# 3 Expressive Portamento in "Ombra mai fu"

## An analysis of recordings by cellists, violinists and singers 1906–1925

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During the last decades, an increasing body of research has emerged that has situated singing as a major inspiration and perhaps even the primary historical model for string instrument performance (or indeed all musical performance). The key performance element pointing scholars in this direction has been portamento, no doubt in part because portamento has historically been one of the most important means of musical expression for both singers and instrumentalists. For example, Clive Brown argues that "there can be little doubt that portamento, as an adjunct of legato, had its origins in singing, where it is a typical consequence of changing pitches smoothly and connectedly, especially over larger intervals."[1] Peres Da Costa and Milsom similarly state that "as a portal to such concepts" as portamento, instrumentalists in the nineteenth-century "were encouraged to emulate the practices of expressive singing as means towards these wider aims."[2]

However, it is not only singing, but vocal communication more broadly, that has been studied as an original model for musical portamento. Parallels between spoken declamation and the inflections in musical expressivity have been discussed, among others, by Kate Bennett Wadsworth, David Milsom, Neal Peres Da Costa, John Potter and Emma Williams. As Milsom and Peres Da Costa state, "while instrumentalists were encouraged to practice the traits of song, the wider implication of this (which also included instruction to singers themselves) was that performance was to be imbued with aspects of oratory."[3] Potter notes regarding portamento that "perhaps it is a stylized means of re-creating an expressive aspect of speech that would be missing if notes were simply joined without such an effect."[4] The implications of the relation between speech and musical performance are commented upon by Kate Bennett Wadsworth, who concludes that "if 19th-century singers had this style of public speaking in their ears, it is possible that their portamento was not inherently sentimental, or even emotional; instead, it may have covered an entire rhetorical spectrum, from 'melancholy' or 'reprehension' to 'the logical completion … of a clause'."[5]

Reaching further still, Daniel Leech-Wilkinson has made the argument that musical expressivity can be traced to early communication between

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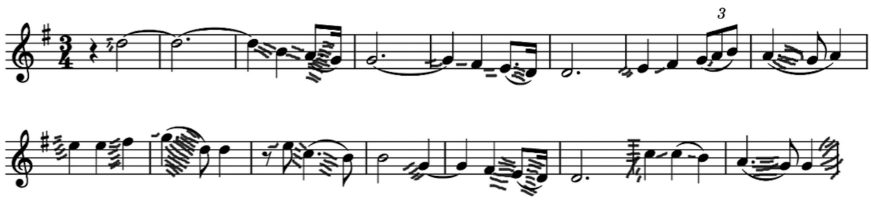
infant and mother – what is usually called *motherese* – stating that "the modelling of vocal communication plays an evidently central role in all kinds of musical expressivity. And, so, I think it is worth studying rather more closely. It seems very probable that our experience of music is formed more by what music reminds us of than we've been trained to believe."[6] As a result, string portamento has increasingly been seen less as an isolated performance device related to instrument-technical conventions, and more as an essential tool connecting string performance to the communicative and vocal nature of music and deeply imbedded with cultural cues. But which aspects of vocal portamento are mimicked on string instruments and how do these expressive effects transform when the medium change? What does this connection tell us, more broadly, about these musicians' ideas of musical communication and expressivity? How much of these nuances of musical expressivity can be perceived by modern listeners?

This study proposes to use early recordings, ranging from 1906 through 1925, of a popular musical aria ("Ombra mai fu" by Handel) by leading performers on three different instruments (voice, violin, and cello), to search for modelling of vocal portamento by string performers and to try to explain their musical effects.

## Terminology used for describing and categorising portamento

Many different categorisations and descriptions have been used to describe and discuss portamento in the academic and pedagogical musical literature, but the present study will only include the terminology that proved useful for this comparison in particular and relate to the instrument-technical types of portamento, its speed, volume and shape.

