AN ANTHROPOLOGICAL COMPARISON
OF TWO CHILDREN´S PHOTOGRAPHS

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Abstract

The two most popular theories about the nationality of the famous tango singer, Carlos Gardel, are presented here. These are the Uruguayan and French theories. Both arguments are exposed according to documentation, witness testimonies, and Gardel's declarations to the media. A study and anthropological comparison of two children's photographs are presented. According to Berthe Gardés, both photographs correspond to Gardel when he was a child. The photographic comparisons were made by modern, forensic anthropological analyses of faces, using digital techniques with Adobe Photoshop software. As a result of these comparisons, it can ascertain that, without any doubt, the two photographs analyzed are not of the same child. These conclusions support the Uruguayan theory about the nationality of Gardel. Medicolegal aspects of the case were also analyzed as well as several legal irregularities that had never been clarified concerning Gardel's last will. Forensic aspects about his death in a plane crash at the airport of Olaya Herrera of Medellín City, Colombia, were also analyzed. The fast and poor identification of Gardel's body, basically taken from personal objects, was not performed according to scientific techniques of identification. Although dental analysis is described in the forensic literature, the analysis was never distinguished because neither Gardel's radiographs nor his dental charts were shown. Therefore, several experts have serious doubts that the body buried in the Chacarita cemetery is that of the famous tango singer. All these irregularities are supported by the fact that the photographs analyzed are undoubtedly of two different children. Certainly one of them is of Gardel as a child, but the other one seems to be of the true son of Berthe Gardés, one Charles Romuald Gardés. These facts strengthen the Uruguayan theory about the nationality of Carlos Gardel as the illegitimate son of Colonel Carlos Escayola and María Lelia Oliva, born in Tacuarembó, Uruguay.

Keywords: Carlos Gardel, location of birth, theories, children's photographs, anthropological analysis

Learning Objectives:

1. Identify the most relevant facts about the life and death of the greatest tango singer of all time, Carlos Gardel.

2. Summarize the most important theories and arguments about Carlos Gardel's location of birth and its relationship with the two children's photographs.

3. Discuss the most important forensic aspects of this case, such as details of Carlos Gardel's autopsy and how his physical remains were identified.

4. Explain the use of traditional anthropological techniques to compare photographs by digital superimposition as a useful identification technique, as well as its use to identify the true Carlos Gardel child photograph.

5. Describe an original scientific work on two old children's photographs, using digital superimposition techniques and how they were identified – one of them like a true photograph of Carlos Gardel as a child, and the other one almost surely a photograph of Charles Romuald Gardés.
Introduction

This paper deals with the forensic problem of comparing obstructed/dimmed characteristics of facial images for personal identification. Cases of personal identification from facial photographs are quite common in the field of forensic sciences. Such problems often turn out to be tough, especially for facial images that are suspected to be the same person but with apparent dissimilarities caused either artificially by disguise, such as a wig, false beard, mustache, etc. or by natural reasons such as aging, baldness, growing, shaving a beard or moustache, changing a hair style, etc. (Iscan 1993). Iscan observed that one of the most significant problems with morphological or photo-anthropometric analysis for comparing two face photographs is that the appearances of facial features are likely to be altered in the two photographs, since they are usually taken at different times, under different conditions of camera alignment and orientation, and with different lighting conditions.

This paper is the anthropological study and comparison of many features of the children’s photographs. These photographs were submitted by Dr. Bello, a medical doctor who represents the civil association “Refugio Tangero” of Maldonado City, and the public notary José Texeidor, in 2002. Several comparison analyses using digital technology were carried out, especially the use of Adobe Photoshop software to modify and achieve more defined images of all the photographs submitted for comparison, as they were quite old.

The objective of this study was to determine if the photographs submitted for comparison correspond to the same child. This comparison carried great responsibility because at least one of the photographs compared could correspond to one of the greatest tango singers of all times, Carlos Gardel (figure1).

According to the testimony of Mrs. Berthe Gardés in the June 13, 1936 edition of the magazine La Canción Moderna, both photographs are of Carlos Gardel when he was a child.

Controversies surrounding the location where Carlos Gardel was born are well known. Some authors support that he was born in Toulouse, France, and others claim he was born in Tacuarembó, Uruguay. One objective of this study is to demonstrate, through comparison of these photographs, where he was born.

