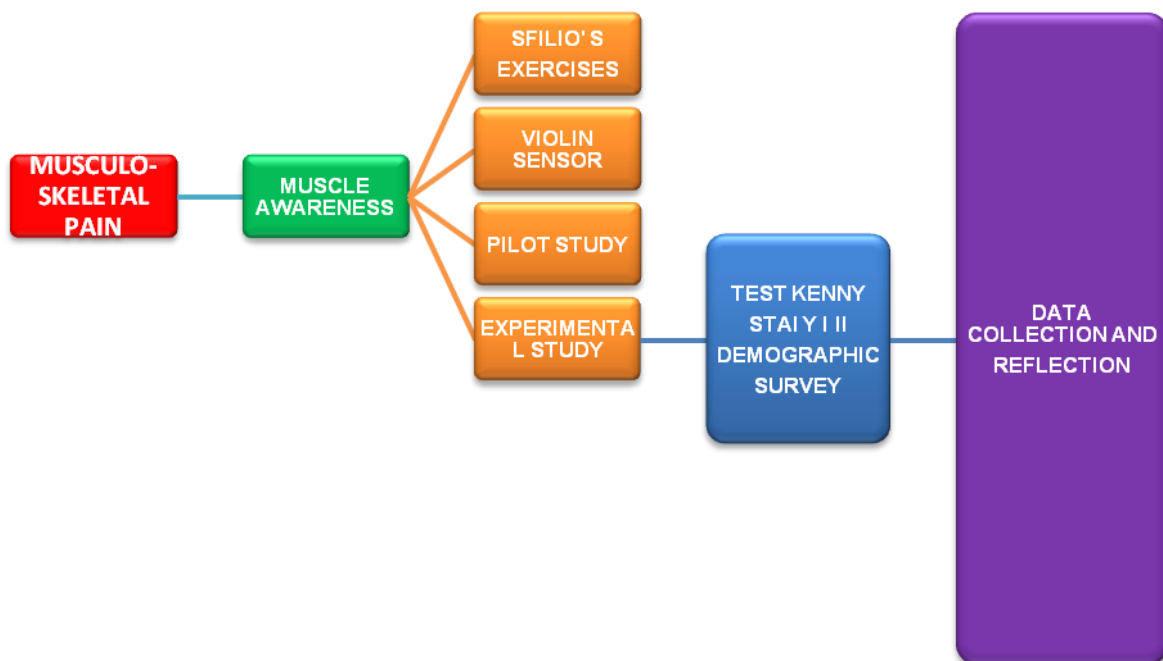


Figure 52. Study design of the thesis.

6.2. Filizzola/Tramma Violin Sensor

The first device (Filizzola) consists of three overlapping layers :

- Layer one: adhesive copper tape with conductive glue, thickness $30\ \mu\text{m}$ ³⁷ (1/10 mm).
- Layer two: velostat³⁸ by 3M resistive thickness 4 thousandths of an inch³⁹.

³⁷The Micron is a unit of length equal to one thousandth of a millimeter, or one millionth of a meter. Also called micrometer.

³⁸Velostat is a material made of a polymeric foil (polyolefin) impregnated with carbon black to make it electrically conductive. It was developed by Custom Materials, now part of 3M, and due to its properties of changing its resistance with either flexing or pressure, it is becoming popular with hobbyists for making inexpensive sensors for microcontroller experiments.

³⁹Inch is a unit of length, which is still widely used in the Anglo-Saxon countries, such as the United Kingdom and the United States in addition to many technological areas.

- Layer three: adhesive copper tape with conductive glue, thickness 30 μm (1/10 mm).

Figure 53 represents the description of technical features of Velostat.

3M Film, Bag and Tubing Properties*

Property	Test Method	Typical Value
Thickness	ASTM D2103	4 mil (102 microns)
Strength		
Breaking Factor	ASTM D882	10 lbs./in.
Puncture	Fed Std 101	8 lbs.
Heat Seal Parameters		
Temperature		180°F - 250°F
Time		0.5-5.0 sec.
Pressure		20-60 PSI
Temperature Limits		-50°F to 150°F
Vicat Softening Temperature	ASTM D1525	83°C
Electrical Properties		
Volume Resistivity	ASTM D991	<500 ohm-cm
Static Decay	EIA-541	<2 sec.
Water Vapor Transmission	ASTM F372	3 g/sq m/day
Chemical Susceptibility		
Dilute Acids and Alkalies	ASTM D543	Resistant
Concentrated Acids and Alkalies		Slight attack
Alcohols (Isopropanol)		Resistant
Hydrocarbons (Heptane)		Moderate attack
Ketones (Acetone)		Slight attack
Oil and Gasoline		Moderate attack
Aromatic Hydrocarbons (Toluene)		Severe attack
Shelf Life		Indefinite

Typical values for 4.0 mil. film.

*Physical characteristics will change with other thicknesses.

Figure 53. Technical features of Velostat.

The sensor covers all the violin fingerboard, and shows a resistance measured at rest of about 270 Ohm⁴⁰, as one can see in the following Figure 54.



Figure 54. The “sandwich” composed of two copper tapes and one of Velostat in the middle on the violin fingerboard.

⁴⁰The symbol Ω (ohm) is the unit of the measurement of electrical resistance.

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The sensor described above has been connected via/through a female jack 2.5 mm, as can be seen in Figure 55, with two copper wires soldered with tin.



Figure 55. Female jack 2.5 mm.

The sensor is connected to a microprocessor open source *Arduino*⁴¹ (Figure 56) through an audio cable with a thickness of 3.5 mm (Figure 57).

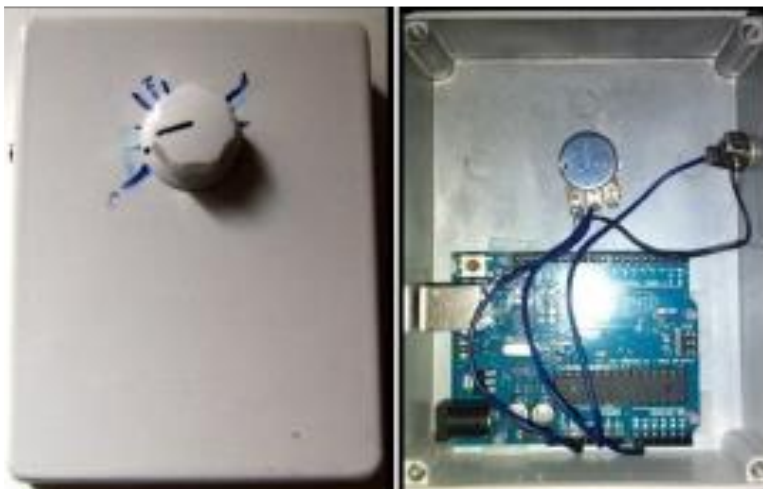


Figure 56. *Arduino* hardware.



Figure 57. Audio cable.

⁴¹*Arduino* is an open-source computer hardware and software company. *Arduino* started in 2005 as a project for students at the Interaction Design Institute in Ivrea, (Italy). The name *Arduino* comes from a bar in Ivrea, where some of the founders of the project used to meet.

The pressure of the sensor decreases the resistance of the Velostat and therefore reduces the reading of tension as well (analog read). The power is five volts. The potentiometer (POT) is 1 KOhm⁴² value and has the function to calibrate the instrument of measurement.

All these elements are connected to a computer via a USB cable for data collection. Figure 58 represents the basic structure of the device:

1. Velostat on the violin fingerboard.
2. Jack 2,5 mm.
3. Arduino with potentiometer.
4. Printer cable Cable USB 2.0.
5. PC



Figure 58.The basic structure of the sensor Filizzola/ Tramma

After this the next step was to download the *Arduino Software*1.0.5 and *Processing* 2.1.2⁴³ from the following <https://www.arduino.cc/en/main/software> and <https://processing.org/download/>.

⁴² The KiloOhm is the unit of measurement of the electric resistance of 1000 Ohm.

⁴³*Processing 2* is a programming language, initially created to serve as a software sketchbook and to teach computer programming fundamentals within a visual context, actually used by tens of

How to improve awareness of the violinist's left hand through Sfilio's Method

After obtaining the Processing software there started to appear details, as can be seen in the graphic shown below (Figure 59), and the data began to record. The number 3 is the baseline (without pressure), the numbers 4 and 5 show when the fingers press down on the fingerboard.

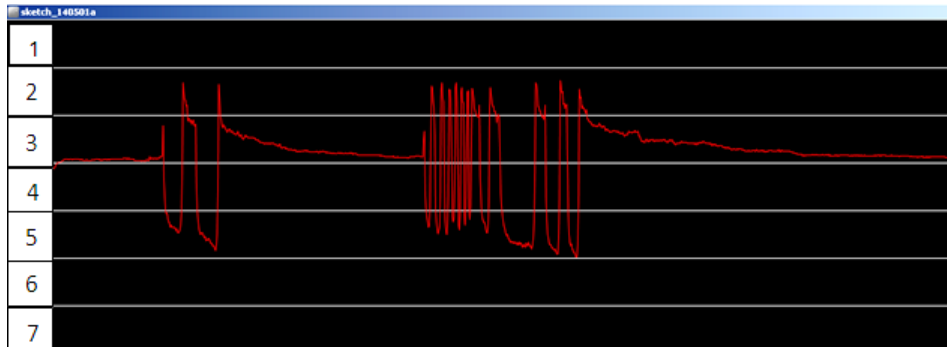


Figure 59. Processing graphic left hand pressure.

The Data that originated from the *Arduino* hardware was recorded by the software, and saved in a spread sheet Excel (Microsoft® Office).

This device after testing, and in consequence of a certain instability in terms of pressure sensing, displayed in line 3 the baseline (without pressure). After pressing and lifting the fingers on the strings (line 5) the line did not come back to the same place, but overstepped the baseline (line 2).

Just for this reason and to solve this problem, it was decided to create a new device.

6.3. La Gala/Tramma Violin Sensor

For this device the engineer Prof. La Gala used the Strip force sensor by the Interlink model FSR 408. This series is part of the single zone Force Sensing Resistor™ family (Figure 60).

Force sensing resistors (FSR), are robust polymer thick film (PTF) devices that exhibit a decrease in resistance with increase in force applied to the surface of the sensor.

thousands of students, artists, designers, researchers, and hobbyists who use *Processing* for learning, prototyping, and production.



Figure 60. Force Sensing Resistor™ by 3M

The sensor, applied on the fingerboard is divided in two parts: the first one placed below the first and second strings, and the second one placed below the third and fourth strings, as shown in the following Figure 61.



Figure 61. Sensor Force Sensing Resistor™ by 3M fixed on the fingerboard.

This sensor mentioned above is connected with a female jack 2.5 mm as may be seen in Figure 62.



Figure 62. Female jack 2.5 mm. to connect the sensor to a USB card.

How to improve awareness of the violinist's left hand through Sfilio's Method

The sensor is connected with a USB card (Figure 63) through the male jack 2.5 (Figure 64) and the cable PS/2 (Figure 65).

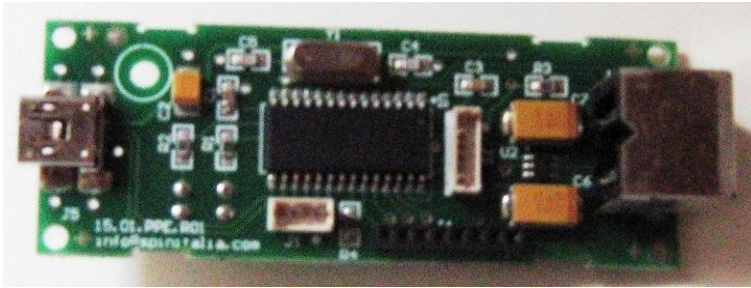


Figure 63. USB card.



Figure 64. Male Jack 2.5 mm.



Figure 65. Cable PS/2 for Keyboard and Mouse.

Finally, a mini USB cable connects the sensor to/with a laptop (Figure 66).



Figure 66. Mini USB cable.

The software (created by Dr. La Gala) utilized to read and to store data is 1.0.1HID⁴⁴, appears as in the image below (Figure 67).

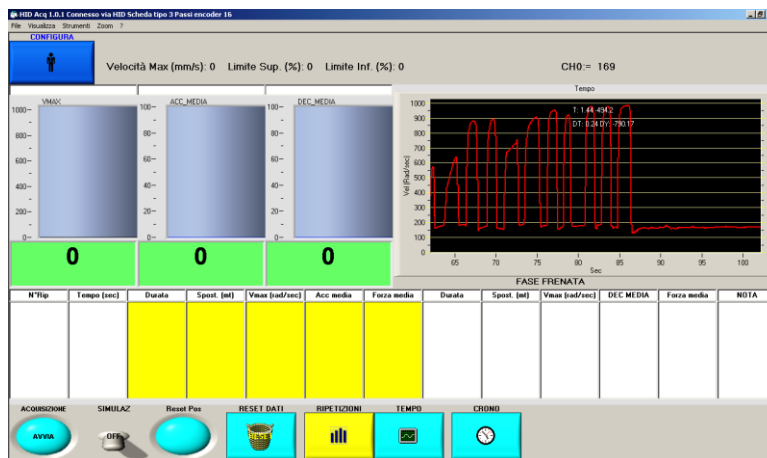


Figure 67. Software 1.0.1 HID.

In the following graphic (Figure 68), the plot of the left hand pressure is displayed. Under the “200” values there is no finger pressure, only open strings. The maximum pressure is under “1000” values. This device does not register the pressure on each string (as in double stops), but it measures the **average pressure** of all four fingers.

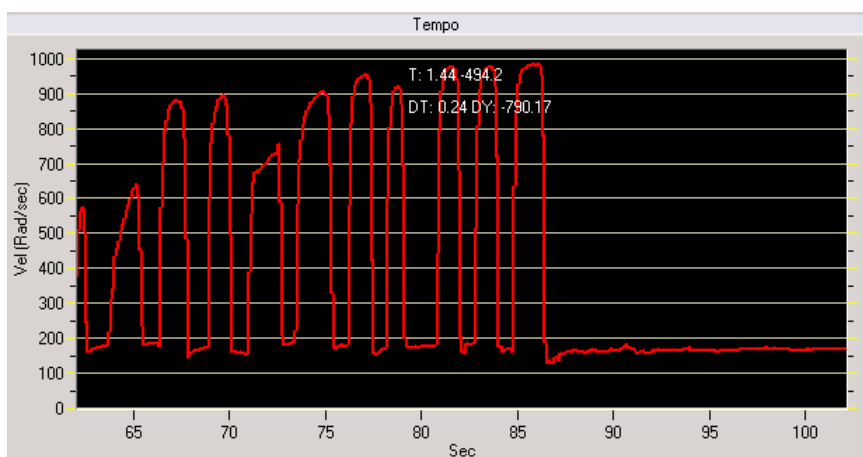


Figure 68. Plot of finger pressure on the strings.

After having created the two sensors, and having taken into consideration the Filizzola / Tramma device, the Author decided to conduct a pilot study to test the validity of

⁴⁴The Software La Gala/Tramma was created by Francesco La Gala specifically for this study, adapting a previous software designed for studies of Canoe and Kayak. <http://www.federcanoia.it/federazione/news/4-la-forza-non-e-tutto-prove-in-vasca-per-migliorare-le-prestazioni-a-bordo-di-kayak-e-canoe-un-a.html>

the second sensor (La Gala / Tramma) and to define a protocol study that should be applied to the experimental study.

At this point it is relevant to recall that one of the objectives of this dissertation has the intention to demonstrate scientifically that the application of some exercises from Sfilio's Method may represent a valid means for the resolution of problems regarding left hand injury and, consequently, for performance optimization.

6.4. Pilot Study

For the pilot study a professional musician of the Orchestra of the *Teatro dell' Opera di Roma*, a colleague of the Author of this thesis was contacted. The realization of the pilot study lasted two weeks, and the following study protocol that was implemented is divided into five steps as showed in the following Table 12.