Regarding the fingering used by string performers for portamento, I have used the well-known terms proposed by methods by Carl Flesch.[7] In short, when the finger sliding towards the second note is the one used for the first note it is called a B-portamento and when only one finger is involved playing both notes is called a single-finger portamento. These two types sound very similar and are often difficult to distinguish. On the other hand, when the fingers change while sliding to the second note, the slide receives the term L-portamento and this portamento produces a very different sonic effect, due to the small break before the finger change, sometimes including some slight repetition of pitch with a platforming effect (Audio Example 3.1).[8] Consequently, the L-portamento has been treated differently in the pedagogical literature and has been all but vanished from mainstream performance. Flesch cautions against the L-portamento but also speaks of the influence of vocal practices on string portamento when applied in a subtle manner: "Correct execution of the portamento, furthermore, depends on our realizing that a portamento representing an imitation of the human voice approaches the latter more closely in the same degree that the intermediary note is less audible."[9] As noted by Mark Katz, according to eighteenth- and



*Example 3.1* First 16 bars of "Ombra mai fu," with all portamento present in the 13 recordings (some of the recordings are in a different tonality or register than annotated here).

nineteenth-century treatises, "violinists were not to slide twice or more consecutively, or to create rhythmic or metrical disturbances by sliding heavily toward (and, thus, accenting) a properly unaccented note, or by sliding between phrases or across bar lines. It was also said to be in bad taste to glide into a note (the so-called L-portamento) rather than to execute a slide from the departing pitch. Furthermore, it was recommended, at least by the renowned violin teacher, Leopold Auer, that only descending portamenti be used."[10] Emma Williams notes that "Spohr was clear in his preference for shifting with the guide (initial) finger as opposed to the destination finger to avoid "unpleasant howling."[11]

Another categorisation that proved useful for song recordings were the three types of *port-de-voix* in Beriot's treatise *Méthode de violon*, studied by Clive Brown, that refer to the varying speeds of a slide, from *vif* (linear speed), *doux* (positive exponential speed) and *trainé* (parabolic or changing speeds back and forth), the latter sharing certain audible components ~~of~~ the L-portamento, as we will see later in the comparison.[12] The *trainé* type of portamento is also described by Trino Zurita as *portamento prosódico*, due to its declamatory effect.[13] The effects produced by these different slides differ, sometimes substantially, according to the intensity in volume, the general tempo and the continuity or noncontinuity of the slides throughout the distance between the two notes, and these nuances will receive separate commentary. Zurita differentiates between complete and fragmented portamento, but since I found that no two fragmented portamentos are alike, I will simply describe and illustrate the extent of these in each example.[14]

A number of terms from singing methods and treatises are also useful in describing some of the inflections on the notes made by string performers, and these will therefore be used for all recordings in the study. The anticipating grace, as described as one of four ways of performing grace notes in the singing method by Corri, describes sliding while arriving early at the second note.[15] The *scoop* is a term which has been used to describe small slides performed by singers at the beginning of notes and can sometimes be compared to the terms *intonazione* and *librar la voce*, used by scholars like Stem, Köpp and Williams, for string performers and singers. *Intonazione* is categorised by Köpp as a small scoop when sliding into position for the

beginning of a note and *librar la voce* as the effect of changing fingers on a repeated note, both for small intervals.[16] Zurita calls the latter type of portamento *digitación expresiva*, highlighting how the technical aspect of position change, in this case, is used as an expressive element.[17] Finally, there is a type of vocal portamento that uses vibrato to almost seamlessly move frequencies during small intervals, usually minor or major seconds. None of the above-mentioned categories describe this type well, and for this comparison, these slides will simply be called *vibrato-glissando*.

## Recording survey for "Ombra mai fu"

Despite its aura of seriousness, the clearly humorous aria "Ombra mai fu," from George Fredrich Handel's opera *Serse*, depicts king Serse serenading a tree and its shadow and has been an immensely popular stand-alone piece for a number of generations, perhaps ever since its less-than-successful opera premiere in London 1738.[18] The popularity of the aria during the first decades of the twentieth century ensured that many great classical singers of the time, as well as contemporary instrumentalists, performed and recorded the aria, often in different arrangements titled *Handel's Largo*, for labels such as Victor and Columbia. The aria, in its published edition by Friedrich Chrysander (*Georg Friedrich Händels Werke. Band 92*, Leipzig: Deutsche Händelgesellschaft) in 1884, is marked Larghetto, annotated in F Major and contains 32 bars of music from the first note of the soloist, if no sections or bars are repeated. The only lyrics is a single phrase, which, translated into English, reads "Never was a shade of a plant dearer and more lovely, or more sweet" and is repeated and restructured as follows:

O__mbra mai fu_
di ve-ge__ta-bi-le
Ca-ra ed a-ma-bi-le, so-ave più
O__mbra mai fu di ve-ge-ta-bi-le
Cara ed a-ma-bi-le, so-ave più,
Ca__ra ed a-ma-bi-le
O_mbra ma_i fu di ve-ge-ta-bi-le
Ca_ra ed a-ma-bi-le so_a-ve più, So_-a_ve più