There are no doubts that Gardel lived in Buenos Aires City as a boy, that he was nationalized as Argentinean in 1923 and that he died in a plane crash during his last professional tour in Medellín City, Colombia. It is also well known that Gardel grew up in a poor neighborhood of Buenos Aires City known as El Abasto, where there was the old Central Market of Fruits. Since he was very young, Gardel sang. He was recognized for his unique voice and was given the sobriquet of ”el Morocho del Abasto.” He studied at the elementary school of the Salesiano’s College in Buenos Aires City. In 1902, when he worked at the Victoria Theatre, he knew several very important zarzuela and opera singers. In 1911, he carried out a peculiar “musical duel” in the middle of the street named Guardia Vieja in the Buenos Aires City neighborhood of El Abasto. The duel was against “el oriental,” José Razzano, another famous tango singer. Neither of them won the musical duel but it marked the beginning of a paramount musical association known as “The Gardel-Razzano’s Duo.” They continued working together for more than 15 years. Then, Gardel recorded his first single record from the Columbia Records Seal.

In 1915, Gardel was shot outside the Palace of Glade, a Buenos Aires City cabaret located in the high-
class neighborhood La Recoleta. The bullet could not be extracted, and it remained in his body for the rest of his life. Two years later, he became the protagonist of his first silent film, Flor de Durazno. In 1923, Gardel and Razzano toured with the company Rivera and De Rosas, visiting Uruguay, Brazil, and Spain. In the mid-1920s, the “Gardel-Razanno” duo separated. The true reason of this separation was never clear. Razzano continued to work as Gardel’s manager, but the two would never sing together again.

Following the end of the duo, Gardel carried out several European tours. He also worked as an actor in several films by Paramount Pictures, including Luces de Buenos Aires, Espérame, La Casa es Seria, and Melodía de Arrabal. It is important to mention that these later films incorporated Gardel’s assistant, the famous journalist and poet Alfredo Le Pera. Then Gardel and Le Pera wrote their most famous songs that established Gardel as a movie star singer, songs such as “Mi Buenos Aires Querido,” “Silencio,” “Volver,” and “El Día Que Me Quieras.”

In 1933, Gardel returned to Buenos Aires City. At that time his guitarists were Barbieri, Riverol, Vivas, and Pettorossi. Together, they conducted another tour of Argentine and Uruguay.

In 1934, Gardel filmed perhaps his most famous films, Cuesta Abajo, Mi Buenos Aires Querido, and Tango en Broadway with Paramount Pictures Corporation of New York City. At the end of 1934, Gardel sang in a musical show by Paramount Pictures called Cazadores de Estrellas. In 1935, he made the films El Día Que Me Quieras and Tango Bar, in which he sang his most famous hits.

At the beginning of April 1935, Gardel began the fateful tour of Puerto Rico, Venezuela, Aruba, Curacao, Colombia, Panamá, Cuba, and México. He would not finish this tour, because on June 24, 1935 Gardel died with his friend Alfredo Le Pera in a plane crash on the track of the Colombian airport of Olaya-Herrera at Medellín, City. The last photograph taken of Gardel and his guitarists inside the S.A.C.O. F-13 airplane was recovered from the crash. The camera's lining was made of leather, which saved the film from the fire. The plane crash killed 15 people, including two of Gardel’s guitarists, Guillermo Desiderio Barbieri and Angel Domingo Riverol. Today, thousands of people visit the remains in the Chacarita cemetery that are popularly believed to be that of Gardel, though experts dispute the true identity of the remains.

More than 700 of Gardel’s records have been preserved. He not only recorded tango songs but also sang folk music, milongas, zambas, rancheras, tonadas, and estilos – a total of 30 musical genres. He recorded a tango in English and several traditional songs in French, Italian, and a tango in the Guarani language. In 2003, Carlos Gardel’s voice was declared “Patrimony of the Humanity” by the UNESCO.

Carlos Gardel’s Location of Birth

All the controversies about Carlos Gardel’s location of birth can be summarized in two theories. The first theory, known as the French Theory, claims that Gardel was born in Toulouse City, France on December 11, 1890. The other theory, known as the Uruguayan Theory claims he was born in Tacuarembó City, Uruguay in December 1887. The French theory is based on the information found at Toulouse City that Gardel was born under the name Charles Romuald Gardés, as the son of Berthe Gardés (figure 2), and that in his last will Gardel claimed he was born in Toulouse, France and the only son of Berthe Gardés. According to this theory, Gardel was not Argentinean nor was he Uruguayan; rather, he was French. According to this theory, he was born on December 11, 1890 with the name of Charles Romuald – natural son of Berthe Gardés, who emigrated from France to Argentina when he was three years old.