Table 12. Five steps of the Pilot Study.

First Step	Second Step	Third Step	Fourth Step	Fifth Step
1 st Recording with violin sensor before start the Experimental study (base line)	5 Days application (25/30 min) of common violin method	2 nd Recording with violin sensor	5 Days application (25/30 min) of exercises from Sfilio's Method	3 rd Recording with violin sensor

The first day (first step) the violinist was asked to play a short piece that was taken as the standard for subsequent recordings. The violinist decided to play the first page of the Fugue taken from the Sonata for solo violin in A minor BWV 1003 by JS Bach (1685-1750). The duration was about two minutes. The piece was performed with a metronome speed of 112 to the quaver, used also for subsequent recordings.

Immediately after the first recording, came the training (second step) which began for about thirty minutes during a period of five consecutive days (Monday / Friday) with the violinist's own instrument. This training was carried out in the author's presence.

The daily study was articulated into eleven sections/segments. This comprised four studies/exercises from three violin Methods: H. Schradieck (Figure 69), A. Salvatore (Figure 70), and R. Kreutzer (Figure 71). The choice of these exercises was based by common consent of the Author and the colleague who took part in the pilot study: the exercises are useful in developing the sensation of left hand agility and lightness.



Figure 69. Henry Schradieck from the School of Violin Technique - Exercise n° 1 (excerpt).



Figure 70. Antonio Salvatore from *Quaderno di Tecnica per Violino* - Exercise n° 10 (excerpt).



Figure 71. Rudolph Kreutzer from *42 Etudes ou Caprices* for violin - Exercise n° 9 (excerpt).

For each section the tempo of the metronome started from a slower tempo to a faster one (MM=48/60/72/84/96/108) and then returned once more to the slow tempo. Depending on the metronome speed, the violinist decided to begin with eight notes per bow for the slower tempo (MM=48 and MM=60), and sixteen notes per bow for the faster tempo (MM=72, MM=84, and MM=96). During this training, among the sections, the violinist has taken a short rest in intervals of sixty seconds.

By the end of these five days (second step) of training, the second recording was effected (third step) with the violin sensor device.

During the second week (fourth step), the procedure carried out was the same as that used in the first week (about thirty minutes for five days) but this time with Sfilio's exercises, applied without the bow (Table 12). The violinist played his own instrument. The metronome speed was the same for all sections (MM=60) because these mechanical exercises need a great deal of control in terms of dropping and lifting of the fingers.

The violinist, during this fourth step found that there was increased difficulty in keeping high concentration. This was due, in part to the fact that these exercises without the use of the bow and the repetitive finger motions, were sometimes implemented mechanically and instinctively with little awareness. By the end of the second week the pilot study concluded with the last recording (fifth step).

In the following paragraph the results of the data collection are given.

6.5. Data Collection

From the collected data, it has been possible to note some interesting results. The third recording had a lower mean of pressure compared to the first and second as is illustrated in the next Table 13.

Table 13. Mean pressure results of the Pilot Study. Rec. 1= first recording; Rec. 2 = second recording; Rec. 3 = third recording.

PILOT STUDY PARTICIPANT	REC. 1	REC. 2	REC. 3
Mean/SD	685,07± 64,07	641,50± 177,84	627,11±176,83

It is difficult to assess the discomfort factor while playing another violin and how much it influenced the violinist's playing. However, before the recordings the violinist was given the opportunity to familiarize himself for a few minutes with the new instrument fitted with the sensor.

After this encouraging result which appeared to be a direct result of the application of Sfilio's Method, we proceeded to implement the application of this pilot study protocol to a group of students of the Conservatory of Cuneo (Experimental Study). The next Chapter VII presents the experimental study, the criteria for the selection of pupils, the Methodology, and the repertoire that was employed.

CHAPTER 7. EXPERIMENTAL STUDY WITH STUDENTS

7. EXPERIMENTAL STUDY WITH STUDENTS

7.1. Introduction

In the light of all that has been said so far, about the muscle-skeletal problems (Chapter II) due to the tension of the left hand and compared to the lacunae in the Italian and foreign Methods analyzed - with the exception of the Method of Sfilio (Chapter IV), based on the testimonies of former Sfilio's students still alive -, a sensor which can measure the pressure of the fingers of the left hand on the strings was developed, obtaining interesting results in the pilot study (Chapter VI). Therefore it was expected that the Sfilio Method, applied to a larger group of students, may offer a wider range of results from which even more interesting conclusions could be reached.

Therefore, the Author of the thesis realized the experimental study using a group of seven students of the Conservatory, who were available to submit to this experience.

7.2. Participants and their Recruitment

A small group of students shared the violin class of the author of this dissertation, at the Conservatory of Cuneo. The most complex aspect of the organization of this experience has been to balance the demands of all students who had to appear daily in the Conservatory to take part in the experimental study, for two weeks without interruption.

To better evaluate the results that would have produced the experimental study, the seven students were divided into two groups, respectively in intermediate and advanced level. Among the intermediate level students, the age was between fourteen and seventeen years old; while among the advanced level students the age was between nineteen and twenty-two years old.

7.3. Study group

For the experimental study the same procedure as that of the pilot study was implemented (Chapter VI). That is to say, for the realization of this study it took place over a period of about two weeks and the work realized is divided into five steps (Table 14):








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Table 14. Five steps of the Experimental Study.

First Step	Second Step	Third Step	Fourth Step	Fifth Step
1 st Recording with violin sensor before start the Experimental study (base line)	5 Days application (25/30 min) of common violin method	2 nd Recording with violin sensor	5 Days application (25/30 min) of exercises from Sfilio's Method	3 rd Recording with violin sensor

Each of the students were asked to choose, according to the teacher, to play a short piece of music lasting about two minutes, and this piece was taken as the standard for the subsequent two recordings. These pieces were performed during all three phases of recordings, with the same speed of the metronome, as reported in the Table15 below.

Table 15. Metronome speed of three phases of recordings.

Participants	Level	Piece	Beat
1.	Intermediate Level	R. Kreutzer Etude n° 36 from 42 Etudes (excerpt)	 =104
2.	Intermediate Level	F.Kreisler Rondino on a theme by Beethoven	 =104
3.	Intermediate Level	L. Portnoff Concertino op. 13 in E minor	 = 92
4.	Intermediate Level	Dvorak Sonatina in G major op. 100 first moviment	 =104
5.	Advanced Level	Bach Sonata n°1 in G minor BWV 1001 – Fuga (excerpt)	 = 52
6.	Advanced Level	Bach Partita n°3 in E major BWV 1006 – Preludio (excerpt)	 = 88
7.	Advanced Level	Bach Partita n°1 in B minor BWV 1002 – Allemanda (excerpt)	 = 60

Before starting, all the students were subjected to three psychological tests: Demographic survey (Appendix 8), Kenny- MPAI (Appendix 9), and the State-Trait Anxiety Inventory Form Y1 and Y2 (Appendix 10 and 11). Subsequently all have measured the pressure of the left hand with the sensor La Gala / Tramma so as to determine a sort of individual baseline.

On the first day the student, before playing the short piece, was given the possibility of familiarizing himself with the violin sensor for a few minutes with their own shoulder rest and bow.

After recording the pressure with the device and collected data, there then started the application of the common violin Method. The excerpts used were the same utilized for the pilot study.

The first group (Intermediate Level) consisting of four younger students (placed in a circle to give the possibility of simultaneous observation to the teacher), to verify in details all the movements of the left hands fingers. Subsequently, the second group (Advanced Level) were placed in the similar first group position with the teacher in the middle.

Immediately after the first recording, and during the course of the first week, the training (second step) was begun for about twenty five to thirty minutes during a period of five consecutive days (Monday / Friday) with the violinist's own instrument. These practical exercises were carried out in the author's presence, and utilizing the same procedure as that of the pilot study. The extracts of some exercises drawn from the most important violin Methods for developing the sensation of left hand agility and lightness were applied. H. Schradieck (Figure 73), A. Salvatore (Figure 74), and R. Kreutzer (Figure 75). These exercises selected were determined by the wealth of study of the students level, by the pilot study experience and also because those Methods are routinely used in Italian Conservatories.



Figure 72. Henry Schradieck from the School of Violin Technique - Exercise n° 1 (excerpt).

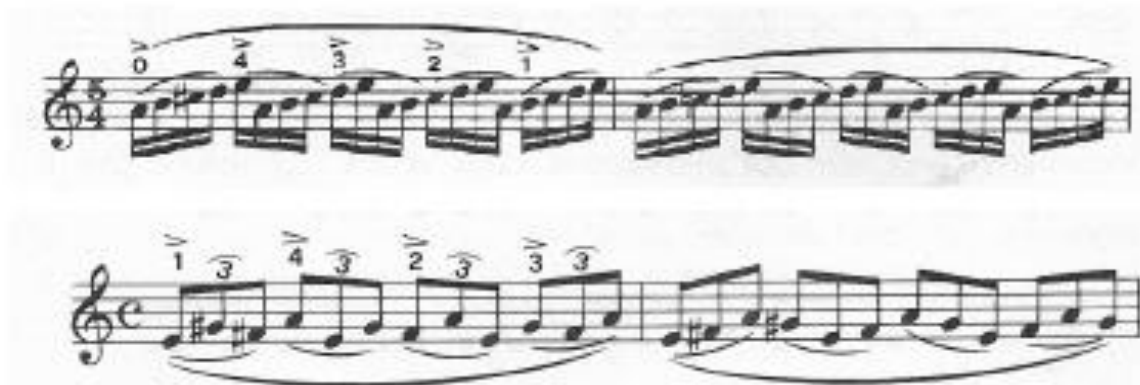


Figure 73. Antonio Salvatore from Quaderno di Tecnica per Violino - Exercise n° 10 (excerpt).



Figure 74. Rudolph Kreutzer from 42 Etudes ou Caprices for violin - Exercise n° 9 (excerpt).

The daily study was articulated into eleven sections as in the Pilot Study (see Chapter VI).

7.4. Materials and procedures of the Experimental Study

The psychological assessment instruments applied in this study were used with a view to create psychological evaluations of the selected musicians. The description and the criteria of choice for each of these tests are reported below.

7.4.1. Demographic survey

This survey was submitted to students primarily to know their path of musical studies, the age range, and muscle-skeletal problems derived from the study of the instrument itself (Appendix 8).

7.4.2. Kenny - MPAI (Italian version)

As already mentioned in the introduction, the principal aim of this study is concerned with improving the awareness of the violinist's left hand. Therefore, it seemed appropriate to use a music performance anxiety inventory. The one chosen was Dianna Kenny's revised 40-question emotion-based MPA test (2009, see Appendix 9). This was because:

... these results provide initial evidence of the complex structure of music performance anxiety, particularly in its severe form, and indicate that management and treatment of the condition will need to be tailored to the individual's pattern of contributing causal features (cited in Kenny, 2009a: 37).

The Italian version (Facchini F. and Facchini, R., 2014) of this test was used. The answers were later analyzed by a psychologist. This test is currently being validated in the Italian language.

7.4.3. State -Trait Anxiety Inventory Form Y1 and Y2 (Italian version)

The State-Trait Anxiety Inventory (STAI) (Spielberger *et al.*, 1983; Italian version

Pedravissi & Santinello, 1989 Appendix 10 and 11) consists of two sections that evaluate two different aspects of anxiety: State Anxiety (evaluated by Y1 form) and Trait Anxiety (evaluated by Y2 form). Respectively, the State Anxiety represents the intensity of the anxious emotion in a particular time, and it is apparent in feelings of tension, nervousness, worry, anxiety, and neuro-vegetative responses. The Trait Anxiety, instead, consists of a "relatively stable individual disposition" and is thus considered as a characteristic of the subject's personality. The two scales of the STAI consist of twenty questions with a Lickert scale response system of four points (*1=per nulla; 2=un pò; 3=abbastanza; 4=moltissimo*). Some questions are quoted in reverse way (inverse items of Y1: 1, 2, 5, 8, 10, 11, 15, 16, 19 e 20; inverse items of Y2: 1, 3, 6, 7, 10, 13, 14, 16 and 19). The response options for the STAI-state relate the momentary state of mind of the subject. The choice between these different alternatives in the STAI-trait refers, instead, to the usual condition of the subject. Each of these scales scored from 20 (low anxiety) to 80 (high anxiety). The higher the score, the greater is the anxiety level and it can give rise to certain uneasiness, interfering with the performance of an individual.

As regards the procedure to carry out this test, the test STAI State-Anxiety and Trait-Anxiety (Y1 and Y2, respectively), were administered by a certified professional psychologist before and after every concert. It is important underline that STAI Y2 is a test of personality trait that normally should require only one reading. However, in order to be as close to the correct mark as possible, this test was applied throughout the study.

7.5. Analyses of data

After collecting the psychological data, they were entered into SPSS (Statistical Package for Social Sciences) for Windows 19, and analyzed that led to the formulation of conclusion. Given the characteristics of the sample (small number of participants) and the objectives to be tested, it was decided to use non parametric statistics. Thus, in order to obtain information on the characteristics of the sample, descriptive statistics were calculated to psychological and physiological variables. Spearman's correlations to study the relationships between the variables were also used. Also noted is the significance level used of $p < .05$ as a reference.

The physiological results, obtained through the Tramma-La Gala Sensor and the software *1.0.1HID* (created by Dr. La Gala), were analyzed with the *Microsoft Office Excel*

2007.

7.6. Ethics approval

The whole study was presented to the participants to explain the implications of participating in this study. Various indications for ethical treatment of participants, including the Declaration of Helsinki (World Medical Association, 2000) and the American Psychological Association (APA, 2010) were taken into consideration.

The research safeguarded the welfare of the participants, above all. All research participants (students and interviewed) signed an informed consent to participate (Appendix 5). In the first document the general objectives of the research, the role of the participants and the researcher role, including ensuring confidentiality of the data provided, were explained.

In the following Chapter the results of the data will be shown.

CHAPTER 8. RESULTS

8. RESULTS

8.1. Introduction

This chapter presents the results of the Experimental Study that was made with the sensor La Gala / Tramma. The latter proved to be more effective for reading the pressure measurements of the left hand on the strings, than the device presented in the pilot study (Chapter VI, Filizzola / Tramma sensor).

Before presenting the collection of data regarding the pressure of the left hand, a personal and psychological profile of the students involved in the experimental study, through the a demographic questionnaire, K-MPAI, and STAI Y1 and Y2 jointly is presented.

As has been said, the Experimental study was realized with seven students of *Conservatorio Superiore "Ghedini" di Cuneo*, divided in two groups (Intermediate and Advanced) based on the level of violin training.

8.2. Psychological and Physiological Data Results.

8.2.1. Demographic questionnaire

As explained in Chapter VII, the demographic questionnaire was administered to the seven participants of the experimental study, in order to verify also if they had some muscular problems derived from the study of the violin.

The following Table 16 contains information about the level of violin training, the age range, years of study, muscle-skeletal problems, auto-perception of left hand tension and therapeutic treatments.

Table 16. Demographic questionnaire of Experimental study participants. N= Never; S= Sometimes; O= Often. 1., 2., 3., 4., 5., 6. and 7. = Participants.

PARTICIPANTS	Intermediate Group				Advanced Group		
	1.	2.	3.	4.	5.	6.	7.
Age Range	14-17	14-17	14-17	14-17	18-21	18-21	22-25
Years of Study	7-9	4-6	4-6	7-9	10-12	10-12	> 15
Muscle-Skeletal Problems	S	S	S	O	S	O	S
Auto-Perception of Left Hand Tension	O	S	S	S	S	S	S
Therapeutic Treatments	NO	NO	NO	YES	NO	NO	NO

The Demographic questionnaire shows us that in the Intermediate Group the age range is among 14-17 and in the Advanced Group among 18-21.

There is only one participant (number seven) that is older in comparison with the others, and he is the more experienced student (over fifteen years).