For the present portamento discussion, a total of 13 recordings of the aria made between 1906 and 1925 were studied; six by cellists, three by violinists and four by singers. Cellist Pau Casals (1876–1973), contralto Clara Butt (1872–1936) and violinist Fritz Kreisler (1875–1962) recorded the piece twice, thereby providing the possibility of studying the evolution or changes in portamento between performances and over time.[19] The scope of this study does not include analysing the historical accuracy of any particular style elements, but, in general terms, it is clear that what we would consider baroque performance style today, is not consistent with the style of the studied recordings. There are no clear indications in the sample that this

aria was performed in a significantly different way to how these musicians would have approached, say, a nineteenth-century aria. As an example, we may take many variations to the score observed in the recordings, including added notes, changing rhythms, trills, changing the key, as well as of course arranging the piece for a variety of different ensembles. Generally, instrumentalists tend to perform the aria twice and add to the melodic structure in several places, as indicated in several contemporary arrangements for violin and cello.[20]

As illustrated in Table 3.1, the most senior of the performers, Heinrich Grünfeld (1855–1931) was 59 when recording the aria, while most of the musicians were born in the 1870s and three as late as between 1888 and 1892. With the exception of Grünfeld, all performers made the recording in their thirties or forties, what could reasonably be considered their prime performance years. All the included recordings predate the implementation of electric recording equipment and as such present some limitations to bear in mind when comparing different versions. Acoustic recordings generally only capture well the frequencies between 150 and 2400 Hz, which means that the timbre and volume of certain instruments are more difficult to perceive than others. As Leech-Wilkinson explains, "on early cylinders and discs much the most successful instrument for recording (after

*Table 3.1* General information on the recording sample

| *Performer* | *Instr.* | *Year* | *Accomp.* | *Bars* | *Year, country of birth* | *Record details* |
|---|---|---|---|---|---|---|
| Heinrich Grünfeld | Vcl | 1906 | piano | 40 | 1855, Austria | Gramophone 047857 |
| Hans Kronold | Vcl | 1908 | piano | 40 | 1872, Poland | Edison Gold 9987 (cylinder) |
| Clara Butt | contralto | 1909 | orch. | 32 | 1872, UK | Gramophone 3486f |
| Alexander Heinemann | baritone | 1912 | orch. | 32 | 1873, Germany | Columbia A5415 |
| Fritz Kreisler | Vln | 1914 | piano | 73 | 1875, Austria | Victor 74384 |
| Pau Casals | Vcl | 1915 | orch. | 64 | 1876, Spain | Columbia A5649 |
| Clara Butt | contralto | 1917 | orch. | 32 | 1872, UK | Gramophone 03154 |
| Pau Casals | Vcl | 1920 | orch. | 64 | 1876, Spain | Columbia 49802 |
| Enrico Caruso | tenor | 1920 | orch. | 32 | 1873, Italy | Victor 6023 |
| Albert Spalding | Vln | 1921 | piano/org | 33 | 1888, USA | Edison 82239-R |
| Beatrice Harrison | vcl | 1922 | piano | 73 | 1892, UK | His Master's voice 1647 |
| Fritz Kreisler | vln | 1924 | piano | 73 | 1875, Austria | Victor 74684 |
| Cedric Sharpe | vcl | 1925 | organ | 64 | 1891, UK | His Master's Voice D436 |

the brass band) was the voice, and especially the coloratura soprano and tenor.[…] Closest in effectiveness were wind instruments, with strings far behind."[21] This is an important aspect to keep in mind when comparing the voices of Caruso and Heinemann to the timbres of violinists and cellists. Additionally, one must consider the serious impediments on important performance aspects, such as the possibilities of the ensemble, tempo and volume, posed by the technology of the time.[22] Furthermore, as clear from visual software, such as spectrograms by Sonic Visualiser, the degree to which performers and recording technicians managed to circumvent the limitations varied widely.[23] In comparison to aspects such as timbre or volume, expressive portamento is less affected by the technical limitations of the recordings; however, the perception of sliding can be compromised by the variety of reproduction speeds used for these recordings, since the tempo affects the auditive impact of portamento.