The Uruguayan theory supports that Gardel was an illegitimate son of Colonel Carlos Félix Escayola (figure 3), mayor of Tacuarembó Department, Uruguay during the last decades of the nineteenth century, and that he was born as a result of an incestuous relationship. According to the Uruguayan theory, Carlos Gardel was born in December of 1887 on the ranch of Santa Clara (figure 4) in the Valle Edén, Department of Tacuarembó, Uruguay as a natural son of the Colonel Carlos Félix Escayola and Maria Lelia Oliva Sghirla. Carlos Escayola was married in 1868 to the oldest of the three Oliva sisters, Clara. When she died
in 1873, he married again, this time to the second of the Oliva sisters, Blanca. While married to Blanca, it is believed he had an incestuous relationship with his sister-in-law, María Lelia Oliva, the youngest of the three sisters. As a result, according to this theory, Carlos Gardel was born in December 1887. It is alleged that Gardel's French mother, Berthe Gardés, worked in one of Colonel Escayola's cabarets in Minas de Corrales City. She had moved there with a French mining company. Gardel was born on the ranch of Santa Clara, property of the Colonel Carlos Escayola. Later he was given to Berthe Gardés with a cash payment of gold and the intention that she take the newborn far away from the Colonel's family. Berthe Gardés gave the newborn to a friend in Montevideo City. It is also known that Berthe Gardés had a romantic relationship with a man there whose name was Carlos Romualdo (Charles Roumuald in French). As a product of that relationship, Carlos Romulado's true son was born and named Charles Romualdo, after his father who never recognized him. After a while, Berthe Gardés traveled to France with her true son, Charles Roumuald. It is presumed that Gardés' son fought in the First World War in Europe between the years of 1914 and 1918 and that he died in the war.

Fig. 2 Mrs. Berthe Gardés

Fig. 3 Colonel Carlos Escayola

Fig. 4 Ranch of Santa Clara in Tacuarembó Department, Uruguay, the location of Gardel's birth, according to the Uruguayan theory
Arguments and Documents Supported by Both Theories

If Carlos Gardel was born out of an adulterous and incestuous relationship, then his birth was probably not recorded in a traditional manner. Gardel, however, enrolled his birth to the Uruguayan Consulate in Buenos Aires on October 8, 1920, according to the consular Uruguayan laws of May 21, 1906. In this document, he declared “to be born in Tacuarembó on December 11, 1887, son of Carlos and María, both Uruguayans and deceased” (figure 5).

Fig. 5 Carlos Gardel's certificate of birth granted by the Uruguayan Consulate at Buenos Aires, in October 8, 1920

Fig. 6 Card of Argentinean citizenship number 218.125 of March 7, 1923 in which Gardel declared his Uruguayan origins
All of these official documents shown above indicate that Gardel’s location of birth is Tacuarembó City, Uruguay. The alleged French mother, Berthe Gardés (figures 6-8), appears nowhere on these documents. Furthermore, there is journalistic evidence to support Gardel’s Uruguayan citizenship. On June 24, 1915, the daily El Tiempo, from Montevideo, discussed the duo “Gardel-Razzano” as “the young countrymen.” Glaringly, at those times, there was no controversy about Gardel’s nationality. In an October 1, 1933 interview by La Tribuna Popular, Gardel said “…I was born at Tacuarembó, which for known is idle to clarify.” To the daily Diario Imparcial of Montevideo on October 4, 1933, he repeated this. In another magazine, Caretas, of Antioquia City, the famous tango singer claimed, “my heart is Argentinean but my soul is Uruguayan because I was born there.” Finally, in an interview for the daily El Telegrafo of Paysandú City in 1933, he said in regard to his nationality “…Uruguayan and born in Tacuarembó.” This demonstrates that for Gardel, there was no controversy about his nationality (Ruffié de Sant Blanc, M et al, 2006).
It is with deliberate purpose that Gardel clarified in all those interviews that Tacuarembó City was his city of birth, because it was enough that he simply say “Uruguayan” to answer questions about his location of birth.

Another indirect but important testimony in determining Gardel’s nationality was presented by Carlos Segundo Escayola, the fifth son of Colonel Carlos Felix Escayola and Maria Lelia. He was the last of the thirteen legal sons the Colonel had with the three Oliva sisters. Carlos Segundo Escayola is a key part in the mystery of Gardel’s nationality.