The participants numbers four and six referred to often have muscle-skeletal problems, and only the participant number four sometimes needs some therapeutic treatments.

8.2.2. Kenny Music Performance Anxiety Inventory (K-MPAI) results

The structure of the revised K-MPAI test for music students, is divided into nine Factors: Depression/hopelessness (Psychological vulnerability); Worry/dread (Negative cognitions); Proximal somatic anxiety; Parental empathy; Memory; Pre and post performance rumination; Generational transmission of anxiety; Self/other scrutiny; Controllability.

To calculate the values for each Factor, the Author of this thesis had indications from Dr. Dianna Kenny⁴⁵, the author of the test.

Dianna Kenny also explained that, for the professional musicians, when the total score of all Factors is over 105 "indicate that the musicians may have a clinical level of anxiety and/or depression" (from the personal correspondence with the Author). About the scoring protocol for music students, Dianna Kenny affirmed: "I don't yet have a scoring protocol for the students because I have only got one student population so far. I need to do confirmatory factor analysis to judge the stability of the factors" (from the personal correspondence with the Author).

Consequently, the values obtained from this Experimental study, are only indicative and not definitive and they will be deeply analyzed after the Italian validation and after Kenny's official scoring protocol for the students.

⁴⁵ Dianna Kenny is a Professor of Psychology and Professor of Music at the University of Sidney and was the founding director of the Australian Centre for Applied Research in Music Performance at the Sidney Conservatorium of Music.

Using the Kenny Music Performance Inventory, as the basis of an exploratory evaluation grouped by thematic factors, the values of participants are presented in the following Table 17.

Table 17. Assessed Factors in K-MPAI, results of the participants before the first recording. 1., 2., 3., 4., 5., 6. and 7. = Participants.

K-MPAI ASSESSED FACTORS	PARTICIPANTS						
	Intermediate Group				Advanced Group		
	1.	2.	3.	4.	5.	6.	7.
Depression/hopelessness (Psychological vulnerability)	23	15	6	20	20	18	20
Worry/dread (Negative cognitions)	26	12	18	8	14	21	15
Proximal somatic anxiety	22	26	18	14	21	15	22
Parental empathy	8	8	6	2	3	4	5
Memory	8	8	12	2	5	5	0
Pre and post performance rumination	4	5	0	11	2	4	6
Generational transmission of anxiety	6	6	0	6	7	2	8
Self/other scrutiny	13	13	12	6	10	15	10
Controllability	8	6	6	4	5	7	6
TOTAL	118	99	78	73	87	91	92

As already explained, one can not make other considerations since there is still no scoring protocol for the music students.

In any case, observing the results of the seven participants one can see that one from the Intermediate Group (Participant number one) had a higher level of anxiety.

8.2.3. STAI Y2 (State Trait Anxiety) results

Regarding the STAI Y2 (State Trait), Table 18 displays the value obtained for the seven participants divided in Intermediate and Advanced Groups. One should be reminded that the State Trait Test tells us about the general normal anxiety level.

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Table 18. STAI Y2 individual results of seven participants. 1., 2., 3., 4., 5., 6. and 7. = Participants.

	Intermediate Group				Advanced Group		
Participants	1.	2.	3.	4.	5.	6.	7.
Results	43	36	32	49	47	34	33

The participants numbers one and four of the Intermediate Group present a greater anxiety trait. The same is observed in the Advanced Group for the participant number five. At the moment “we are not in possession of accurate data regarding the Italian men and women average and SD of the STAI test. In general, the total STAI score is between 20 and 80 with a threshold value predictive of anxiety symptoms established at 40. According to a scalar criteria is also possible to define three severity level: 40 to 50 slight form, 50 to 60 moderate form, >60 severe form” (from personal correspondence with Psychologist Dr. Adriano Legacci⁴⁶).

8.2.4. STAI Y1 (State Anxiety) results

Below, Table 19 shows the STAI Y1 results of the seven participants to the Experimental Study.

Table 19. Individual results of State Anxiety (STAI Y1) of all participants before and after the three recordings. Rec. 1 = first recording; Rec. 2 = second recording; Rec. 3 = third recording. 1., 2., 3., 4., 5., 6. and 7. = Participants.

PARTICIPANTS	REC. 1		REC. 2		REC. 3	
	Before	After	Before	After	Before	After
Intermediate group						
1.	41,00	57,00	37,00	34,00	35,00	30,00
2.	57,00	24,00	34,00	24,00	21,00	20,00
3.	32,00	39,00	32,00	31,00	30,00	31,00
4.	42,00	25,00	38,00	31,00	32,00	31,00
Advanced group						
5.	33,00	30,00	35,00	34,00	30,00	31,00
6.	37,00	31,00	35,00	35,00	44,00	39,00
7.	31,00	31,00	27,00	30,00	30,00	28,00

⁴⁶ Adriano Legacci (Padova). Psychologist, specialist in Psychotherapy. Former professor of Clinical Psychoanalysis and Psychology team director of Carl Rogers Centre. www.psicologopadova-adrianolegacci.it 1st October 2015.

In order to compare the Intermediate and Advanced Group results relative to the anxiety state (STAI Y1), there has been calculated the mean (M) and the standard deviations (SD) of each group showed in the following Table 20.

It was also observed (Table 20) if there were differences between the Intermediate and Advanced Group in terms of State-Anxiety and Trait-Anxiety. It turns out that the Intermediate Group showed lower values through the course of experimental study than the Advanced Group.

Table 20. Means (M) and Standard Deviation (SD) results of STAI Y1 and Y2 of Intermediate and Advanced Group before and after the three recordings. Rec. 1 = first recording; Rec. 2 = second recording; Rec. 3 = third recording.

GROUPS	STAI Y2	STAI Y1 REC. 1		STAI Y1 REC. 2		STAI Y1 REC. 3	
		BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
Intermediate Group							
M/SD	40,00±7,53	43,00± 0,36	36,25±15,44	35,25±2,75	30,00±4,24	29,50± 6,03	28,00± 5,35
Advanced Group							
M/SD	38,00±7,81	33,67± 3,06	30,67± 0,58	32,33±4,62	33,00± ,65	34,67± 8,08	32,67± 5,69

8.2.5. Physiological Data Results

In this section are presented the individual left hand pressure results (Pressure = kPa⁴⁷) of each participant in the Experimental study during three recordings (Table 21).

The means of kPa have been calculated without zero, i.e. removing, from the total average, all the moments in which the strings were not depressed. Therefore the average here presented is the result of each moment of recording in which the participant had effectively played.

The following showed values, therefore, are exactly those considered as the baseline, noticed from the sensor when there was not any pressure on the strings. So, to guarantee that the measurements of results were reliable as much as possible, it was asked of the

⁴⁷ kPa= KiloPascal, is a strain and pressure unit of measure. The name derives from Blaise Pascal (1623 – 1662) French physicist, and mathematician.

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students, before beginning to play, not to touch the strings during about sixty seconds, an interval during which the sensor recorded the baseline.

In fact, the sensor itself could undergo small differences following the very slight and imperceptible alterations of the instrument, determined from various factors (weather changes, greater or smaller degree of humidity and so on).

The following Table 21 shows the Mean (M) and Standard Deviation (SD) of the individual pressure results of the three recordings.

Table 21. Means (M) and Standard Deviation (SD) Pressure Level-Data collections for first, second and third recording. Rec. 1 = first recording; Rec. 2 = second recording; Rec. 3 = third recording. 1., 2., 3., 4., 5., 6. and 7. = Participants.

PARTICIPANTS	REC. 1	REC. 2	REC. 3
	M±SD	M±SD	M±SD
Intermediate Group			
1.	563,3±151,67	511,8±200,87	477,5±192,25
2.	618,8±254,95	529,3±242,93	608,5±209,91
3.	551,9±234,23	496,7±224,26	464,6±216,62
4.	464,3±134,21	466,3±82,10	403±77.01
Advanced Group			
5.	606,02±169,27	577,8±172,59	529,3±215,50
6.	508±83,3	579,2±157,46	470,4±98,08
7.	536 ±253,33	483,8±68,94	453,7±241,09

8.2.6. Comparing Psychological and Physiological Data Results

The Author of the thesis considered it interesting to relate the individual results of psychological tests regarding the pressure of the left hand fingers of each participant. This is because it is interesting to verify if a greater or lesser anxiety corresponds to a higher or lower pressure of the left hand on the strings.

To resume the physiological and psychological individual results the following Table 22 was made.

Table 22. Individual STAI Y1 (Before/After) and Pressure value results. Rec. 1 = first recording; Rec. 2 = second recording; Rec. 3 = third recording. 1., 2., 3., 4., 5., 6. and 7. = Participants.

PARTICIPANTS	REC. 1	REC. 2	REC. 3
	STAI Y1 Before/After	STAI Y1 Before/After	STAI Y1 Before/After
	Pressure	Pressure	Pressure
Intermediate group			

1.	41,00/57,00	563,3	37,00/34,00	511,8	35,00/30,00	477,5
2.	57,00/24,00	618,8	34,00/24,00	529,3	21,00/20,00	608,5
3.	32,00/39,00	551,9	32,00/31,00	496,7	30,00/31,00	464,6
4.	42,00/25,00	464,3	38,00/31,00	466,3	32,00/31,00	403,0
Advanced group						
5.	33,00/30,00	606,02	35,00/34,00	577,8	30,00/31,00	529,3
6.	37,00/31,00	508,0	35,00/35,00	579,2	44,00/39,00	470,4
7.	31,00/31,00	536,0	27,00/30,00	483,8	30,00/28,00	453,7

The next Table 23 compares the mean of STAI Y1 and Pressure of the Intermediate and Advanced Group.

Table 23. Mean of STAI Y1 (Before/After) and Pressure results of Intermediate and Advanced Group. Rec. 1 = first recording; Rec. 2 = second recording; Rec. 3 = third recording.

GROUPS	REC. 1		REC. 2		REC. 3	
	STAI Y1 Before/After	Pressure	STAI Y1 Before/After	Pressure	STAI Y1 Before/After	Pressure
Intermediate Group	43,00/36,25	549,58	35,25/30,00	501,03	29,50/28,00	488,40
Advanced Group	36,00/30,67	550,01	32,33/33,00	546,93	34,67/32,67	484,47

In the next Chapter IX all the results presented will be discussed and will be followed up by final conclusions.

CHAPTER 9. DISCUSSION OF RESULTS AND GENERAL CONCLUSIONS

9. DISCUSSION OF RESULTS AND GENERAL CONCLUSIONS

9.1. Introduction

This study has aimed to understand if in the educational sphere and in the professional life, the application of the Method of Sfilio could solve or prevent muscular injury of the left hand in violinists in order to optimize their performance. Namely, if the application of some innovative exercises as the *esercizi muti* included in the Treatise of Sfilio *Alta Cultura di Tecnica Violinistica*, can help and improve the awareness in the left hand pressure on the strings - to respond to the saying: -"maximum efficiency = minimum effort".

In fact the problem of muscular tension in musicians is (as the literature review realized has shown) a problem common to a large part of them.

However, so far, no study has been conducted to determine if specific exercises such as those proposed by Sfilio for the left hand might or might not solve or prevent muscular tension due to an excessive pressure on the strings.

Thus, the specific intention of this study is to have applied the *esercizi muti* by Sfilio to assess their effectiveness.

Another important objective of this thesis was a historical research about the personal figure of Sfilio, a talented blind Italian violinist and teacher, known as the *Sarasate italiano*.

Also the last but not the least important objective was to verify if greater anxiety corresponds to higher muscle tension.

It is important to emphasize that the present study is experimental, realized with few subjects. Therefore, these results are not statistically significant and the data analysis is a qualitative one.

In order to better interpret the psychological and physiological results of this study, they will be discussed in the following section.

9.2. Discussion of results

To better understand if the application of Sfilio's Method and Treatise had a positive effect on the students, the Author will attempt to interpret the data and described what resulted.

In this section the results presented in the previous chapter will be discussed and the general conclusions will be drawn in order that it will correspond to the initial objectives of this dissertation.

Regarding the participants, the demographic test revealed that the age range was among 14 to 21 years. The two groups were homogeneous. The age range of Intermediate Group was among 14 to 17 and the Advanced Group among 18 to 21.

Only one participant for each Group declared to have experienced "often" musculo-skeletal problems and only one (of the Intermediate Group) admitted as having had some therapeutic treatment.

All the other participants declared that they have "sometimes" problems related to musculo-skeletal disease and among them only one admitted to have had "often" the perception of left-hand tension, while the others participants just "sometimes".

Therefore, the considered participants, both in the Intermediate and Advanced Group levels have affirmed also to be in general good health and they did not reveal during the Experimental study any change of a psychological nature or any disease that could invalidate the study.

The demographical test underlined how all the students that participated in the Experimental study seldom had any muscle-skeletal problems. Two of them said that they often suffer from problems of this type. They all also declared that sometimes they had the perception of tension in the left hand and one of them maintained that it was very frequent.

Among the students only one of them turned to a physical therapist, although they were uncomfortable with some muscle-skeletal problems.

Therefore, a point of reflection may be the fact that although the students perceive tension and feel uncomfortable concerning the muscle-skeletal structure of their own body, they have not yet a positive attitude to solve the uneasiness themselves.

Regarding the results of Test K-MPAI, we notice that the participant number one (Intermediate Group) had the highest total score. A possible explanation could be that, this

participant was not a pupil of the Author's violin class and, for this reason, may be he produced higher levels of anxiety.

How explained in the Chapter VIII, the values obtained with this test will be take reconsidered when the Italian validation (in progress) will be concluded.

About the result of the test STAI a first general observation concerns the fact that - looking at the three recordings - all the participants of the Intermediate Group had improvement of individual values throughout the study at the time "before".

In what concerns the time "after" values, they were quite similar among the three recordings (to indicate that the time "after" the recording was a time of relaxation) with the exception of two participants who, at the time "after", have had a higher value in respect to the time "before". Therefore, it seems that the concern of the "how I played" has exacerbated its anxiety after the first recording.

Also, in general it seems that the first recording was the reason for the higher anxiety level, probably having to face something unknown in terms of protocol.

Looking at the Advanced Group, instead, on an individual level, there were no changes worthy of consideration whether in "before" or "after" moments.

The Stai Y2 (State Trait Anxiety) does not reveal an excessive trait of anxiety among all the participants attending the Experimental Study. Only two of seven (one of each Group) showed a higher value as regards the others.

An interesting observation concerns the results of STAI Y1 regarding the two Groups. The average of the values obtained by members of the Group shows more clearly that in the Intermediate Group, during the two-week study, the levels of anxiety were reduced, while those of the Advanced Group were almost unchanged.

Observing and comparing the average results of STAI Y1 (state) with STAI Y2 (trait), it is confirmed that the Intermediate Group had an increase in values in the first recording and a notable and gradual decrease in anxiety values in the second and third recording. Regarding the Advanced Group one also notes an imperceptible decrease in the mean values in respect to STAI Y2, as if the moment of the performance provoked lower anxiety levels.

In relation to the pressure measurements of the left hand on the fingerboard (the principal objective of this study) carried out with the La Gala- Tramma device, one can easily

see that all students, both of Advanced and Intermediate levels, had improvements in the third recording, except a participant belonging to the Intermediate Group.

Despite this, the participant number two (Intermediate Group) still had benefits of daily assisted study as is evident from the results of the second and third recording. It would follow that Sfilio's Method for this student had a less positive effect compared to the traditional Method by Schradieck, Kreutzer and Salvatore.

In respect of the other objective of this dissertation - the correlation between anxiety and pressure levels, i.e. between psychological and physiological aspects -, one notes that the Intermediate Group had very interesting results; i.e. the mean of STAI Y1 and Pressure of the Intermediate Group shows that a lower anxiety level correspond a lower pressure level.

It is also evident that the Intermediate Group had a better improvement compared to the Advanced Group.