Among the three singers analysed, the version by Enrico Caruso (1873–1921) in 1920 was no doubt the best-known at the time and possibly influenced both contemporary and later colleagues. Timothy Day attests to the impact of Caruso's recordings more generally, stating that "The ten operatic arias Caruso recorded for the Gramophone & Typewriter Company in Milan on one afternoon in April 1902, including 'Questa o Quella' from Rigoletto […] and 'E lucevan le stelle' from Puccini's Tosca (which had had its premiere in January 1900), did mark a turning-point in the history of recorded music.[24]" Interestingly, Caruso's performance of "Ombra mai fu" was deemed significant enough to be included in a very early performance study called "An experimental study in control of the vocal vibrato" by A.H. Wagner, published in *Psychological Monographs* in 1930.[25] The two versions by British contralto Clara Butt and German baritone Alexander Heinemann (1873–1919), although not as influential as Caruso's, represent performances by two well-known and successful singers of the same era. Butt was a recognised oratorio performer and the dedicatee of Sea Pictures by Elgar, while Heinemann was a popular concerto singer both in Europe and the U.S., as well as a respected teacher at the Berlin Conservatoire. Among the instrumentalists, both American violinist Fritz Kreisler and Spanish cellist Pau Casals were star soloists at the top of their fields, and their early recordings, from 1914 and 1915 respectively, might well have been known to the other performers in this study. Fritz Kreisler recorded the Largo twice, with his own arrangement, 1914 and 1924, while the American violinist Albert Spalding (1888–1953) recorded the piece with symphonic orchestra in 1921. Spalding was Edison's preferred violinist and produced over a hundred recordings, toured as a soloist and premiered the Barber Concerto. Casals' two recorded versions from 1915 and 1920 lie in the chronological middle within the cello versions. There are two earlier recordings by his contemporary Polish Hans Kronold (1872–1922), a well-known orchestral cellist who taught at New York College of Music and the older Austrian Heinrich Grünfeld, a court cellist appointed by William of Prussia and a well-known

chamber music performer. Finally, we have the performances by the two younger British cellists Cedric Sharpe (1891–1978), a prominent chamber music performer who taught at the Royal Academy of music, and Beatrice Harrison (1892–1965), who premiered works by Delius and was the first female cellists to play at Carnegie Hall.

## General traits, discussion

Although it remains debatable whether string and vocal portamento increased substantially at during the fin-de-siècle period, its gradual disappearance during the first forty years of the twentieth century has been established through the study of early recordings, which has traced the evolution towards modern mainstream performance style.[26] In later years, different explanations have been offered for this disappearance, including the rise of recording technology[27], the change from gut to metal strings[28], cultural shifts after the Second World War away from naivety[29] and a need to distinguish classical music style from an expanding popular music style.[30]

As seen from Figure 3.1, although the present sample stretches into the mid-1920s, the frequency of portamento in these recordings of "Ombra mai fu" does not show any clear indications of decline or other significant changes in portamento use over time. We can note, for example, the coinciding portamento frequency (0:55) of Heinrich Grünfeld's recording (born 1855) and Cedric Sharpe's recording (born 1891).

Perhaps more noteworty is the fact that the repeated recordings by Butt (1909 and 1917), Casals (1915 and 1920) and Kreisler (1914 and 1924) although separated by five to ten years, do not indicate any substantial shift in these performers' view of portamento as an expressive element, whether considering the frequency, type or style of sliding. Kreisler slides slightly more in

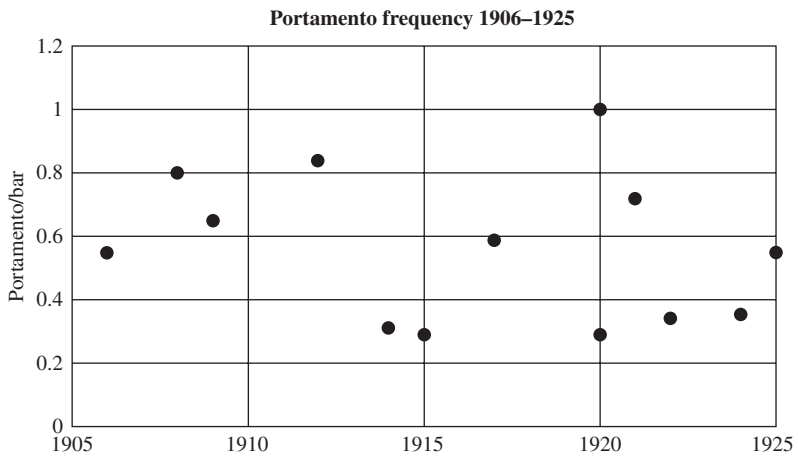



*Figure 3.1* Portamento frequency per bar, over time in this recording sample.