Carlos Segundo Escayola was born in Montevideo in June 10, 1901 and died in 1978. Erasmo Silva Cabrera, an expert on this topic, said, “Carlos Segundo Escayola never denied knowing since he was a child that his father was the father of the ‘zorzal criollo’; he did not show this fact off, but he was not prone to boast of being Gardel’s brother” (Paysée, 1990). In the interview given by Carlos Segundo Escayola to Erasmo Silva Cabrera, he never denied the Colonel’s paternity of Gardel, but Carlos Segundo Escayola consistently abstained from saying the name of his mother, who was Gardel’s mother, too. Perhaps Erasmo Silva Cabrera always knew the name of Gardel’s mother but promised not to say it until Carlos Segundo Escayola died. Then and only then, Erasmo Silva Cabrera would divulge Gardel’s true mother’s name – Maria Lelia Oliva. Carlos Segundo Escayola declared to Erasmo Silva Cabrera, “Gardel was my brother and the day that he died, I closed the doors of my pharmacy in front of the Cristobal Colón Square of Tacuarembó City, and there I received many people who expressed their sadness because all they knew we were relatives.”

Further supporting the Uruguayan theory of Gardel’s nationality is a notary document indicating he purchased land in the exclusive Montevideo town of Carrasco and, once again, declared Uruguayan as his nationality.

One very important clue about the Uruguayan nationality of Gardel is that Gardel did not speak French and could not even write well in French. This is odd since Charles Romuald Gardés’ school files, which can be found at www.todotango.com, indicated that when he finished his studies in San Estanislao with a qualification of 10 in all his assignments, including French language.

The most recent evidence about Gardel’s Uruguayan nationality is an anthropological, comparative study carried out at the end of 2002. This study compares two suspected photographs of Gardel as a child. One of them was shown by Berthe Gardés to the magazine La Candion Maderna on June 13, 1936. This analysis of both photographs shows that the two photographs are not of the same child and, therefore, supports the Uruguayan theory that one of them is a photograph of Berthe Gardés’ true son and the other is a photograph of Carlos Gardel.

The French theory comes from a birth certificate with the name Charles Romuald Gardés, born in 1890 at La Grave Hospital, found in the Toulouse City Hall records. Gardel’s manager, Defino, used this document in the legacy procedures. But this testimony indicates the birth of the French citizen three years later than 1887.

Concerning the childhood of Gardel, an important piece of evidence is a photograph that shows Gardel in a school group of boys (figures 9, 10). At this time, there were not composite schools in Uruguay. In this photograph and according to the declarations of Berthe Gardés, we can see Gardel as a child. Lamentably, there is no data about when and where it was taken, and no teachers could be seen. So, we can ask the next questions: At what location or elementary school was the photograph taken? Was it taken in Buenos Aires City or in Montevideo City? Eduardo Paysé (1990) said, about this photograph, “there is not any conclusive elements that could answer to what elementary school the photograph corresponds. It is suspect that the photograph could correspond to the elementary school group of the school for poor children Regina of the Jesuitas of Buenos Aires City, or perhaps because of the poor clothes the children were wearing, it could be an orphanage that coincides with another date that indicates that Gardel could have been in that orphanage. Also, it is speculated that perhaps before 1893, that child had gone to any elementary school in the south town of Montevideo where that photograph could be taken. About 1930, in a opportunity where Gardel was walking with his friend Dr. César Gallardo near the old café Tupí-
Nambá in the South town of Montevideo City, Gardel said to him that he was a student in an elementary school by that location and asked him the question if that could be the old building yet? And Paysée (1990) said that they could not find it.

Also relevant in determining Gardel’s school is Mr. Salterain Herrera’s claim that Gardel was a student of the Elementary School Number 27 on Durazno Street. Moreover Payssé (1990) adds that “in a visit to the Elementary School, Regina was looking for any Gardel’s records that we had not found; however, according to the priest, Reyna, he was sure Gardel was in that school and confirmed that Gardel was of the Artigas motherland.”

These contradictions led Payssé (1990) to search the Salesian records in hopes of finding something to solve this mystery. Three boxes containing several aforementioned Gardel documents were found. Inside one of those boxes was a class photograph of Gardel taken in the Craft’s schoolyard, now the atrium of the Parish (figure 10). Payssé (1990) found Gardel in the photograph that was identified by Carlos Conci, a Salesian priest who was Gardel’s typography teacher.