It could mean that the younger students have a greater benefit from the application of Sfilio's Method. Also, in fact, the results of the Pilot Study, despite being positive, were just slightly better with the application of Sfilio's Method. It is possible that age and professional experience can influence the results of Sfilio's Method application.

Also, results could be dependent on the individuality and personality of the people involved in the study but, in order to evaluate this aspect, it would be necessary to have a larger number of participants and a deeper psychological study of them.

Therefore, in light of these results, though the study is based on a small field of students, we can affirm that the application of Sfilio's Method revealed itself to be very profitable, in comparison with the application of other traditional Methods (second recording).

9.3. Positive aspects and limitations of this study

This study, although limited, has merit in that it is innovative, because in order to effectively realise it the use of a sensor and the creation of a purpose made software allows us to measure the pressure of the left hand fingers on the strings and to obtain accurate readings. In addition, this study has allowed us to compare different Methods for violin and the exercises that were chosen were therefore applied with a certain rigour, as prescribed by Sfilio himself. One can observe that about 86% of students submitted to this study obtained benefit from these applied *esercizi muti*.

The study in question also had the merit of placing the remarkable figure of Francesco Sfilio in a favourable light, as has emerged from the ex students' memories, and his personal history which the Author of thesis thinks was essential for the elaboration of the Method and Treatise. Sfilio was able to turn his infirmity to his advantage for his skills as a violinist and teacher, widely supported by documentary evidence through historical research.

Sfilio, indeed, besides being a skilful violinist, was a conductor and a composer too; we have found some concert programmes about his professional life, but about his works/compositions no traces have been found.

As in every historical research, it is a continuing process and in the future the appearance of manuscripts cannot be ruled out.

9.4. Implication in Intermediate and Advanced musical education

An important implication of this study could be that in the Italian scholastic system the study of doctrines addressed to improve the self-perception and the body awareness should be encouraged. Therefore, a possible idea could be that of the training of instrument teachers concerning the muscle-skeletal problems or, simultaneously, to support the instrument teacher with a specialist figure (for example posturologist, psychologist and physiotherapist), as it happens during the training of a professional athlete.

9.5. Final reflection and conclusions

The results of this research will hopefully encourage and guide us into realizing further studies with wider perspectives, addressed to an audience more numerous and varied with the application of the Sfilio Method, for and during a longer period.

It would be interesting to demonstrate that the exercises proposed by Sfilio applied for a longer time would determine considerable positive technical and musical results, as testified by the three living ex students of Sfilio.

In short, it would be interesting to verify on a much larger scale if Sfilio's Method allowed us to reach high professional levels in playing the violin, but in a shorter time, compared to more conventional ways of studying the instrument.

It is quite possible that the accompanied study had carried a relevant role in this study because the participants were generally left alone during the weekly study.

Therefore, to apply this Method to a greater field of people using two groups – one of them as a control group – may tell us if the positive effects are due to the exercises proposed or if the benefit in terms of left hand pressure is due to the presence of the teacher who closely follows the student's progress, just as Sfilio did with his pupils; so it was realized as such during the Pilot and Experimental Study. This could help us to understand what could be the key to successful teaching.

The results of this study could hypothetically involve a complete revision of the scholastic system with the presence of a teacher who really devotes himself entirely to the pupils for more days a week and not sporadically, as happens at present.

Obviously, the student's talent itself plays an important part; however, there is no substitute for assiduous study and daily perseverance in the chosen field, in this case the violin.

Therefore the Author of this thesis hopes that this study is a starting-point for further ones with a wider scope and dimension in numerical terms and that is a spur to the violin teachers who every day confront themselves with serious problems, often underestimated, of the left hand without knowing how to tackle and solve them.

The Author of the thesis is convinced that an improvement takes place in performance, thanks to wider self-awareness and knowledge of one's own body responses and he hopes that there will be more understanding and more attention by institutions, by the directors and by the teachers who work in them.

The Author also hopes that the students can gain this self-awareness and develop a deeper interest in the subject who, all too often from fear or embarrassment ignore pains and tensions, often hiding them, which can only lead to misery and can severely compromise their musical and professional futures.

The Author, finally, fervently hopes that the device to measure left hand finger pressure can be improved and find an easy application for daily use. A possible addition or modification for this device could be a light and sound sensor, which would alert the student visually (and by extension auditively) as to whether the finger pressure was too heavy or intense. This could be applied in such a way that it would bring a new dimension to string teaching and bring interesting and also unexpected results on a quantitative and qualitative level.

REFERENCES

Abreu Ramos, A. M., & Micheo, W. F. (2007). Lifetime prevalence of upper-body muscle-skeletal problems in a professional-level symphony orchestra. *Med Probl Perform Art*, 22(3), 97-104.

Alard, D. (1981). *Metodo completo e progressivo per violino*. Editore Ricordi, Milano.

Altenmüller, E., Gruhn, W., Liebert, G., & Parlitz, D. (2000). The impact of music education on brain networks: evidence from EEG-studies. *International journal of music education*, (1), 47-53.

Askenfelt, A. (1986). Measurement of bow motion and bow force in violin playing. *The Journal of the Acoustical Society of America*, 80(4), 1007-1015.

Baillot P. F., Kreutzer R. & Rode P. *Méthode de violon, adopte par le Conservatoire, Paris, Le Roy s.d.*

Balboni, B. & Dispenza, A. (2006). *Movimento Sport Salute*. Il Capitello, Torino.

Bandini-Buti, L., Odescalchi, C. P., & Spaltro, E. (1968). Studio per una progettazione ergonomica di spazi ed attrezzi per attività ludiche infantili. *Zeitschrift für Präventivmedizin*, 13(1), 257-276.

Bejjani, F. J., Kaye, G. M., & Benham, M. (1996). Muscle-skeletal and neuromuscular conditions of instrumental musicians. *Archives of physical medicine and rehabilitation*, 77(4), 406-413.

Beriot, Ch. De (2000). *Metodo per violino*. Edizione Ricordi, Milano.

Borer, P. (2003). *La pagina e l'archetto: bibliografia violinistica storico-tecnica e studi effettuati su Niccolò Paganini*. Comune di Genova, Assessorato comunicazione e promozione della Città.

Borgna, E. (2002). *L'arcipelago delle emozioni* (Vol. 314). Feltrinelli Editore.

Bottinelli, R., Longa, E. (2010). Eterogeneità funzionale del muscolo scheletrico. *Physical movement, Sport and Health*, 166.

Bragge, P., Bialocerkowski, A., & McMeeken, J. (2006). A systematic review of prevalence and risk factors associated with playing-related muscle-skeletal disorders in pianists. *Occupational Medicine*, 56(1), 28-38.

Brandfonbrener, A. G. (1990). The epidemiology and prevention of hand and wrist injuries in performing artists. *Hand clinics*, 6(3), 365-377.

Bruno, S., Lorusso, A., Caputo, F., Pranzo, S., & L Abbate, N. (2006). Disturbi muscoloscheletrici in pianisti studenti di un conservatorio. *Giornale italiano di medicina del lavoro ed ergonomia*, 28(1), 25.

Buya, A. (1923). *Nuovo Metodo per violino con la teoria del tetracordo*. Carisch Editore, Milano.

Caldas, J. C., Costa, A. N., & Burns, T. R. (2007). Rethinking economics: the potential contribution of the classics. *Cambridge Journal of Economics*, 31(1), 25-40.

Calonghi, G. & Badellino, O. (1972). *Dizionario Latino-Italiano*. Ed. Rosenberg & Sellier, Torino

Campagnoli, B. (1797). *Metodo per violino op. 21*. Edizioni Ricordi, Milano e Firenze.

Cappagli, A. (2005). Aspetti psicologici dell'attività musicale: interpretazione ed esperienza professionale. In *Corpo e strumento musicale: è sempre armonia?*. I.R.C.C.S. S. Maria Nascente, Fondazione Don Carlo Gnocchi Onlus, Milano.

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- Cassese, F. P. (2012). *Attività motorie. Fondamenti psicofisiologici*. GAIA srl-Edizioni Univ. Romane.
- Chong, J., Lynden, M., Harvey, D., & Peebles, M. (1989). Occupational health problems of musicians. *Canadian family physician*, 35, 2341.
- Converti, R. M. (2005). Strategie di facilitazioni del gesto e della postura degli orchestrali. In *Corpo e strumento musicale: è sempre armonia?*. I.R.C.C.S. S. Maria Nascente, Fondazione Don Carlo Gnocchi Onlus, Milano.
- Courts, F. A. (1942). Relations between muscular tension and performance. *Psychological bulletin*, 39(6), 347.
- Curci, A. (1962). *La Tecnica fondamentale del violino*. Edizioni Curci, Milano.
- Demoucron, M., & Causse, R. (2007). Sound synthesis of bowed string instruments using a gesture based control of a physical model. In *International Symposium on Musical Acoustics* (pp. 1-1).
- De Martino, G. (2001). *Giuseppe Gaccetta e il segreto di Paganini*. De Ferrari Editore, Genova.
- Dragulin, S. (2011). Biofeedback-innovating treatment in musicians' medicine. *Journal of Science and Arts, Supplement at No. 4(17)*, 5-11.
- Ferrara, B. (1858). *Lo studio del violino elementare e progressivo*. Edizioni Ricordi, Milano.
- Fjellman-Wiklund, A., Grip, H., Karlsson, J. S., & Sundelin, G. (2004). EMG trapezius muscle activity pattern in string players: Part I—is there variability in the playing technique?. *International journal of industrial ergonomics*, 33(4), 347-356.
- Fjellman-Wiklund, A., Grip, H., Andersson, H., Karlsson, J. S., & Sundelin, G. (2004). EMG trapezius muscle activity pattern in string players: Part II—Influences of basic body awareness therapy on the violin playing technique. *International Journal of Industrial Ergonomics*, 33(4), 357-367.
- Flesch, C. (1983 Part II – 1991 Part I). *L'arte del violino*. Edizioni Curci, Milano.
- Foxman, I. M. S., & Burgel, B. J. (2006). Musician health and safety: Preventing playing-related muscle-skeletal disorders. *Workplace Health & Safety*, 54(7), 309.
- Fry, H. J. (1986). Incidence of overuse syndrome in the symphony orchestra. *Med Probl Perform Art*, 1(2), 51-55.
- Fry, H. J. (1986). Overuse syndrome of the upper limb in musicians. *The Medical Journal of Australia*, 144(4), 182-3.
- Fry, H. J. H. (1988). The treatment of overuse syndrome in musicians. Results in 175 patients. *Journal of the Royal Society of Medicine*, 81(10), 572-575.
- Fulcheri, M. (2004). *Le attuali frontiere della psicologia clinica*. Centro Scientifico editore.
- Galamian I. (1991). *Principi di tecnica e d'insegnamento del violino*. Universal Publishing Ricordi S.r.l, S. Giuliano Milanese (Mi).
- Gaser, C., & Schlaug, G. (2003). Brain structures differ between musicians and non-musicians. *The Journal of Neuroscience*, 23(27), 9240-9245.
- Gazzetta, L. (2002). Le patologie muscolo-scheletriche nei musicisti: statistica ed esperienze riabilitative.
- Geminiani, F. (1952). *The art of playing on the violin, 1751*. Oxford Univ Pr.

How to improve awareness of the violinist's left hand through Sfilio's Method

Green, E., Green, A., & Walters, E. D. (1999). Voluntary control of internal states: Psychological and physiological. *SUBTLE ENERGIES AND ENERGY MEDICINE*, 10, 71-88.

Grosshauser, T. (2008, June). Low force pressure measurement: Pressure sensor matrices for gesture analysis, stiffness recognition and augmented instruments. In 8th International Conference on New Interfaces for Musical Expression NIME08.

Grosshauser, T., & Hermann, T. (2009, July). The sonified music stand—an interactive sonification system for musicians. In *Proceedings of the 6th Sound and Music Computing Conference* (pp. 233-238). Casa da Musica, Porto, Portugal.

Großhauser, T., Großekathöfer, U., & Hermann, T. (2010). New sensors and pattern recognition techniques for string instruments. *Sydney, Australia*.

Grosshauser, T., Tessorf, B., Tröster, G., Hildebrandt, H., & Candia, V. (2012). Sensor setup for force and finger position and tilt measurements for pianists. *Proc. SMC*.

Halko, W. (1949). Chin rest for violins. U.S. Patent No 2,486,646, 1949.

Hagberg, M., Thiringer, G., & Brandström, L. (2005). Incidence of tinnitus, impaired hearing and muscle-skeletal disorders among students enrolled in academic music education—a retrospective cohort study. *International archives of occupational and environmental health*, 78(7), 575-583.

Hoppmann, R. A., & Patrone, N. A. (1989, October). A review of muscle-skeletal problems in instrumental musicians. In *Seminars in arthritis and rheumatism* (Vol. 19, No. 2, pp. 117-126). WB Saunders.

Joubrel, I., Robineau, S., Pétrilli, S., & Gallien, P. (2001, March). Pathologies de l'appareil locomoteur du musicien: étude épidémiologique. In *Annales de réadaptation et de médecine physique* (Vol. 44, No. 2, pp. 72-80). Elsevier Masson.

Kaufman-Cohen, Y., & Ratzon, N. Z. (2011). Correlation between risk factors and muscle-skeletal disorders among classical musicians. *Occupational medicine*, 61(2), 90-95.

Kenny, D. T., & Ackermann, B. (2009). Optimizing physical and psychological health in performing musicians. *Oxford handbook of music psychology*, 390-400.

Kenny, D. T. (2009a). *The factor structure of the revised Kenny Music Performance Anxiety Inventory*. Paper presented at the International Symposium on Performance Science, Auckland, New Zealand.

Larsson, L. G., Baum, J., Mudholkar, G. S., & Kollia, G. D. (1993). Benefits and disadvantages of joint hypermobility among musicians. *New England Journal of Medicine*, 329(15), 1079-1082.

Lederman, R. J. (1989). Peripheral nerve disorders in instrumentalists. *Annals of neurology*, 26(5), 640-646.

Lederman, R. J. (2003). Neuromuscular and muscle-skeletal problems in instrumental musicians. *Muscle & nerve*, 27(5), 549-561.

Lee, D. S., Lee, Y. D., Chung, W. Y., & Myllyla, R. (2006, October). Vital sign monitoring system with life emergency event detection using wireless sensor network. In *Sensors, 2006. 5th IEEE Conference on* (pp. 518-521). IEEE.

LeVine, W. R., Irvine, J. K. (1984). In vivo EMG biofeedback in violin and viola pedagogy. *Biofeedback and self-regulation*, 9(2), 161-168.

Lockwood, A. H. (1988). Medical problems in secondary school-aged musicians. *Med Probl Perform Art*, 3(4), 129-132.