his second version than in his first, Butt slides slightly less in her second, and Casals increases the variety and nuances of his portamento the second time around. This sample of recordings, although limited, therefore, seems to support the idea of a later onset of the decrease of portamento, perhaps closer to the Great Depression and the Second World War.[31]

As obvious from the lyrics, each word and syllable in the aria are repeated several times, with different intervals, harmonic relations and rhythms, which makes a connection between portamento and specific words less likely. There are also few obvious connexions between the expressive quality of the slide and the interval or direction of the slide, although downward portamenti do appear more often (60% of the slides). This is partly due to the melodic structure of the aria, but also seems connected to John Potter's words, regarding Schubert song recordings, on "the rhetorical nature of musical declamation, which tends to cause the ends of phrases to fall rather than rise in 'normal' narrative (a pattern related to speech). Downward portamento gives the singer control of the ends of phrases (and, on a micro-level, of words); the listener can be kept waiting—and is, in effect, at the mercy of the performer."[32] Similarly, Kate Bennett Wadsworth comments that "Carl Flesch, in 1944, mentions an older style of playing which uses a same-finger shift over a descending major second as "typical of an 'effective' manner of closing a phrase.""[33] As seen in Example 3.1, the performers in this sample do tend to slide at the major seconds when they occur at the end of a phrase or semiphrase, although the same is true for the few downward thirds or fourths that exist within the melody.

## Cellists

The particularities of analysing portamento in cellists stem primarily from the large distances between notes on the fingerboard, which makes shifting positions necessary much more often than on the violin, as mentioned in previous studies.[34] This circumstance, however, does not constitute a major problem for analysing musical expressivity in this study, since the manner of executing expressive portamento is generally easily discernible from technical sliding. Indeed, in this sample, although we find several position changes that are performed in an expressive manner (*digitación expresiva*), the great majority of slides are performed with clear, expressive intent, in contrast with frequent nonaudible or very subtle position changes, sometimes over large distances.[35]

The five cellists studied here vary considerably in the amount of portamento they use, from the 0.29 portamento per bar of Casals, to the 0.8 of Hans Kronold, but more importantly, where and how they slide presents a wide expressive range. Even between the recordings by Casals in 1915 and 1920, respectively, the locations and characteristics of the slides change considerably, attesting to the highly conscious nature of expressive portamento for phrasing during this time. The cellists in the comparison show an acute awareness of many existing nuances of portamento and choose each given

moment between different speeds, emphasis, as well as between single-finger slides, B-portamento and L-portamento.

As succinctly noted by Potter, "from the earliest mention of portamento-like effects almost all references have been couched in terms of taste and accompanied by a warning against excessive use."[36] No doubt, the only plausible reason for the continued warnings in the literature has been the habit of performers to ignore them, and this sample is no exception. Not only L-portamenti are included here but also slides across phrases and bar lines, consecutive portamenti and portamenti at the beginning of phrases. The earliest recording by Heinrich Grünfeld does not come across as over-indulgent in portamento and the placing of the slides is very deliberate. The speed and volume of the portamenti are generally steady and continuous throughout the interval between the notes, except for the few places where he places a small scoop at the beginning of a note as an emphasis. What ages this recording is not so much the quantity of portamento as is the slow speed of his slides, the way Grünfeld in some instances combines portamento with some quite exaggerated tempo rubato, as well as the casual ensemble playing style, which allows for the pianist to reach some of the beats after Grünfeld has already finished his portamento and arrived at the second note. The recording by Hans Kronold was made only two years later but entails a generational gap, since Kronold was born in 1872, 17 years after Grünfeld. Kronold slides more frequently than Grünfeld (0.8 slides/bar compared to 0.55) but in many respects their portamento styles resemble each other. Like Grünfeld, Kronold's slides are continuous, lasting the entire interval, and rather homogenous in speed and volume. Furthermore, he shares the casual chamber music playing and the connection between quickening and slowing down the tempo to emphasise the expressive quality of his portamenti. Casals, born only four years after Kronold, retains several key elements of the portamento style of Grünfeld and Kronold: he does not shy away from slow, continuous downward portamenti, he connects tempo rubato and portamento and he allows himself to occasionally stray from the beat arrivals of the accompanying orchestra. Casals, however, shows a higher degree of variety and nuance in his portamento style, especially in his second recording in 1920. It is a testament to Casals' meticulous approach to expressive portamento that even though both of his recordings include 19 portamenti, only 9 of them coincide regarding the location, and even those show slight differences in volume or prominence. In the first recording, Casals prefers single-finger or B-portamenti, mostly continued throughout the distance, and many of them pronounced and only slightly slower than Kronold. By 1920, however, Casals' interpretation of the aria had changed substantially and we can now hear a range of different slides, both regarding speed, continuity, volume and type. This second version includes both prominent and subtle L-portamento, where Casals change fingers half-way, portamenti that are fragmented and only audible towards the end, *scoops* with vocal quality and *digitación expresiva*.