Fig. 9 The child in this elemental school photograph indicated by a circle is “Carlos Gardel”

Fig. 10 A close-up of the photograph, before it was published in 1960, that shows the year 1893

Legal aspects of the case

The pronouncement of Gardel’s death was vague and inconsistent with practices established at the time, especially with regard to its legal implications.

First, when his death certificate was presented to the authorities of Medellín City, it claimed the cadaver belonged to Carlos Gardel, a 48-year-old Uruguayan citizen (Ostuni, 1985). Meanwhile, in Buenos Aires City, Gardel’s death pronouncement declared the cadaver belonged to Charles Romuald Gardés, a French citizen 44 years of age at the time of his death, which occurred in a plane crash at Medellín City, Colombia. As we can see, the names, citizenship, and ages of the deceased are all different.
There is nothing in Gardel's will files to clarify these mistakes, leaving behind another six or seven similar legal anomalies.

Gardel's last will judgment remains in Montevideo City, but the true certificate of death where Gardel's Uruguayan citizenship is mentioned could not be presented. Apparently, Gardel's assignee, Mr. Defino, presented a false one. Ironically the swindle was shown by the wife of Gardel's assignee, Mrs. Defino, in her book La Verdad de una Vida. In this book she included a facsimile of the true death certificate, which had been hidden away by her husband. In the real death certificate, Gardel's Argentinean legal citizenship is mentioned, thus invalidating Gardel's French origins in the last will judgment. Legal documents were falsified, and Berthe Gardés appeared as Gardel's true mother to take charge of Gardel's fortune. Therefore, Gardel was substituted with Gardés, Berthe's true son, Charles Romuald Gardés, who was born in Toulouse, France in December 1890. So if he was really Gardel and died on June 24, 1935, he would have been 44 years old rather than 48 years old as was stated on the Medellin's certificate of death.

Paradoxically, Gardel's girlfriend Isabel del Valle, his manager in New York City Hugo Mariani, his friend Manuel Sofovich, and Gardel's guitarists Terig Tucci, Catúlo Castillo, Pancho Martino, and Manuel Pizarro, who support Gardel's French origins, have also presented evidence that Gardel could not have died at 44 years of age. More than 23 testimonies exist supporting the Uruguayan and Argentinean legal documents, which are also reaffirmed by Gardel himself in several interviews from Antena magazine of Buenos Aires City, March 18, 1933, and Imparcial of Montevideo City, October 4, 1933. Therefore, it is impossible that Gardel died at the age of 44.

The Argentinean essayist Horacio Salas, known in France as Chevalier des Arts et des Lettres, is clear in his book, El Tango, when he compares Gardel's last will with reality. He said that, “between his friends he said he was Uruguayan and in private he admitted to be born in 1887.” We see something very different in his last will, which states he was born in 1890.

We must add the declarations of Gardel's false mother, Berthe Gardés, to the list of mistakes concerning Gardel's age. In an interview with La Canción Moderna magazine, published June 13, 1936, she declared, “when Charles was a child he did not know a word of French,” something that is impossible for a child who lived his first three years of life in France. In the same interview with La Canción Moderna magazine, Berthe Gardés showed a photograph of Gardel when he was a child. When the journalist asked her who was the child (who was in fact her true son, Charles) in the oval portrait on the wall of her house, she replied, “he is Carlitos too.” The difference between the children in the two photographs is obvious. This fact was too confirming for the first time the Uruguayan thesis on the existence of two children, “Carlitos” and “Charles Romuald.”

Recently the Uruguayan government in conjunction with non-governmental organizations proposed to carry out a DNA analysis on Gardel's skeletal remains to verify if he was Berthe's biological son. This would provide substantial evidence as to where he was born. Regrettably, however, an Argentinean judge prohibited the DNA analysis by a judicial verdict wherein she alleged Gardel's French origin, taking into account that “in both judicial judgments carried out in Uruguay and Argentina it was resolved that the unique heir was Gardel's mother, Mrs. Berthe Gardés... why must we be taking different versions into account when the question of his nationality had been solved in a judicial judgment?” She ended by saying, “the answer to this question is negative.” Therefore, a DNA analysis could not be done.
Carlos Gardel’s Death

Regarding the plane crash in which Gardel died, the story has never been clearly explained, but several coherent versions exist. The first version claims the plane crash was caused by an incident between Gardel and one of his guitarists, José Aguilar. The second version claims Le Pera accidentally shot the pilot of the plane. It is important to remember that Gardel’s plane crashed into another plane on the runway of the airport, not in the air. The accident was not attributed to technical problems or pilot mistakes, and therefore, there were never conclusive causes of the plane crash (figures 11-14).