How to improve awareness of the violinist's left hand through Sfilio's Method

- Manchester, R. A., & Flieder, D. (1991). Further observations on the epidemiology of hand injuries in music students. *Med Probl Perform Art*, 6(1), 11-14.
- Manili, U., & Ferrari, M. (2002). l'applicazione del biofeedback nella psico-fisiologia dello sport e nell'allenamento. *Movimento*, 8(2).
- Mills, K. R. (2005). The basics of electromyography. *Journal of Neurology, Neurosurgery & Psychiatry*, 76(suppl 2), ii32-ii35.
- Morasky, R. L., Reynolds, C., & Clarke, G. (1981). Using biofeedback to reduce left arm extensor EMG of string players during musical performance. *Biofeedback and self-regulation*, 6(4), 565-572.
- Munno D. *Psicologia clinica per medici*. Centro Scientifico Editore (2008).
- Norris, R. N. (1993). *The musician's survival manual: a guide to preventing and treating injuries in instrumentalists*. Mmb Music.
- Nourissat, G., Chamagne, P., & Dumontier, C. (2003). Motifs de consultation des musiciens en chirurgie de la main. *Revue de chirurgie orthopédique et réparatrice de l'appareil moteur*, 89(6), 524-531.
- Obata, S., & Kinoshita, H. (2012). Chin force in violin playing. *European journal of applied physiology*, 112(6), 2085-2095.
- Oddone, E. (2002). *Anatomia Violinistica* Edizione Ricordi, Milano.
- Okner, M. A., Kernozek, T., & Wade, M. G. (1997). Chin rest pressure in violin players: musical repertoire, chin rests, and shoulder pads as possible mediators. *Medical Problems of Performing Artists*, 12, 112-121.
- Ostwald, P. F., Baron, B. C., Byl, N. M., & Wilson, F. R. (1994). Performing arts medicine. *Western journal of medicine*, 160(1), 48.
- Pak, C. H., & Chesky, K. (2001). Prevalence of hand, finger, and wrist muscle-skeletal problems in keyboard instrumentalists. *Med Probl Perform Art*, 16(1), 17-23.
- Parry, C. B. W. (1998). The musician's hand and arm pain. In *The musician's hand: a clinical guide* (pp. 5-12). Martin Dunitz London.
- Pascarelli, E. F., & Hsu, Y. P. (2001). Understanding work-related upper extremity disorders: clinical findings in 485 computer users, musicians, and others. *Journal of Occupational Rehabilitation*, 11(1), 1-21.
- Pascual-Leone, A. (2001). The brain that plays music and is changed by it. *Annals of the New York Academy of Sciences*, 930(1), 315-329.
- Porta, P.,(2000) *Il violin nella storia*, EDT Edizioni di Torino.
- Sainsbury, P., & Gibson, J. G. (1954). Symptoms of anxiety and tension and the accompanying physiological changes in the muscular system. *Journal of neurology, neurosurgery, and psychiatry*, 17(3), 216.
- Schuele, S. U., & Lederman, R. J. (2004). Occupational disorders in instrumental musicians. *Medical problems of performing artists*, 19(3), 123-128.
- Schultz JH. *Il Training Autogeno*. Feltrinelli XVII ed. it, Milano (1993).
- Seashore, C. E. (1938). *Psychology of music*. Courier Corporation.

How to improve awareness of the violinist's left hand through Sfilio's Method

- Ševčík, O. (1901). *Violin method op.1; op.4; op.6; op.7; op.8; op.9; op.11; op.12; op.13; op.14; op.15; op.22; op.23; op.24.* Bosworth Edition.
- Sfilio, F. (2002). *Nuova scuola violinistica italiana*. Zecchini Editore, Varese.
- Sfilio, F. (2002). *Advanced violin technique*. Zecchini Editore, Varese.
- Sfilio, F., & Bonisconti, A. (1937). *Alta cultura di tecnica violinistica*. Fratelli Bocca, Torino.
- Sherman, R. A. (1985). Relationships between jaw pain and jaw muscle contraction level: underlying factors and treatment effectiveness. *The Journal of prosthetic dentistry*, 54(1), 114-118.
- Spielberger, C. D. *Manual for the State-Trait Anxiety-Inventory STAI form Y*. Palo Alto California: Mind Garden, 1986. (Trad. It. *Inventario per l'ansia di "stato" e di "tratto" forma Y*. Manuale, a cura di Pedrabissi L., Santinello M. Firenze: Organizzazioni Speciali, 1989).
- Spohr Louis (1904) *Metodo per violino*, Editori Ricordi, Milano - Roma - Napoli - Palermo - Londra - Lipsia
- Steinmetz, A., Ridder, P. H., & Reichelt, A. (2006). Craniomandibular dysfunction and violin playing. *Med Probl Perform Art*, 21, 183-9.
- Steinmetz, A., Scheffer, I., Esmer, E., Delank, K. S., & Peroz, I. (2014). Frequency, severity and predictors of playing-related muscle-skeletal pain in professional orchestral musicians in Germany. *Clinical rheumatology*, 1-9.
- Tamorri, S. *Neuroscienze e Sport*. Utet (2000).
- Tos, P. (2005). *Sindrome da iperutilizzo - malutilizzo negli strumentisti in Corpo e strumento musicale: è sempre armonia?*. I.R.C.C.S. S. Maria Nascente, Fondazione Don Carlo Gnocchi Onlus
- Tubiana, R., & Amadio, P. C. (2000). *Medical problems of the instrumentalist musician*. CRC Press.
- Tubbs, R. S., Rizk, E., Shoja, M. M., Loukas, M., Barbaro, N., & Spinner, R. J. (Eds.). (2015). *Nerves and Nerve Injuries: Vol 2: Pain, Treatment, Injury, Disease and Future Directions*. Academic Press.
- U.V.I. *Unione violinisti italiana* (1935). Edizioni Ricordi; Milano.
- Wu, S. J. (2007). Occupational risk factors for muscle-skeletal disorders in musicians: a systematic review. *Medical Problems of Performing Artists*, 22(2), 43-51.
- Young, D. (2003, August). *Wireless sensor system for measurement of violin bowing parameters*. In Stockholm Music Acoustics Conference (pp. 111-114).
- Young, D., & Deshmone, A. (2007, June). *Bowstroke database: a web-accessible archive of violin bowing data*. In Proceedings of the 7th international conference on New interfaces for musical expression (pp. 352-357). ACM.
- Visentin, P., & Shan, G. (2011). Applications of EMG Pertaining to Music Performance-A Review. *Arts BioMechanics*, 1(1), 15-32.
- Zatorre, R. (2005). Music, the food of neuroscience?. *Nature*, 434(7031), 312-315.
- Zatorre, R. J., Chen, J. L., & Penhune, V. B. (2007). When the brain plays music: auditory-motor interactions in music perception and production. *Nature Reviews Neuroscience*, 8(7), 547-558.
- Zaza, C. & Farewell, V. T. (1997). Musicians' playing-related muscle-skeletal disorders: an examination of risk factors. *American journal of industrial medicine*, 32(3), 292-300.

How to improve awareness of the violinist's left hand through Sfilio's Method

Zaza, C. (1998). Playing-related muscle-skeletal disorders in musicians: a systematic review of incidence and prevalence. *Canadian medical association journal*, 158(8), 1019-1025.

APPENDICES

Il "segreto", di Paganini scoperto?

La tecnica del sommo violinista spiegata da un maestro genovese

SAN REMO, Dicembre.

(bask) — Assai noto è nel mondo musicale il maestro Francesco Sfilio, genovese, direttore, nella nostra città, di una scuola di archi e di altra a Torino nonché insegnante all'Istituto Giuseppe Martucci in Genova. Autore apprezzatissimo del volume « Nuova scuola violinistica italiana » lo Sfilio annuncia, oggi, di aver scoperto il metodo usato da Niccolò Paganini nelle sue « diaboliche » esecuzioni.

Paganini, secondo le testimonianze del prof. Schouy di Praga, suo intimo amico, ebbe a dire: « il mio segreto deve essere il cammino verso la migliore comprensione della natura dello strumento. Io devo questa scoperta non al caso ma a degli studi seri e gratuiti ai quali ho lavorato già necessariamente quattro o cinque ore del giorno. » Si comprende, quindi, come di fronte a queste possibilità, le ricerche — soprattutto da maestri insegnanti — non potessero essere che intense, sebbene sempre inani.

Il maestro Sfilio afferma di aver scoperto questo famoso segreto che, forse, è potuto rimanere per tanti anni tale solo perché attorno ad esso si erano costruite troppe leggende e ricercate troppe « stregonerie ». Il maestro Sfilio appoggia queste affermazioni con spiegazioni tecniche e anche fisiologiche in un volume — che ci auguriamo veda presto la luce — intitolato « Corso di alta cultura e di tecnica violinistica ».

Abbiamo voluto avvicinare il maestro da molti anni nostro gradito ospite. Egli ci viene incontro con quella giovialità tutta genovese, e con una sicurezza di passo che ci fa dimenticare, per un momento, con'egli sia privo della vista.

Il maestro ci parla con entusiasmo del suo lavoro.

« Vede, caro amico, in musica non ci possono essere stregonerie né virtuosismi fuori della possibilità comune. E, soprattutto, Paganini va considerato non come incantatore di pubblici al momento delle sue interpretazioni, ma bensì quale maestro e quale padrone assoluto dello strumento. Egli stesso — che fu maestro a Lucca — scrisse e disse più volte che avrebbe lasciato il suo metodo, che avrebbe rivelato la sua scuola. La morte soltanto glielo impedì. Nient'altro che improvvisazioni. Egli poteva dire: « il mio segreto è opera di ragionamento e non di trucco. »

Ora lo — continua il maestro Sfilio — non ho guardato molto al virtuosismo, ma mi sono attenuto alla scala cromatica « sua speciale, lasciataci con i suoi studi; e in questi ho scoperto come la sua scala stessa egli applicava ed eseguiva. E sono venuto a questa conclusione. Il metodo Paganini è fondato, anzitutto, sulla « posizione base » che in lui era completamente diversa da quella insegnata in tutte le scuole di violino. »

E qui il m.o Sfilio, strumento alla mano, ci dimostra come certe esecuzioni egli potesse farle non per stregoneria né perché avesse delle dita sussurrate, ma perché egli, invertendo l'impostazione della mano sinistra, dava una posizione base riuscita in quegli effetti impossibili agli allievi delle scuole comuni. Tutto questo, però, è possibile a tutti. Ed il m.o Sfilio lo dimostrerà nei suoi nuovi allie-

vi dopo che nel suo nuovo Corso di alta cultura.

« In secondo luogo — continua lo Sfilio — Paganini si basava sul suo fatto sensibilissimo (non sovrumano) per l'intonazione; non sull'orecchio, dunque, che avverte la sintonia quando essa già è avvenuta. Ogni interpretazione su un misterioso virtuosismo cade, quindi. Poiché Paganini, lo vi posso assicurare, suonava in modo assolutamente fisiologico per quanto, soprattutto, riguarda la posizione del braccio ritenuta, dal più, scoperta. Soltanto, come già accennato, si valeva del « cronometrismo » che è appunto quella sua speciale scala cromatica. »

Il maestro Sfilio ci fa vedere la porzione di suo libro in cui è la spiegazione delle sue asserzioni. Spiegazioni fatte, con chiarezza di documentazioni, dal prof. dott. Pietro Berri, apprezzato violinista e fisiologo all'Università di Genova.

Il risultato degli studi del ma-

estro concittadino di adozione appare degno della massima considerazione. Sino ad oggi, infatti, non erano state fatte, sulla tecnica del Paganini, che delle constatazioni, senza alcuna spiegazione. Il nuovo volume dello Sfilio, invece, inverte le parti: spiega la tecnica dopo aver preso atto delle constatazioni.

Se la pratica risponderà — come dovrebbe risponderà — alla teoria, avremo una vera rivoluzione nel mondo violinistico.

Il Commissario Prefettizio ad Acqui

ACQUI, 19. — Con provvedimento del Prefetto di Alessandria è stato nominato, in sostituzione dell'avv. Velasco, funzionario della Prefettura, Commissario Prefettizio della Città di Acqui, il sig. cav. Angelo Agno, fascista del 2), Presidente del Riposce per i Vecchi e della Congregazione di Carità.

REPUBBLICHE AMERICANE INQUIETE

Il processo a Rio Janeiro contro 1200 persone per compimento

Cinque deputati tra gli arrestati

RIO DE JANEIRO, 19 notte. (S.I.A.) — In seguito a mandato d'arresto emesso dal Tribunale per la Sicurezza dello Stato, sono state arrestate 1200 persone, tra cui cinque deputati nazionali, sotto accusa di avere gridato un complotto contro lo Stato.

Per prevenire poi dimostrazioni e tumultuosi durante il processo, iniziatosi contro i responsabili della rivolta comunista verificata nel novembre del 1935 (tra organizzatori, complici e partecipi sono sotto processo 1200 individui), la Commissione per gli Affari Costituzionali e di Giustizia ha dato parere favorevole perché sia prolungato lo stato di guerra in Brasile.

Nello Stato di Minas Geraes è stata creata dal Governo Federale una estesissima Colonia Penale Agricola dove saranno internati tutti i condannati dal Tribunale per la Sicurezza dello Stato.

Un colpo di rivoltella nell'aula parlamentare

MONTEVIDEO, 19. (S.I.A.) — Una tumultuosa seduta s'è svolta alla Camera dei Deputati. Minaccio, a cui seguirono violenti pugiliati, si sono avute tra i vari settori parecchi deputati hanno dovuto ricorrere al posto di sicurezza; rifugio alla Camera, per ferite lacero-contuse.

In mezzo a quel pandemonio che ne i frenetici appelli del Presidente dell'Assemblea, né la presenza della Polizia sono riusciti a contenere, è pure stato sparato un colpo di rivoltella dalle tribune riservate al pubblico.

La discussione, protrattasi fino alle ore sei del mattino, verteva sul progetto di riforma elettorale presentato dal Governo.

Le ire dei Partiti avversari si sono accese soprattutto contro il

distribuzione dei Ministri da parte del Presidente della Repubblica. Il comma in parola prescrive che il Presidente distribuirà i nove Ministri nelle seguenti proporzioni: 5 oppure 6 al 10 forte settore parlamentare, favorevole al Governo, e gli altri al settore parlamentare che abbia maggior numero di componenti.

I partiti cileni in lotta

SANTIAGO DEL CILE, 19. (S.I.A.) — Assai confusa è la situazione politica cilena. L'attuale discussione alla Camera sul progetto di legge per la Difesa e Sicurezza dello Stato è causa di frequenti diatribe e pugiliati tra i vari settori del Parlamento.

La Commissione di Legislazione della Camera ha appreso per proprio conto sul progetto — « il Governo l'articolo col quale veniva concesso al Presidente della Repubblica il diritto di decretare l'espulsione dal territorio nazionale di individui appartenenti a determinate razze » — l'istituzione di un Tribunale speciale per i delitti di Stampa.

Asprissime discussioni sono seguite sull'articolo terzo del progetto che vieta lo sciopero degli impiegati e operai addetti ai servizi pubblici statali o municipali, che proibisce l'organizzazione di Partiti contrari al regime costituzionale del Governo e che obbliga le Poste, i Telefoni e le Dogane a distruggere i manifesti, i proclami, i fogli di propaganda di quelle che mettono in pericolo l'ordine pubblico.

Il blocco dell'Alcorno Nazionale, che si ispira alla dottrina fascista, lotta strenuamente contro il Fronte Popolare a cui aderisce il partito radicale.

Il presidente Arturo Alessandri fa spesso appello alle migliori energie per ottenere il necessario equilibrio tra i Partiti in lotta.

La scoperta del "segreto di Paganini,"

Soltanto ora leggo sul *Lavoro* del 20 dicembre l'articolo riguardante il « Segreto di Paganini », scoperto dal maestro Sfilio. Quale vecchio insegnante e didatta, temperato nella disciplina del virtuosismo, mi permetto manifestare in merito, con queste brevi righe, il mio pensiero.

Premetto subito che, dopo i tanti segreti e le innumere scoperte delle più che famose variazioni dello Stradivari e del modo di fabbricare i violini pari a quelli del grande cremonese, segreti e scoperte che furono sempre dei solennissimi « Bluffs » perpetrati a solo scopo reclamistico, mi hanno reso scettico e diffidente, quindi, per il momento, è bene ch'io mi astenga da ogni prematuro giudizio, in attesa dell'annunciato libro che, sono certo, verrà letto con avidità curiosa da ogni seguace d'Enterprise e, principalmente, da ogni violinista il quale, data la nuova possibilità di divenire celebre, vorrà mettere immediatamente la pratica quanto il maestro Sfilio esporrà e rivelerà nel suo « corso di alta cultura e di tecnica violinistica ».

Potrò invece dire che, già da tempo, gli storici hanno sfatato ogni leggenda diabolica sul conto del sommo violinista, convenendo e riconoscendo appieno che l'arte del Paganini era, non stregoneria, ma soltanto emulazione sovrana d'un'anima super-sensibile e... nulla più! Sicché il suo segreto (se così si può dire) stava tutto nel suo temperamento eccezionale e nelle sue agilità di vibanti.