The youngest cellists in the survey, British Cedric Sharpe (b.1891) and Beatrice Harrison (b.1892) show two possible and highly diverging approaches to portamento. The two interpretations are arranged quite differently in terms of ensemble, tonality and even notation. Although they both play the aria twice, Harrison plays the piece in G major and move up an octave higher for the repetition (perhaps inspired by Kreisler's 1914 recording) while not presenting much audible trace of technical portamento to facilitate position changes. Like previous versions, Harrison connects portamento with sudden changes in the tempo but is even more prone to accelerando than both Casals and Kronold and uses more accents on significant notes. Harrison's interpretation has a certain dramatic pathos with a vocal quality to it, and many of her portamenti are scoops or short slides to emphasise the beginning of notes (*intonazione*), sometimes after making an accelerando followed by a slight coma, and she also performs anticipating graces. Her contemporary Cedric Sharpe, performing the piece in C Major, not only slides considerably more but also shows less variety in his portamento. Sharpe shows a predilection for the L-portamento, which ages his performance somewhat, even though his tempo is more stable. In the beginning of the motive, Sharpe uses three downward L-portamentos close to each other and although not all three are continuous or equal in volume, it does sound excessive to modern ears. Sharpe generally does not place scoops or use other types of slides; however, there is marked difference regarding the speed of his portamento, with upward slides sometimes played much faster than downward ones.

## Violinists

The two violinists included in the comparison show many similarities to the mentioned cello recordings regarding the shape of their portamento, but tend to perform more L-portamento, especially in an upward motion. Fritz Kreisler is from the same generation as Casals and there are significant parallels between how the two performers develop their interpretations over the years. Kreisler, like Casals, recorded the piece twice with identical settings and plays the whole aria twice, although he switches to the higher octave the second time around. Kreisler also shows the same meticulous approach regarding his portamento, changing both placements and style of most of his slides for his second recording session, keeping only 10 out of the original 23 portamenti. The musical identity, however, of the two recordings end up being quite consistent, due to the nearly identical, stable tempo and crisp bow articulation in both performances. Kreisler shows a varied range of portamenti that clearly mimic singing, including very subtle *intonazione*-scoops at the beginning of notes, small portamenti from below to emphasis repeated notes (*digitación expresiva*), very subtle vibrato-glissandi and continued, soft upward portamenti for big leaps. Unlike Casals, Kreisler uses many different upward L-portamenti, both soft, fragmented and more prominent, with very audible finger changes

half-way through, and he intertwines slides with other expressive embellishments like trills, *appoggiaturas* and double-stops. The much younger Albert Spalding recorded the aria with orchestra right between the two Kreisler versions, in 1921, and in terms of tempo, his interpretation is the outlier of the instrumentalists in this selection, given how slowly he performs the piece. Possibly, the slow tempo is related to the increased frequency of sliding (Spalding slides 0.72/bar, compared to Kreisler's 0.31–0.35) and it is surely connected with the decision to only play one repetition of the aria, and instead repeat only the last five bars an octave higher.[37] Like Kreisler, Spalding uses many upward L-portamento with varying volume and speed, sometimes fragmented and also performs with *digitación expresiva*.