Aguilar, one of Gardel’s guitarists and a survivor of the tragedy, made very controversial declarations to the press that changed with time, leaving the causes of the plane crash one of many great mysteries in Gardel’s life and death.
During a visit to Tacuarembó City on April 30, 2003, while at a press conference, the Argentinean Gardel expert, Mr. Juan Carlos Bieler, formulated new questions and doubts about Gardel’s identity and nationality (Bieler, 2003). In his dissertation, this expert affirmed again that Gardel was born at Tacuarembó City, according to the Nelson Bayardo and Eduardo Payssé González investigations. Further, he warned about the problems of an eventual DNA study. These are the technical problems and the fact is, it will need the authorization of the Escayola family and the Argentinean government. Bieler thinks, however, that the most significant problem is he is not sure the body buried in the Chacarita cemetery is that of Carlos Gardel (figure 15). He said, “I am sorry, but I am not sure that the body buried at the Chacarita cemetery is that of my father.” Bieler also said “Gardel’s body was identified by two things: a gold bracelet and by a dental analysis, but both elements present serious doubts or at least dark aspects.” He added, “neither Gardel’s dental chart nor documents referring to it were ever shown, so it is very unlikely that Gardel’s body had been earnestly identified by these means and has never been tested by forensic experts.” Bieler continues:

…[A]bout the gold bangle with an inscription of ‘Carlos Gardel Jeanjoré 735 Buenos Aires,’ which was used to identify his body, there are several doubts because if Gardel’s body was severely burned in the plane crash to the point that the forensic investigation carried out more than 13 days after the accident, his shirt, tie, sack, both hands, feet, and face were deemed totally unrecognizable; yet his gold bangle did not melt, when everybody who works with gold knows that it melts with a simple plumber’s soldering pipe.

Further doubt surrounds the date when Gardel’s body was moved from Medellín City to Buenos Aires City. About this point, Bieler said: “according to the recorders, the body was sent to Buenos Aires City on January 6, 1937, but the Colombian authorities certified what Armando Defino, Gardel’s manager, went to Medellín to bring Gardel’s body by himself one month later. If the Colombian version is true, Gardel’s body had to be brought to Buenos Aires two times, therefore I ask myself the question, what was really Gardel’s body?” And finally Bieler said that, “according to these last Gardel’s body confusions, I think that it’ll be very difficult to know Gardel’s nationality by a DNA study of the remains at Chacarita Cemetery because we are not certain that the body at Chacarita cemetery was really of Carlos Gardel. Even if we get the authorization to DNA analysis, we could be making a DNA study on the wrong body”.

Fig. 15 Carlos Gardel’s tomb in the Chacarita Cemetery at Buenos Aires City
Carlos Gardel’s Autopsy

The forensic reports about the identification of the bodies are very interesting (Lencioni, J et al, 1985). The plane crash occurred at the airport Olaya Herrera on June 24, 1935, and the official report says basically the following: “the same day of the plane crash three cadavers of Colombian citizenships were examined and the next day the other victims. The plane crash was in the track because a collision between two planes with a fire and explosion.” The official report on Gardel’s body, signed by the medical examiner Dr. Luis Carlos Montoya, said: “body number 11 – found below of the valves of one of the motors of 48 years old, Uruguayan from the Tacuarembó City, Province of Montevideo (nationalized Argentinean). It was identified for its good stage of preservation of his tooth, a gold chain, a wristwatch in his left hand, a vest stuffing of feathers and for a chain pending of their clothes with a set of keys and a gold medal with the legend – Carlos Gardel – Juan Juarez 735 Buenos Aires.” The medical examiner described the injuries: “fourth degree burns on the skull, thorax and lower extremities.” There was not an internal exam of the skull, thorax, and abdomen; only an external exam of the body is described, so an incomplete autopsy was performed. In regard to the pilot’s body, the official report said, “Number 14. Ernesto Samper Mendoza, 33 years old, identified by an appendectomy scar, by the tooth, and by a Colombian identity card. His body shows the following injuries: general burns and the amputation of the right superior extremity below the elbow due to the fire action.” And what about the gunfire inside the cabin’s plane that could have caused the tragedy? The bullet found inside Gardel’s body can be explained by Gardel’s being shot by Roberto Guevara Leiva outside the cabaret Palais de Glace in 1915, as the bullet was never extracted and remained in Gardel’s body. When Gardel’s cadaver was exhumed in the Medellín City Cemetery on March 7, 1936 to come back it to Buenos Aires City, a bullet was found inside his remains, presumably that of the shooting in 1915. Certainly, the hypothesis of gunfire causing the plane crash was based in this bullet.