Non posso negare né affermare se il grande Niccolò avesse l'idea di lasciare un metodo che « rivelasse la sua scuola », però faccio notare che Sivori (altro famoso violinista genovese) il quale fu allievo di Paganini e quindi a conoscenza d'ogni posizione base, d'ogni cromatismo e d'ogni altra destrezza del celebre violinista, era ben lontano dal suo grande maestro, e ciò perché di costituzione e di temperamento diversissimi da quelli di Paganini.

Infatti il buon Camillo, che io conobbi e sentii in casa d'una famiglia genovese nel 1893, era basso, grassoccio e calmo ed aveva delle mani quasi infantili, mentre Paganini (se è vero come ce lo hanno descritto) era magro, allungato (Heine lo chiamava « lo spettrale Niccolò ») ed aveva le mani lunghe, nervose e dinoccolate, quindi, ve di conseguenza logica che l'allievo non potesse avere né l'attacco dell'arco, né il giuoco dinamico della tecnica (sbalorditiva in Paganini) né la cavata del Maestro!

Questo ho voluto dire non per fare dei paragoni, ma soltanto per dimostrare che il metodo di un artista, sia pur esso Paganini, non può essere l'assoluto viatico per la generale ascesa alla celebrità e tanto meno servire d'incentivo per « studiar poco ».

Il Folegatti ha scritto che Sivori, in sua vita non abbia suonato meno di ottantamila ore (dicasi ottantamila!) da ciò si deduce che ogni artista agisce e pratica l'esercizio secondo i dettami del suo io interiore e secondo le sue necessità fisiche, perché ogni anima umana ha una sensibilità tutta propria, che può essere corretta, sì, ma non cambiata ed ogni essere una costituzione differente.

Libri di fisiologia e di tecnica per violinisti ve ne sono parecchi ed anche ottimi ma, in generale, le loro regole devono essere quasi sempre modificate e adattate a seconda delle attitudini dello scolaro, perciò la solfa è sempre questa: Chi è dotato di qualità superiori e studia, progredisce, si afferma ed eccelle sopra gli altri; chi, invece, disgraziatamente ne è privo, rimarrà sempre una rozza da training, poiché mancandogli la cosiddetta stoffa, né la posizione base, né la spiegazione della tecnica di Paganini, né lo studio del sistema muscolare, né il cromatismo, potranno portarlo alla celebrità, come pare al mondo violinistico non verrà rivoluzionato con la scoperta dello Sfilio, né Paganini, per questo, essere mai imitato, raggiunto e sorpassato!

Una opportuna codificazione, non fuori di proposito, che dovrebbe essere presa in seria considerazione, invece, è la seguente: nel 1940 cade il centenario della morte del violinista « che sopra gli altri come aquila vola ». Perché non si cerca, così, di formare una commissione affinché per mezzo di mondiali sottoscrizioni, oltre ai soliti festeggiamenti musicali e conferenze, gli venga eretto un degno monumento? Credo che Paganini se lo meritasse. Pirano ha già da anni sciolto il suo voto erigendolo al suo Tartini: a Genova?

ISAIA BILLE'
del R. Conservatorio
di S. Cecilia - Roma

Lettere al Direttore

Ancora del "segreto", di Paganini

Signor Direttore,

Sul Suo pregiato quotidiano del 20 gennaio scorso è comparsa una lettera del Prof. Isaia Billè, docente di contrabbasso nel R. Cons. di S. Cecilia in Roma, la quale manifesta personali opinioni su ciò che si suole chiamare «segreto» di Paganini, con commenti prematuri e non troppo benevoli su quanto io, insegnante altrettanto vecchio e patimenti «temperato nella disciplina del virtuosismo», avrei scoperto. Mi permetta, Sig. Direttore, di replicare sia per quanto mi concerne, sia riguardo a vari altri punti della lettera. Premetto che, per quanto si possa essere a priori scettici e diffidenti tanto sulla questione delle verità dei violini quanto su quella del «segreto» paganiniano (questioni curiosamente accostate dal prof. Billè, nell'esordio della sua lettera), non mi sembra opportuno giudicare soltanto in base a semplicistiche cronache o ad ecchi giornalistici, né prudente parlare di «bluff» quando manca ogni sereno e preciso elemento di giudizio e soprattutto quando ci si fonda su convinzioni personali e su acquisizioni culturali possibili di revisione e di critica. Perciò per quanto si riferisce al mio «Corso di alta cultura e di tecnica violinistica», nel quale ho raccolto il frutto dell'insegnamento verbale ed imitativo che, con qualche profitto, pratico da oltre vent'anni, non potendomi qui dilungare su questioni di carattere tecnico, penso convenga attendermi la pubblicazione per poterle il prof. Billè rinnovare l'amabile qualifica di «bluff», ed io replicare se lo riterrò opportuno.

Ma desidero subito dichiarare che il mio «Corso» non è stato scritto per tentare l'avidità curiosità dei lettori; e, come ho di proposito atteso tanti anni per mettere su carta una quantità di osservazioni che nascevano direttamente dal modo mio d'insegnare, dal modo degli allievi di apprendere, dal commento dei metodi altrui e finalmente dalla meditata analisi di tutto quanto si riferisce a Paganini, così avrei potuto attendere ancora, se non m'avessero sospinto molti cari allievi e soprattutto il desiderio di far cosa grata a tanti e tanti che, nello studio del violino, s'arrendono di fronte a difficoltà che paiono e non sono insormontabili, e che si possono superare, e agevolmente, sol che si metta in pratica qualche semplice precetto e, precisamente, quelcheduno di quelli che lo stesso Paganini, pur non sbottonandone eccessivamente, più d'una volta ha reso di pubblica ragione. E, se il prof. Billè crede di non potersi pronunciare circa l'intenzione di Paganini di lasciare un metodo, non mi resta che invitarlo a leggere i carteggi paganiniani (uno dei quali è stato pubblicato di recente a cura del Municipio di Genova e per opera del prof. Codignola, intitolato «Paganini intimo»), quanto scrisse la «Gazzetta Musicale» di Nizza in data 23 gennaio 1840, o, se non gli tornasse comodo risalire a fonti così remote, a scorrere il libretto del Bonaventura, pubblicato dal Forniggin nel 1915. Avrebbe potuto così farsi un giudizio meno semplicistico su quanto il Paganini, con evidente scopo pubblicitario, chiamava «segreto» e avrebbe anche appreso che Camille Sivori, allievo del Costa e del Dellepiane, a sette anni d'età, ebbe da Paganini soltanto quattro o cinque lezioni nelle quali «egli ritrasse mirabili frutti (son parole del Costabile, uno dei biografi di Paganini) per mezzo della comunicazione fateggi delle prime idee della scala». E il «buen Camillo» (chiamiamolo pure così familiarmente, come fa il Billè, ma senza intento alcuno di commiserazione), appena decenne se ne andò per il mondo a sbalordire le folle, destando entusiasmi non meno schietti e frenetici di quelli che aveva suscitato Paganini e nessuno tra i critici ebbe a dire che Sivori non aveva «né l'attacco dell'arco, né il gioco dinamico della tecnica (sbalorditivo in Paganini), né la cavata del Maestro». E maggior lode andava a Sivori il quale, oltre alle proprie ed a quelle paganiniane, suonava musiche di altri autori,

il che Paganini non faceva. Le 80.000 ore di studio che un biografo... col contatore attribuisce a Sivori, hanno dunque se mai servito, dai dieci anni in su, per conservargli la scioltezza delle dita! Ma, in fondo, io devo essere grato al prof. Billè se, per dimostrare che, anche venendo in possesso del metodo paganiniano (se non c'è «storia» non c'è da farsi grandi illusioni circa la riuscita della carriera) egli mi tira in ballo niente po' po' di meno che l'esempio di Sivori...

Il prof. Billè ha visto e sentito Sivori, in casa d'amici genovesi, nel 1893. Sivori, che è nato nel 1815, aveva dunque la bellezza di 78 anni ed era alla vigilia della morte avvenuta l'anno appresso. E' anche possibile che, a questa veneranda età, manchi l'attacco dell'arco, il gioco dinamico, o tante altre belle cose. Anch'io ho sentito Sivori, nei miei giovani anni, in un concerto al Teatro Paganini. Mi ricordo che esegui le variazioni sul «Carnevale di Venezia», e quelle sul «Mosè»; e serbai di questo concerto una profonda, incancellabile impressione. E se la mia modesta opinione su questo virtuosismo non dovesse trovar credito, mi apponerei al concetto che, di Sivori, gli allievi hanno tramandato ad allievi che, tuttora vegeti ed invecchiando, vivono ed insegnano in Genova.

Ma perché il raffronto fra Paganini e Sivori, fatto dal Billè, riuscisse esatto, occorre che egli fosse in possesso di una conoscenza personale di ambedue i termini di confronto. Ora invece egli sa di Paganini quanto può avere attinto alla tradizione. E in base a questa tradizione, noi possiamo ammettere con lui che Paganini era straordinariamente dotato e che non è il caso di parlare di stregoneria. E siamo anche del parere che, bastate le leggende diaboliche circolanti sul conto di Paganini, non sia necessario l'intervento degli storici; basta il buon senso. Nel 1937 il Billè invece vede e sente Sivori vecchio di 78 anni e il fatto di trovarlo «basso, grassoccio (?)», calmo, con mani quasi infantili» crea in lui la curiosa convinzione che Sivori non potesse rivalleggiare col Paganini, quello leggendario, dalla figura spettrale e dalle dita snaturate... Perciò, se d'ora innanzi, ci troveremo di fronte a violinisti paccioconi e con le manine butirrosee, dovremo soltanto concludere che hanno speso male i loro denari e che neanche Sfilio col suo «bluff», potrebbe rimetterli in carreggiata...

Nella lettera del prof. Billè, si fa largo uso di vocaboli che «sonnent crevero»: anima super-sensibile, costituzione, temperamento, sensibilità, ecc. Che cosa significano questi termini in proposito di «tecnica del violino»? Siamo forse in tema di interpretazione musicale, in argomento di valori artistici o spirituali? Anche chi non è dotato di qualità superiori può fare dei progressi nella tecnica. Ci sono dei possessori di tecniche sviluppatissime che non sono degli artisti e se ne trovano anche fra i concertisti. E la tecnica che si pone al servizio dello spirito, non il contrario! L'anima d'artista, la vocazione, quella famosa vocazione su cui, fantasticano tanto profani e non profani, l'intuito, la predisposizione, la così detta «storia» che cosa sono, a che cosa si riducono se la tecnica è insufficiente o difettosa? Ed è anche vero che «pochi» eletti sono illuminare il pieno possesso tecnico del loro strumento col fulgore d'una arte superiore. Sono così, questo di questo che nessun lettore, per quanto mal disposto verso di me, potrà accusarmi d'aver spulciato sul nome di Paganini, illudendo i giovani che alla mia scuola si può diventare del Paganini e cioè degli artisti «compiuti», dei veri candidati alla celebrità. La tecnica di Paganini era personale ma non astratta e una leggendaria; riprova, cioè, su basi fisiche e fisiologiche come qualsiasi altra attività corporea, e merito sommo del genovese fu quello di aver intuito e saggiato con lungo studio, quali erano le basi fisiche e fisiologiche che meritavano d'essere assecondate, senza forzamenti del

la natura e senza inutile sperpero di energia. E in quanto alle poche ore di studio che lo stesso Paganini preconizzava per i possessori del suo «segreto», esse stanno ad indicare che non è il «numero» delle ore di studio che conta, ma l'intensità di questo studio ed il profitto che se ne ritrae.

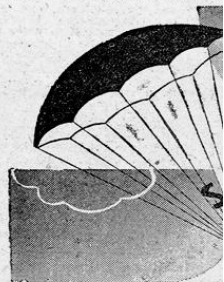
Ed avrei finito, ritenendo d'essermi spiegato chiaramente e rimandando alla lettura del mio libro chi vorrà essere con me e contro di me, indifferente d'ora innanzi alle critiche di coloro che «pur astenendosi da giudizi prematuri», intonano già il «De profundis».

Il prof. Billè chiede la sua lettera auspicando che per il 1940 (centenario della morte di Paganini), mercé l'opera di una apposita commissione e mediante mondiali sottoscrizioni, venga da Genova eretto un monumento al suo grande figlio. Parrebbe giusto che, se Pirano ha un monumento a Tartini, Genova debba avere un monumento a Paganini. Ma Genova ha un corso, un teatro con relativo busto ed un Liceo Musicale Paregato intitolati a Paganini. Se i reggitori del Comune, nel 1940, non riterranno sufficienti queste prove di affetto e si sentiranno sollecitati da una «monumentomania» che, nel paese, oggi fuori luogo, potranno anche deliberare un bel marmo od un bel bronzo. Per conto mio ritengo che una magistrale esecuzione delle opere note e la restituzione al pristino fulgore delle altre ignote od inedite, possano costituire la più degna delle commemorazioni. Ciò che auspico come genovese d'origine e come cultore di studi paganiniani.

Francesco Sfilio

Vita femminile Moda e Modi

La rubrica «Vita Femminile» «Moda e Modi» non pubblica, secondo la consuetudine, nel numero di ieri sabato, lo sarà in quello di dopodomani, martedì.



UN VESTITO RITINTO IN CASA COL SUPER-IRIDE È UN VESTITO SALVATO DALL'ABANDONO E DAL DISUSO.

48 SMAGLIANTI TINTE

SUPER-

Ditta Ruggero Benelli - SUF

L. 52 costa l'e

Lettere al Direttore

Violinate

Sig. Direttore,

La lunga replica del M.o Sfilio, che non modifica affatto la mia opinione sui « Segreti » più o meno rivelatori, mi obbliga a una forzosa risposta. Sarò breve anche per non abusare della sua cortesia e dello spazio del giornale.

Ho già detto che, non conoscendo il lavoro dello Sfilio, ogni giudizio sull'opera sua era prematuro: che Paganini è Paganini, e Sivori è Sivori!... Questo è quanto!... Mentre noi, loro epigoni, non andiamo cercando altro che di dare la nostra più o meno buona operosità a solo bene dell'Arte!

Per chiudere la parentesi io mi auguro che il mondo artistico e, soprattutto, il tempo (vero e unico giudice imparziale) diano ragione al M.o Sfilio e che, merc'è sua, la scuola violinistica, da ora in avanti, abbia ad emettere virtuosi a gettito continuo!...

Obbl.mo

Isaia Billé

**QUEL SEGRETO
DI PAGANINI...**

ALTA CULTURA
DI TECNICA VIOLINISTICA

10

E' uscito il volumetto che il violinista maestro Francesco Sfilio aveva annunciato (Alta cultura di tecnica violinistica - Milano - ed. Bocca, Lire 8) e che diedi in queste colonne circa la tecnica di Paganini. Crediamo far cosa grata ai musicisti riportare parte della bella prefazione allo stesso scritta dall'illustre prof. dott. Pietro Berri, libero docente di medicina nella R. Università di Genova, esimio cultore di musica e Vice Presidente della Giovane Orchestra Genovese:

La Sfilio ha intuito, pur non essendo fisiologo, che la natura dovesse essere ancora maggiormente assecondata in alcune particolari modalità di atteggiatura e di arcata; è giunto a formulare utili suggerimenti per poter efficacemente annullare o correggere impostazioni non fisiologiche o anti-fisiologiche, in relazione soprattutto ai movimenti simultanei o contemporanei e cioè alla interdipendenza funzionale dei due arti superiori che, non sembrando possedere nello studio del violino l'importanza fondamentale che ha in quello del pianoforte, non viene presa in considerazione dagli insegnanti e grava perciò fatalmente sulla tecnica dell'allievo.