## Singers

When considering first the two recordings by British contralto Clara Butt, the pattern from the recordings by Casals and Kreisler regarding repeated portamento is present here as well, and Butt repeats only 10 of her original 21 portamento from her 1909 recording while adding nine new ones in 1917. Again, this certainly seems to underscore the importance placed on portamento and its flexibility as an expressive element for performers of this generation. However, the style of Butt's slides varies less between recordings than is the case, for example, for Casals, since both her versions focus on slow, continuous downward portamento. The main differences between Butt and the string performers are the number of scoops/*intonazione* at the beginning of notes and the prominent *vibrato-glissandi* that Butt sings when descending small intervals like a minor or a major second. Butt also slows down in a much more exaggerated fashion during the last four bars, which means that her slides in the last bar are extraordinarily slow. The German baritone Alexander Heinemann was only one year her junior, but his recordings show significant differences in both his vibrato pattern and portamento style, as well as sliding more in general. Heinemann tends to slide more *senza vibrato* and starts with larger scoops. The difference in vibrato pattern and timbre between the singers is also striking and has a significant effect on the perception of their portamento, a fact surely influenced by technology limitations. The Italian tenor Enrico Caruso, born the same year as Heinemann, slides more than both Butt and Heinemann and indeed more than any other performer in the comparison; however, his slides are also more varied in style, speed and volume. Like Butt, Caruso sings *vibrato-glissandi* at several smaller intervals, but he also sings several exponential and parabolic portamenti that start fast, then slow down and then speed up again, as well as doing several clear anticipating graces for upward intervals. Like Heinemann and Butt, he sings scoops upwards to start many of his longer notes or when repeating notes, but in Caruso's case, these are often larger in scope.

## Comparison between all performers

The nuances in portamento and how they relate to tempo, vibrato and more generally, musical phrasing in this sample of recordings, bring to mind the difference of scale in phrasing during previous times, as pointed out by Milsom and Peres Da Costa, "Indeed, it was often local detail more than phrase arch that was paramount in late-nineteenth-century expressivity."[38] Certainly, the idea of arch-phrase and long lines does not seem to work as well for these versions as they would for modern performances. Due to small constant changes in tempo, combined with various types of portamento in each phrase, some phrases appear cluttered, slow-moving and sometimes even incoherent to modern ears if zooming out too far, whereas the musical moments when studied individually provide an expressive sense.

Instrumentalists and singers differ in how they phrase, not only due to the obvious differences in sound production but also due to the integration of the different performance elements. One of the most significant differences is that the singers, to a higher degree, connect constant fluctuations in tempo with their slides. Caruso, Butt and Heinemann all use more ritardando to emphasise downward portamento at the end of phrases and use accelerando to return to the main tempo, as well as to emphasise upward portamento in the beginning or in the middle of a phrase. Butt, whose general tempo is a little bit quicker, presents some especially exaggerated ritardando, such as the sudden tempo change in the last two bars. This echoes Potter's statement, regarding singing that "the 'dragging' element of portamento is therefore likely to be just as important as the nuancing of the pitch; the singer has control of both pitch and rhythm for the time it takes to express a word or phrase."[39] As shown below in Figure 3.2, both Caruso and Butt perform with a much larger range of tempo volatility overall and this holds true at the smaller scale as well. In places where several instrumentalists and singers choose similar portamenti and tempo changes, such as bar 9, bar 23 or 26, we see significant accelerandi and ritardandi between each separate note in Caruso's version, while Casals and even Kreisler vary their tempo to a much lesser degree. However, these differences in tempo volatility between singers and instrumentalists do not occur everywhere in the sample. The two slowest recordings (Heinemann's and Spalding's) show similar and limited ranges of tempo motion, in both cases due to the lack of intense accelerandi, which points to the overall tempo as an important performance decision that is closely connected to both volatility and portamento. Just like the portamento frequency, the overall tempo range does not seem to have a clear chronological component. On the one hand, the two oldest recordings (Kronold and Grünfeld) connect their ritardando and portamento in a manner that age their recordings, as noted before, but on the other hand, they use a more limited range of tempo change over all and also less continued and intense variance of tempo back and forth at the local level.