Materials and Methods

The human recognition process for such problems is primarily based on both holistic as well as feature-wise, symmetry perception, aided by subjective analysis for detecting ill-defined features. To prepare a paired sample of associated features for training purposes, when we select one particular feature on the source image as a unique pixel, we must associate it with the corresponding feature on the target image, also.

Although the problem of machine recognition of faces has received wide attention from engineers for about three decades (Chellapa et al, 1995), forensic anthropologists have not enjoyed the fruits due to the following reasons:

The works on face recognition technology, as available in the literature on engineering (Manjunath et al, 1992) are aimed at full automation level. The procedures involved in the overall process include segmentation and extraction of a questioned face from a cluttered scene, detection of features from the face region, then matching and identification from a stored database of facial images of suspects. Such an ambitious solution to the problem may take a considerably long time to be perfected. At the same time, an automated decision may not be acceptable to a court of law, unless it is time-tested and foolproof. Again, machine recognition of many facial features may be obscured in cases of artificial disguise or naturally changed facial appearances. Therefore, the work done by engineers on facial recognition is based on different methods, such as statistical approach (Turk et al, 1991), feature machine (Manjunath et al, 1992), profile analysis (Kaufman et al, 1976) and neural networks, (Kohonen, 1988). Some of these methods allow for holistic comparison, while some are based on
features analyses. They have their own merits as discussed in detail by Chellappa et al. (1995). No doubt, many engineers have taken up the problem of facial image recognition for their study, but at present they are more inclined toward development and improvement of general techniques of pattern recognition while dealing with this particular problem rather than focusing their attention on the practical needs of the forensic anthropologist. Consequently, such works on facial recognition technology, though having enriched engineering literature, have not yet turned out to be of practical use in crime cases where a forensic anthropologist is usually supplied with one questioned and one comparable face photograph for establishing identity.

Presented here is a newly proposed, symmetry-based approach toward facial image recognition motivated by the needs of forensic investigators, and allowing both feature as well as holistic comparison with the aid of superimposed and composite images, also suitable for court presentation.

The anthropologist's expertise plays a critical role in the establishment of identity. It may be recalled at this point that forensic anthropologists are already used to deciding identity in cases of craniofacial identification by examining superimposed images, where an ambiguity due to soft tissue thickness is always present.

Forensic anthropologists usually have been asked to compare photographs of an individual taken at different locations or over long periods of time to determine whether they belong to the same person. Kerley (1982) was probably the first to present a paper on the subject by comparing the newspaper photograph of a face in a crowd with that of a known person. Photographic comparisons are sometimes required to make a positive match between photographs taken at different times and places, etc. In this type of analysis, an important problem can be the quality of the photograph, lighting, size of the film or print, graininess of the film, subject distance of the camera, camera lens type, age of document and so on, as well as the positioning of the head and body and morphological changes as a result of growth and aging. Therefore, photographic analysis is most effectively approached in three ways: comparison of facial morphology, photograph anthropometry (using indices), and photo-to-photo video superimposition. This last analysis was done on two children's photographs to establish whether they are the same individual.

The photographs shown by Mrs. Berthe Gardes to La Canción Moderna magazine on June 13, 1936, were compared. According to Berthe Gardes, both photographs are of Carlos Gardel when he was a child.

- In the present anthropological comparative analysis, the oval photograph will be the Number 1. This was at Berthe Gardés house (figure 16).
- The other photograph corresponding to Carlos Gardel as a child will be the Number 2. This is the photograph published in Ahora magazine at Buenos Aires in 1960 (figure 17).

Both of the submitted photographs were digitalized and compared by superimpositions using Adobe Photoshop software. The most important zones of the face – the mouth, nose, lips and chin – were enlarged to carry out respective comparisons. The ears and general contours of both faces were enlarged and compared, as well.
Anthropological Features and Studies on the Two Children’s Photographs

- The child in photograph Number 1 has an oval face, a delicate chin, broad lips, and a narrow and long nose (Comas, J 1976).