Ho detto in principio che il M.o Sfilio mi conosce personalmente da poco tempo. Devo però precisare che, mentre Egli ha avuto sentore di me da pochissimi anni, in seguito ad un mio giudizio critico sulle esecuzioni di una Sua Allieva, io conosco il M.o Sfilio da oltre vent'anni. Da quando cioè Egli venne a creare la Sua scuola nell'incantevole plaga della Riviera Ligure di ponente ov'io naqui e trascorsi la prima giovinezza. Da un'epoca dunque ormai remota ma così viva nella memoria delle presenti generazioni, che, nella fosca atmosfera attuale ritornano col pensiero alla tormentata che in quegli anni squassava il mondo. Ma nella Riviera non giungeva neppure un'eco delle cannonate ed i giovanissimi potevano abbandonarsi ai giochi, agli studi, ai sogni. Mentre io ero alle prese con le prime asperità dello studio del violino sotto la guida di un insegnante certo valente ma iraco che, troppo presto spazientitosi, fini col dichiarare a mio padre che non avrei combinato nulla (e fu profeta!), sentivo parlare del maestro da 1-200 giunto nella nostra cittadina cui accorrevano principianti di violino e non principianti, lo vedeva per istrada coi suoi allievi, mi perveriva attraversando certe strade della città vecchia, l'eco di scale cromatiche e di passi a semplici o doppie corde eseguiti dai suoi allievi con ammirevole intonazione... e si diffondeva la fama di alcuni di essi che, non ricchi ab initio di grandi doti musicali, riuscivano a cimentarsi dopo pochissimi anni di tenace studio, ed in pubbliche esecuzioni per giunta, con le musiche tecnicamente più ardue dei classici del violino, Paganini compreso. E non solo a me giovinetto, rimasto ignaro di tante nozioni elementari e fondamentali, tutto ciò appariva miracoloso!

Oggi, meno ignaro — teoricamente almeno — di tutto quanto si riferisce al violino ed alla viola, letti i due fascicoli della Nuova scuola violinistica, medita quell'ultima opera del Maestro, comprendo che non v'era nulla di miracoloso nei rapidissimi progressi tecnici degli allievi di questo didatta.

Come Sfilio ha intuito quale potesse essere il «segreto» della trascendentale meccanica paganiniana (e più di un lettore ne resterà persuaso per la logica con cui Sfilio analizza la tecnica del grande Genovese) così coloro che altamente apprezzano gli allievi dello Sfilio, parecchi dei quali stanno

ospiti mantia di giorchiello. la gran del qu un'aula. L'ann vestit. malam in segg ossa so vero T e quei andare. E, da genza i quale l sere vi novese, amiti, forma is giug det Pr nome t Procuri Giova una let te calli re è pr senza c care p care cl l'ambite tare e t re, ed lasciare. Qui l po' all l'antuo non del moment altri la sono — acco stampati ma. Bai vanni T che per stato un ratore a vese, fa più bio. tuo Sua Bando t tos ann

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compiendo brillantissime carriere, sapranno ormai di quale segreto anch'Egli si valesse per farli così rapidamente progredire ed emergere; come verranno tentati di applicare subito a se stessi o ad altri le norme che Egli, con raro gesto altruistico, ha dettato in forma così chiara e con ragionamento così persuasivo.

Il segreto di Paganini viene finalmente sfrondata d'ogni leggenda. Cade la fama di stragone che ha perseguitato fin dopo la morte il nostro grande contrerapeo, cadono le molte interpretazioni sulla genesi di quel proverbiale virtuosismo. Anche quelle che, fondandosi su inesatte attribuzioni anatomiche (Paganini non aveva affatto le dita smisuratamente lunghe!), parevano sminuire le eccezionali facoltà di quel violinista. Il quale suonava in modo assolutamente fisiologico per quanto riguarda la posizione che era dai più dell'aria scorretta, si valeva del cromatismo come del più naturale sistema di impostazione della mano sinistra e si fondava sul tatto e non sull'orecchio per l'intonazione. Quanti son gli insegnanti che non hanno mai urlato all'allievo stonato: «Non hai orecchio!». Chi è senza peccato... si faccia avanti. Eppure sembra oggi così nuovo che ci si venga a ricordare che quando l'orecchio, l'avvertire, la stonazione è già in atto i Donde anche qui la necessità di rivedere attentamente la metodica dello studio del violino e di riformarla, laddove non lo fosse ancora, su basi naturali.

Si potrebbe essere scettici sui risultati conseguibili col metodo Sfilio, se una più che ventennale pratica, l'attestazione di molti valentissimi allievi e di illustri musicisti e la facilità con cui è possibile sincerarsi della fondatezza dei suoi asseriti, non ci convincesse che esso può tranquillamente essere posto a base di una Scuola.

Pietro Berri

Segnalazione

Prendete la più agile fantasia modernista e spingetela al parossismo: adornatela di «sculture» acute, ora esatto quasi con ferocia, ora tristemente melanconico, o gioiosamente anticipatore e avrete una sintesi del *Discorso sul mondo oscuro* di Roberto Gaia (Ed. Accame Torino - Lire 10).

In una gamma di sensazioni discordi, tumultuose e spaziali, il Gaia ha tessuto le sue brevi avvincenti sue sensazioni: l'animo dell'autore ha cercato la fredde e tenace ragione scientifica ne «La vida es sueño»; ha cantato con leggerezza quasi sentimentale ne «L'aria di romanzo»; ha giocato di squilibrio e di paradosso in «Scrivere in sinfonia»; ha fatto esplodere in «Shadon» gli impulsi più rumorosi, slegati, faragginosi; ha trovato la pace e la fonte dell'umano credere e sperare ne «La preghiera». Una carambola di cose opposte, talvolta apparentemente incompatibili: mal coscienza; epperò, per chi sa capire il dinamismo sofferto e geniale degli innovatori e degli anticipatori, un libro che deve essere — per forza — discusso.

LIBRI RICEVUTI

G. e F. Vinci - *I canti dell'Impero* - (Opere di Poesia - Bologna - Lire 8).

Dino Guseni - *L'amore cronometrico* - (Ediz. L'arte - Trieste - L. 3.50).

Anna M. Mazza - *Io e lo specchio - Litiche* - (Ediz. Principato - Messina - Lire 10).

Filippo Caracciolo di Melito - *Il grege* - Roma.

Ettore Davite - *Il Campidoglio* (Vecchi ed. Milano - L. 5).

<http://www.fondazioneffilio.it/pdf/secolo12luglio2000.pdf> (accessed May 11th, 2013: 05 pm).

FALEGNAME E VIOLINISTA



Il maestro Gaccetta nel letto di casa, in sala Marchionni a Genova



Maestro Gaccetta nella sua bottega di via Vege II (Fotosegnito di Italo Sanchez)

Giuseppe Gaccetta, genovese, 87 anni, è l'ultimo depositario della tecnica del più grande violinista della storia

Un geniale Geppetto che suona come Paganini

ANITA CRUZZA

ed è vero, ma hai carattere Sei capace a rispettare un patto?%

IL SECOLO XIX

Parola di PRIMO VIOLINO

Allievo di Francesco Sfilio, Gaccetta ha inciso i Capricci di Paganini nel 1931. Nel 1940 la guerra e difficoltà economiche lo hanno costretto a lasciare il violino per la pialla. "Riscoperto" per caso, ora sogna di fondare una sua Scuola

<http://www.fondazioneffilio.it/pdf/secolo27luglio2000.pdf> (accessed May 11th, 2013: 05 pm).

NEL SEGNO DEL "CANNONE"



Il falegname Giuseppe Gaccetta rispolvera il suo amato violino

Un puntale per violoncello. È stato un puntale eseguito a opera d'arte italiana che ha fatto alzare il sipario su Giuseppe Gaccetta, 87 anni, falegname nel centro storico, sconosciuto violinista di straordinario talento nella Genova degli anni Trenta. Quel puntale, che lo ha fatto conoscere a Giuseppe Signani, violin-celista del Carlo Felice. A lui, dopo sessant'anni di silenzio, Gaccetta ha rivelato di essere stato un tempo musicista. Un violinista che, nel 1931, aveva persino inciso su rubriche alcuni "Capricci" di Paganini. È stato l'ascolto di quella prodigiosa registrazione a sollevare l'interesse del mondo della musica attorno a quel mitico artigiano ottanta-settenne e attorno all'uomo che gli aveva insegnato a suonare a quel modo. Francesco Sfilio, allievo di Camillo Sivori, unico discepolo di Paganini, interessato su Sfilio (la sua volta grande dibattito dimenticato dalla storia della musica) e sul suo metodo didattico unico e diversificato, che deriva per linea diretta dal grande Nicolò Paganini, che ne ripropone esercizi didattici e pratiche di "allenamento" musicale. Un metodo destinato a rivoluzionare il sistema di insegnamento moderno del violino.

La storia di Giuseppe Gaccetta - i suoi esordi come violinista, il suo incontro con Francesco Sfilio approdato a Genova nel 1929 per aprire una propria scuola di violino, i suoi lunghi anni di studio in vista del concorso paganiniano del 1940 cancellato dallo scoppio della guerra - il Secolo XIX ha raccontato ai suoi lettori lo scorso 12 luglio. Ora è il direttore del conservatorio Niccolò Paganini ad aprire un'altra pagina. Lo fa decidendo di offrire a Gaccetta la possibilità di insegnare il metodo di studio paganiniano. È offrendo alla città di valorizzare un tesoro di conoscenza unico al mondo.



Il grande Nicolò Paganini



Il "Cannone" custodito a Turin



Uto Ughi al termine di un concerto eseguito con il "Cannone" di Paganini

Giuseppe Gaccetta, falegname e violinista, diventa professore a 87 anni: svelerà la tecnica segreta del grande virtuoso

A Genova da tutto il mondo per suonare come Paganini

Da Paganini a Sivori, da questi a Sfilio fino all'ultimo erede, Gaccetta presterà il suo talento ai solisti di domani. Dal 2001 per lui una cattedra al Conservatorio. Il direttore Angelo Guaragna: «Faremo di tutto per cominciare prestissimo»

Appendix 7. Consent form for the participants.



Universidade de Aveiro Campus Universitário de Santiago/ 3810-193 Aveiro Portugal
Telefone (+351) 234 370 200 - Fax (+351) 234 370 985

PROGETTO DI RICERCA: La tensione della mano sinistra nell' esecuzione violinistica

Obiettivo generale: Il presente studio tende ad esplorare le problematiche della mano sinistra dei violinisti e violisti e vuole dimostrare che, l'applicazione di alcuni esercizi specifici possono aiutare a risolvere e prevenire queste problematiche.

Il ruolo dei partecipanti.

Gli alunni coinvolti nel presente progetto di ricerca di dottorato, dovranno garantire la presenza diaria per almeno un'ora al giorno, durante due settimane (lunedì-sabato).

Si fa presente che il periodo sarà tra il giorno 1 e il giorno 13 di Settembre e l'orario sarà un orario comune alla maggior parte degli allievi con preferenza nelle fasce orarie 15.30/16.30 e 17/18 e la sede sarà il Conservatorio di Cuneo.

La partecipazione degli allievi sarà fondamentale per la realizzazione di questo studio sperimentale che sarà innovativo e, ci auguriamo, anche di importanza scientifica.

Gli allievi dovranno sottoporsi a tre test psicologici, somministrati da una psicologa esperta, e tre registrazioni effettuate una all'inizio dello studio, una dopo la prima settimana e una alla fine della seconda settimana.

Il ruolo del ricercatore.

Il sottoscritto Ludovico Tramma N° Matricola 63086 si compromette nel:

1. garantire la totale confidenzialità delle informazioni raccolte e di tutti i dati acquisiti.
2. garantire che l'utilizzazione dei dati forniti sarà esclusivamente per fini di ricerca scientifica.
3. garantire che la partecipazione ai test non sia invasiva o possa ledere, in alcun modo, la persona.

CONSENSO INFORMATO

Io sottoscritto/a....., dichiaro di essere cosciente del progetto di ricerca "La tensione della mano sinistra nell' esecuzione violinistica" e acconsento che mio figlio/figliapartecipi allo studio di cui sopra.

Firma di uno dei genitori:

.....

.....,/...../.....

Ludovico Tramma
via dei Quintili 255 00175 Roma cell. +39.349.2261675 E-mail: ludovico_tramma@hotmail.com
Web-site: www.duotrammafaccini.it

Appendix 8. Demographic questionnaire.



PROGETTO DI RICERCA IN MUSICA

Caro Partecipante,

chiediamo la collaborazione nel compilare questo piccolo questionario demografico con l'obiettivo di conoscere meglio il tuo percorso di studi con il violino.

Questo piccolo questionario guarda un progetto di Dottorato in Musica, realizzato nel dipartimento di Comunicazione e Arte dell'Università di Aveiro, per la compilazione del quale ringraziamo la partecipazione.

Gruppo di Ricerca

Ludovico Tramma (DeCA - Dottorando)

David Wyn Lloyd (DeCA- Relatore)

Ana Torres (Dipartimento educazione – Correlatrice)

Per le seguenti domande, per favore, barrare la risposta più appropriata (una risposta per ogni domanda)

A. INFORMAZIONI PERSONALI

Q1. Sesso:



Q2. Etá:

10-13

14-17

18-21

22-25

Q3. Da quanti anni studi violino?

Meno di 5 anni

6 – 9 anni

10-13 anni

14-17 anni

B. ATTIVITÀ MUSICALI

Q4. Quanto tempo al giorno ascolti musica?

Meno di 15 minuti al giorno

Da 15 a 30 minuti al giorno

Da 30 a 45 minuti al giorno

Da 45 a 60 minuti al giorno

Oltre 60 minuti al giorno

Q5. Quale genere musicale ascolti prevalentemente?

Musica Classica

- Jazz
 - Pop/Rock
 - Hip-hop
 - Funk/house
 - Folk music
 - Altre (per favore, specificare)
-

Q6. Quanti concerti ascolti all'anno?

- Meno di 5 per anno
- 5 – 10 per anno
- 11 – 20 per anno
- 21-30 per anno
- Più di 30 per anno

Q7. Hai mai sofferto di dolori muscolari o articolari?

- MAI
- QUALCHE VOLTA
- SPESSO

Q8. Qual è l'intensità del dolore? (barrare la faccina corrispondente al livello del dolore percepito)



Q9. Senti di avere tensione nella mano sinistra quando suoni?

- MAI
- QUALCHE VOLTA
- SPESSO

Q10. Attualmente, soffri di qualche disturbo che ritieni derivi dall'uso del/dei tuo/tuoi strumento/i musicale/i?

SI

NO

Q11. Se si, sei in trattamento o stai seguendo una terapia?

SI

NO

Grazie per la collaborazione!

Appendix 9. Test Kenny-MPAI Italian version.

Qui di seguito sono riportate alcune affermazioni su come ti senti in generale e come ti senti prima o durante un'esecuzione. Si prega di cerchiare il numero corrispondente secondo la propria opinione in relazione al condividere o meno le seguenti dichiarazioni.

		Fortemente in disaccordo			Fortemente d'accordo			
K_1	Generalmente sento che ho il controllo della mia vita	6	5	4	3	2	1	0
K_2	Mi riesce facile fidarmi degli altri	6	5	4	3	2	1	0
K_3	A volte mi sento depresso senza sapere perché	0	1	2	3	4	5	6
K_4	Spesso mi riesce difficile trovare l'energia per fare le cose	0	1	2	3	4	5	6
K_5	La preoccupazione eccessiva è una caratteristica della mia famiglia	0	1	2	3	4	5	6
K_6	Ho spesso la sensazione che la vita non abbia molto da offrirmi	0	1	2	3	4	5	6
K_7	Anche se lavoro duramente nella preparazione di un'esecuzione, è probabile che commetta errori	0	1	2	3	4	5	6
K_8	Trovo difficoltà a dipendere dagli altri	0	1	2	3	4	5	6
K_9	I miei genitori erano per lo più sensibili alle mie esigenze	6	5	4	3	2	1	0
K_10	Prima o durante un'esecuzione, provo sentimenti simili al panico	0	1	2	3	4	5	6
K_11	Non so mai prima di un concerto se suonerò bene	0	1	2	3	4	5	6
K_12	Prima o durante un'esecuzione sento la bocca secca	0	1	2	3	4	5	6
K_13	Spesso sento di non valere molto come persona	0	1	2	3	4	5	6
K_14	Durante l'esecuzione mi ritrovo a pensare se riuscirò a portare a termine la performance	0	1	2	3	4	5	6
K_15	Il pensiero della valutazione che posso ricevere interferisce con la mia esecuzione	0	1	2	3	4	5	6
K_16	Prima o durante un'esecuzione, mi sento male, svenire, o sento torcere le budella	0	1	2	3	4	5	6
K_17	Anche nelle situazioni di esecuzione più stressanti, sono sicuro che suonerò bene	6	5	4	3	2	1	0
K_18	Sono spesso preoccupato per una reazione negativa del pubblico	0	1	2	3	4	5	6
K_19	A volte mi sento in ansia senza alcun motivo particolare	0	1	2	3	4	5	6
K_20	Fin dall'inizio dei miei studi musicali, ricordo di essere stato ansioso in relazione all'esecuzione	0	1	2	3	4	5	6

		Fortemente in disaccordo				Fortemente d'accordo			
K_21	Mi preoccupo che una cattiva esecuzione possa rovinare la mia carriera	0	1	2	3	4	5	6	
K_22	Prima o durante un'esecuzione, sento il cuore battere forte nel petto	0	1	2	3	4	5	6	
K_23	I miei genitori mi hanno ascoltato quasi sempre	6	5	4	3	2	1	0	
K_24	Rinuncio alle opportunità di performance che valgono la pena a causa dell'ansia	0	1	2	3	4	5	6	
K_25	Dopo lo spettacolo, mi preoccupo se ho suonato abbastanza bene	0	1	2	3	4	5	6	
K_26	La mia preoccupazione e il mio nervosismo per l'esecuzione interferiscono con la mia attenzione e concentrazione	0	1	2	3	4	5	6	
K_27	Da bambino, spesso mi sentivo triste	0	1	2	3	4	5	6	
K_28	Mi capita spesso di preparare un concerto con un senso di spavento e di disastro imminente	0	1	2	3	4	5	6	
K_29	Uno o entrambi i miei genitori erano troppo ansiosi	0	1	2	3	4	5	6	
K_30	Prima o durante una performance, ho aumentato la tensione muscolare	0	1	2	3	4	5	6	
K_31	Spesso sento di non avere nulla per guardare al futuro	0	1	2	3	4	5	6	
K_32	Dopo lo spettacolo, lo rivivo nella mia mente più e più volte	0	1	2	3	4	5	6	
K_33	I miei genitori mi hanno incoraggiato a provare cose nuove	6	5	4	3	2	1	0	
K_34	Mi preoccupo così tanto prima di una performance, da non riuscire a dormire	0	1	2	3	4	5	6	
K_35	Quando suono senza partitura, la mia memoria è affidabile	6	5	4	3	2	1	0	
K_36	Prima o durante la performance sperimento fremiti, tremoli o brividi	0	1	2	3	4	5	6	
K_37	Quando suono a memoria mi sento sicuro	6	5	4	3	2	1	0	
K_38	Mi preoccupo nel sapere di essere esaminato dagli altri	0	1	2	3	4	5	6	
K_39	Mi preoccupo per il mio proprio giudizio su come suonerò	0	1	2	3	4	5	6	
K_40	Continuo a perpetrare l'attività concertistica, anche se ciò è per me fonte di grande ansia	0	1	2	3	4	5	6	

©Kenny, D.T. (2009). *Kenny Music Performance Anxiety Inventory-Revised (K-MPAI-R)*
Traduzione: Fiammetta e Rosanna Facchini con la partecipazione di Nancy Lee Harper e Dianna Kenny.



*Servizio di Monitoraggio e Intervento
precoce per la lotta agli Esordi
della sofferenza mentale e
psicologica nei giovani*

Questionario S.T.A.I. (State Trait Anxiety Inventory) – FORMA Y-1

Nome _____ Sesso _____ Età _____
 Cognome _____ Data _____

SINTOMI	Per nulla	Un pò	Abbastanza	Moltissimo	Riservato allo sperimentatore
1. Mi sento calmo					
2. Mi sento sicuro					
3. Sono teso					
4. Mi sento sotto pressione					
5. Mi sento tranquillo					
6. Mi sento turbato					
7. Sono attualmente preoccupato per possibili disgrazie					
8. Mi sento soddisfatto					
9. Mi sento intimorito					
10. Mi sento a mio agio					
11. Mi sento sicuro di me					
12. Mi sento nervoso					
13. Sono agitato					
14. Mi sento indeciso					
15. Sono rilassato					
16. Mi sento contento					
17. Sono preoccupato					
18. Mi sento confuso					
19. Mi sento disteso					
20. Mi sento bene					

Appendix 11. Test S.T.A.I. Y – 2.



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Questionario S.T.A.I. (State Trait Anxiety Inventory) – FORMA Y-2

Nome _____ Cognome _____
Età _____ Sesso _____ Data _____

SINTOMI	Per nulla	Un pò	Abbastanza	Moltissimo	Riservato allo sperimentatore
1. Mi sento bene					
2. Mi sento teso ed irrequieto					
3. Sono soddisfatto di me stesso					
4. Vorrei poter essere felice come sembrano gli altri					
5. Mi sento un fallito					
6. Mi sento riposato					
7. Io sono calmo, tranquillo e padrone di me					
8. Sento che le difficoltà si accumulano tanto da non poterle superare					
9. Mi preoccupo troppo di cose che in realtà non hanno importanza					
10. Sono felice					
11. Mi vengono pensieri negativi					
12. Manco di fiducia in me stesso					
13. Mi sento sicuro					
14. Prendo decisioni facilmente					
15. Mi sento inadeguato					
16. Sono contento					
17. Pensieri di scarsa importanza mi passano per la mente e mi infastidiscono					
18. Vivo le delusioni con tanta partecipazione da non poter togliermele dalla testa					
19. Sono una persona costante					
20. Divento teso e turbato quando penso alle mie attuali condizioni					



CURRICULUM VITAE

Name and surname Francesco La Gala
Place of birth Rome
Date of birth 27 / 09 / 1969
Nationality Italian
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DATI PERSONALI

Servizio militare Svolto dal 11 /08/94 al 16/10/95 come ufficiale di complemento presso la sezione studi ed esperienze della Scuola di Fanteria di Cesano.

STUDI

Aprile 1999 **Dottorato di ricerca in Meccanica Teorica e Applicata.**
Tesi: "Modellistica e Controllo di Sistemi Articolati con Elementi Flessibili", Tutor Prof. S.Monaco.
Dipartimento di Informatica e Sistemistica
Università di Roma 'La Sapienza'.

Gennaio 1995 Abilitazione alla professione di Ingegnere .

Luglio 1994 **Laurea in Ingegneria Meccanica.**
Indirizzo : Robotica ed Automazione,

Tesi: "Simulatore per il controllo di configurazione e movimentazione nelle applicazioni spaziali."

Università di Roma "La Sapienza".

Luglio 1988

Maturità Scientifica

Liceo Scientifico "C. B. Cavour" di Roma.

ESPERIENZE DI RICERCA E SPERIMENTALI:

Ricerca (dottorato)

Nel corso dell'attività di ricerca mi sono interessato allo studio dei sistemi di controllo per riconfigurazione ed assetto di strutture articolate spaziali con elementi flessibili in presenza di vincoli anolonomi , con particolare attenzione rivolta agli aspetti modellistici .

La parte sperimentale svolta presso il Laboratorio di Sistemi del Dipartimento di Informatica e Sistemistica ha riguardato la realizzazione di un simulatore per il controllo di configurazione (A.C.C.S), di cui ho curato il progetto meccanico , la parte elettronica (schede di interfaccia e acquisizione tra P.C. e attuatori/sensori), il progetto di un sistema di misura della posizione tramite laser rotante e la parte software di gestione.

Altri progetti seguiti durante l'attività di ricerca:

Implementazione di strategia di controllo digitale di tipo "MULTI RATE" per la movimentazione di ROBUTER (un mezzo di navigazione autonoma su ruote) .

Sviluppo del ROBOTIC TUTOR (un sistema per il supporto alla deambulazione per disabili) .

Progetto e realizzazione del sistema di movimentazione del robot mobile MAARS.

RICERCA E ATTIVITÀ SPERIMENTALI:

Ott.1997 – presente (INSEAN, Vasca Navale, CNR)

In questo periodo ho lavorato presso l'INSEAN-CNR (Vasca Navale) di Roma. Dal Gennaio 2001 ho assunto la posizione di Ricercatore e sono stato fino al 2008 il responsabile del Laboratorio elettronico.

Dal 2009 al 2011 ho assunto la posizione di Direttore del Servizio Dell'Unità tecnica Progettazione – Costruzione Modelli & Supporto Tecnico Generale

Dal 2011 ad oggi sono il responsabile del laboratorio Misure e Prove Speciali

I principali progetti sviluppati sono i seguenti:

- Sistema di misura automatizzato per il rilievo del campo di velocità triassiale del fluido attorno ad una carena tramite tubo di Pitot.

- Sensore piezoelettrico e relativo sistema di condizionamento per la misura del campo di pressioni generato dall'elica.

Progetto di un asse opportunamente strumentato per la misura di coppia e spinta assiale senza contatti striscianti.

- Integrazione e modifica del sistema di controllo della velocità del carro dinamometrico n°2, per la conduzione di prove a velocità non costante.

Sistema di misura per altezza d'onda per il rilievo di campi ondosi non stazionari. Questo progetto ha dato origine ad un prodotto realizzato in circa 150 pezzi ed utilizzato da diversi enti di ricerca.

Progetto del sistema di controllo della velocità del carro dinamometrico n°1 (in collaborazione con Siemens Italia).

Progetto del sistema di movimentazione per la misura dei vortici d'estremità alare tramite P.I.V in collaborazione con AIRBUS (Progetto CWAKE).

Sistema di movimentazione micrometrica multiasse per prove su sommergibili.

Sistema di movimentazione per appendici di sommergibili.

Sistema di misura per la determinazione della distribuzione degli sforzi sulla struttura di scafi veloci.

Progetto delle schede di controllo per il PMM (robot planare per la movimentazione di modelli di imbarcazione).

Progetto e realizzazione di un sistema di misura applicato alle pagaie di canoisti per l'analisi dinamica e la stima del rendimento propulsivo. (in collaborazione con FIK) .

Sistema di misura immergibile per il rilievo delle forze idrodinamiche su appendici tramite FBG. (Fiber Bragg Grating).

Partecipazione al progetto HTA (HYDRO TESTING ALLIANCE) per la definizione di uno standard da condividere con altri istituti europei per i sistemi di misura wireless in ambito idrodinamico. Attualmente in questo progetto occupo la posizione di coordinatore del gruppo di ricerca.(<http://www.hta-noe.eu>).

Progetto di una piattaforma inerziale basata su sensori MEMS con interfaccia bluetooth per misure di seakeeping su modelli di imbarcazione di piccole dimensioni.

Sviluppo di modellistica per la federazione canoa kayak per determinazione del rendimento biomeccanico dell'atleta

Progetto del sistema di controllo del singolo automa e del sistema di comunicazione per la gestione di uno sciame di piccole imbarcazioni autonome (In collaborazione con SSI del gruppo finmeccanica.

Sviluppo del sistema di condizionamento ed acquisizione dati utilizzato nel monitoraggio strutturale per edifici relativo al progetto WISEST in collaborazione con LABOR , INFOCOM (La Sapienza) e Gruppo Alessandrini costruzioni

Partecipazione al progetto europeo FP7 "SAFECAST". Sviluppo di sensori di deformazioni posizionati all'interno di strutture in cemento armato precompresso da impiegare in test sismici.

Partecipazione al progetto europeo FP7 "AUTODROP" . Progetto di un veicolo autonomo propulso per gravità da impiegare nel posizionamento di sensori sul fondo marino.

Attività Professionali:

Dic. 1995 – 2001

Come attività professionale, mi sono occupato di progettazione e realizzazione sistemi di misura e sistemi di controllo. In tale contesto ho curato la progettazione di sistemi di monitoraggio e controllo, con trasmissione dati su bus standard (es. RS485) o proprietari, con realizzazione di schede in logica cablata o con microcontrollore programmato (es. ST6260 della SGS-Thomson , Pic della Microchip, 8051,..).

Tra i progetti più interessanti:

1999-2002

Sviluppo del software di calcolo per l'analisi dello stato di deformazione di strutture in muratura. Tale sistema è stato utilizzato ad es. nella valutazione dello stato della parete della Sala Baglivi dell'ospedale monumentale Santo Spirito in Roma.

Sviluppo di centraline autonome per il monitoraggio di cedimenti differenziali su edifici

Sviluppo del sistema robotico di posizionamento dei sensori acustici per la mappatura delle bolle di distacco sugli intonaci degli affreschi. (in collaborazione con il Dipartimento di meccanica delle vibrazioni di Ingegneria università "La Sapienza" .

Cito inoltre il sistema di automazione del poligono di addestramento per il combattimento nei centri abitati (PACA) della Scuola di Fanteria di Cesano (Roma), mentre tra i prodotti sviluppati sono presenti uno switch indirizzabile per bus seriali con standard RS232 e RS485, dei driver di potenza per motori passo-passo, e sistemi di movimentazione 3D controllati da calcolatore.

Progetti minori:

Progetto di un modem per comunicazioni dati criptati in VHF

Realizzazione di sistemi di misura utilizzati per il monitoraggio dell'attività fisica degli atleti.

Attività didattica:

Come attività didattica, ho tenuto i corsi di Teoria dei Sistemi e Controlli Automatici per il diploma di laurea breve in Ingegneria Informatica, a Roma, negli anni 96/97.,97/98, 98/99.

DAL 2003 al 2008 , sono stato docente il corso di Fondamenti Di Automatica Presso l'università di Roma3 del corso di Ingegneria Informatica.

Dal 2009 al 2012 sono stato docente del corso di Tecnologie dei sistemi di Controllo presso l'Università di Roma3 del corso di Ingegneria Informatica

Dal 2010 al 2012 sono stato docente del corso di Misure e Strumentazione Automatica presso l'Università "La Sapienza" del corso di Ingegneria Automatica.

Tesi di laurea seguite: circa 50 divise tra Meccanica delle Vibrazioni, Controlli automatici, sensori e Trasduttori ed Elettronica applicata .

Nei corsi universitari ho spesso impiegato programmi di simulazione per supplire alla mancanza di temi e spazi e per effettuare sperimentazioni reali in laboratorio. Il modulo più interessante è il pacchetto per la simulazione di sistemi anolonomi con modelli non lineari.

BIO SKETCH

Francesco La Gala was born in Roma, Italy, on September 29, 1969. He received the Laurea degree in Mechanical Engineering and the Research Doctorate degree in Applied Mechanics from the University of Roma "La Sapienza" in 1994 and 1998, respectively.

From 1998 to 2000 he was a freelance professional working as consultant for industry (Siemens, Alenia Marconi).

From 2000 to 2012 he was a Researcher at INSEAN where he was the responsible of the electronic laboratory from 2001 until 2012. The main research activity was addressed to the development of custom experimental set-up for hydrodynamic investigations in particular in electronic design, custom sensors, and mechanical design.

He was also assistant professor at the Faculty of Information Engineering of the University of Roma in :

from 1998 to 2001 Automatic Control

from 2002 to 2003 Digital Control

from 2003 to 2009 Automatic Control

from 2010 to 2012 Technologies of control systems

from 2010 to 2012 Measures for dynamic systems.

**Autorizzo il trattamento dei dati personali ai sensi del D.LGS.
196/2003**

Roma, 1/08/2013

Ing. Francesco La Gala

A handwritten signature in black ink, appearing to read "Francesco La Gala". The signature is written in a cursive style with some loops and flourishes.