- The child in photograph Number 2 has a rounded face, a rounded chin, midsize thickness lips, a midsize thickness and short nose (distance between the alar-alar craniometric points and distance between the nasion and subnasal craniometric points, respectively).

Results and Conclusions

All the comparative anthropological studies by digital media like superimpositions, sagittal views, and enlarged images of both photographs show that there is no significant coincidence between the two photographs as is indicated by the arrows, even though the photographs are not high-quality and were taken decades ago.

There were no significant similarities between the child in the oval photograph (Number 1) and the child in photograph (Number 2). Therefore, both photographs are of two different children (figures 18, 19).

Final Considerations

According to the evidence presented in this paper, there is no doubt that both photographs are of two different children. This supports the Uruguayan theory about Gardel's location of birth. It was scientifically proven that the photographs are not of the same child. Instead, they show Charles Romuald Gardés, the true son of Berthe Gardés, who was born in Toulouse France in 1890; and Carlos Gardel, born in Tacuarembó, Uruguay in 1887 and the son of Colonel Carlos Escayola and María Lelia Oliva. This demonstrates that Carlos Gardel's nationality was Uruguayan.

It is interesting to note the questions made by Gardel's expert Bieler in his last conference at Tacuarembó City about whether the cadaver buried at the Chacarita Cemetery was actually that of Carlos Gardel. Forensic identification never showed positive identification beyond all reasonable doubt. For example, his dental chart or dental radiographs were never revealed. Identification was based only on several elements associated with the cadaver: the gold chain, the medal with his name and address in Buenos Aires City, and the bullet found inside of his body when it was exhumed and taken from Medellín City Cemetery to Buenos Aires City Cemetery. Although these associated elements could be crucial at the moment of the identification of a body, they have relative forensic value. In this case especially, taking into account that Gardel died in a plane crash, they have relative value as forensic evidence of identification.

Another thing that is unclear is why it took so long to send Gardel's remains to Buenos Aires City to be buried at Chacarita Cemetery. The plane crash was on June 24, 1935. According to the Colombian cemetery of Medellín City, the body was exhumed on March 7, 1936 and sent to Buenos Aires City in January 1937. Therefore, Gardel's remains were exhumed almost nine months after he died and sent to Buenos Aires City 17 months later. This is a rare, and questionable, practice.

To affirm or deny the version of the story that includes gunfire
inside the plane's cabin, complete autopsies of all cadavers should be made, taken radiographs, especially to the pilot cadaver. If there was any gunfire to cause the plane's collision, then a bullet should be found in at least one of the pilot's bodies. Complete autopsies have never been performed. All the attention was put on the alleged Gardel's cadaver, but taking into account the partial autopsy of Gardel's and the pilots' bodies and the fact that the mysterious bullet was found almost nine months later when the body was found, several forensic details of this case remain in the darkness.

Finally, anthropological comparison does in fact demonstrate that the two photographs are of different children.

References


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About the Author

Horacio E. Solla, PhD, received a Bachelor’s in Anthropology as well as a Master’s in Human Sciences from the University of the Republic, Faculty of Humanities and Sciences, Uruguay. He also received his doctorate from the International Atlantic University and a degree of merit from the International Biographical Institute at Cambridge, England (2001). Dr. Solla has made many postgraduate degree courses in forensic anthropology, the last one in 2003, dictated by Dr. Douglas H. Ubelaker of the Smithsonian Institution. He received a certificate of inclusion in 2000 Outstanding Scholars of the 21st Century, First Edition, in honor of an outstanding contribution to the field of forensic anthropology in Uruguay (as a founder of forensic anthropology in that country). He has published three books and more than 60 scientific papers. Dr. Solla is member of the Uruguayan Society of History of Medicine, the American Academy of Forensic Sciences, the American College of Forensic Examiners, and the Spanish College of Forensic Experts. He was Curator at the National Museum of Anthropology (1990–1992), Assistant of Physical Anthropology at the University of the Republic, faculty of Humanities and Sciences, Uruguay (1989–1995), and an anthropologist at the National Institute of Criminology (1992–1995). Presently, he has a full-time position as the forensic anthropologist at the Judicial Morgue of Montevideo City (Supreme Court of Justice), where he has solved more than 1,200 forensic anthropology cases and identified skeletal remains of more than 200 missing persons, in addition to teaching forensic anthropology at the Catholic University of Montevideo, Uruguay. He also has worked as an advisory forensic anthropologist in several important private cases.