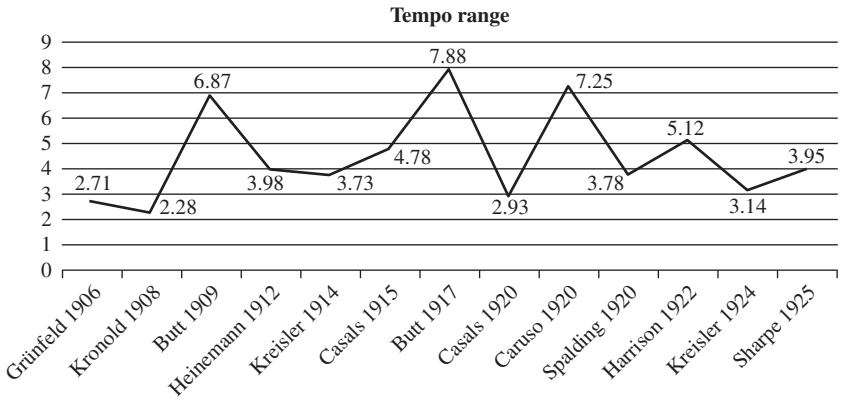
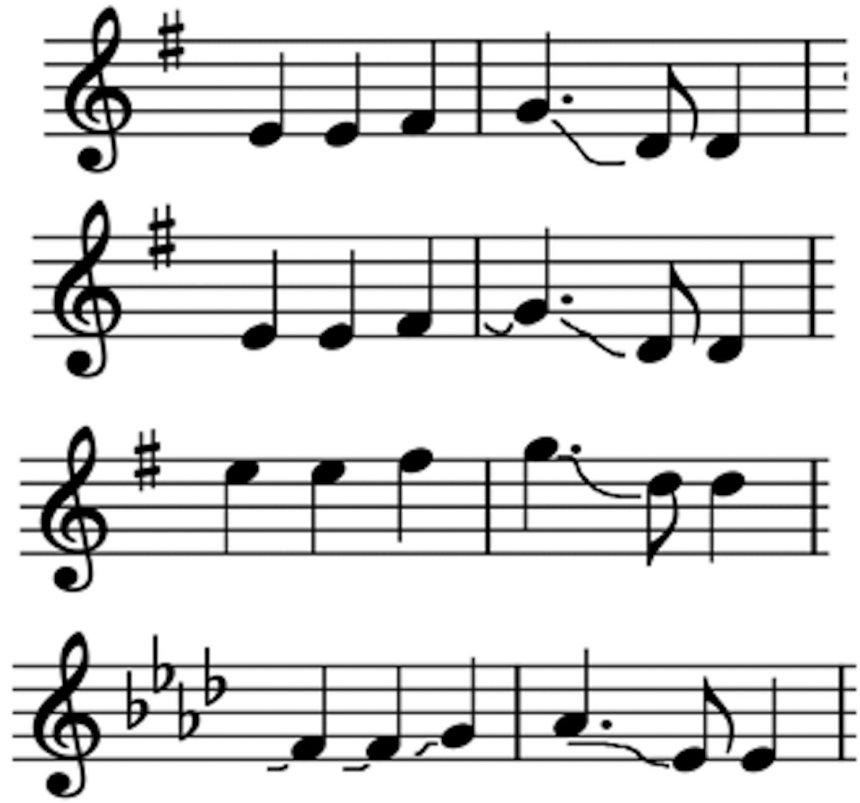


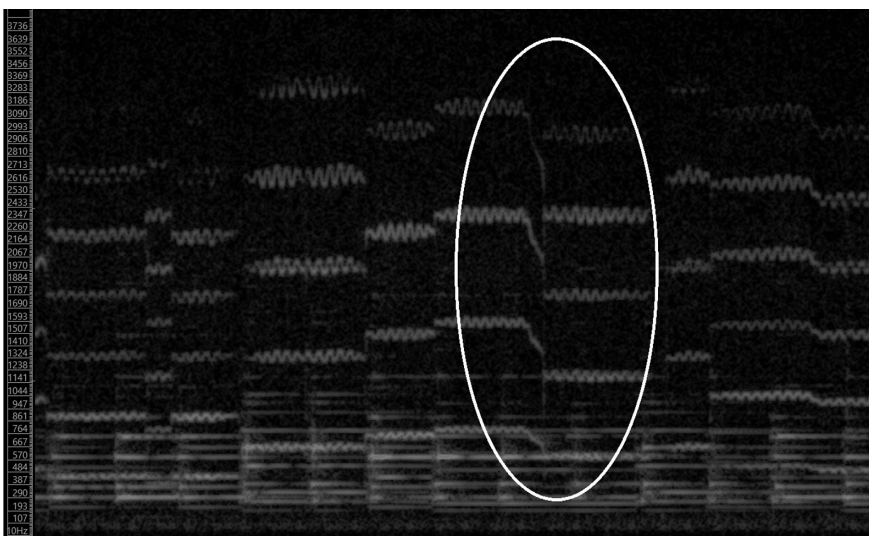

*Figure 3.2* Tempo range for the recording sample. Maximum tempo (bpm) measured divided by minimum tempo (bpm) measured.

Once again, Harrison provides the clearest example of string performance modelled on vocal performance. She is the only instrumentalist to come close to the overall tempo range of Caruso and Butt while also showing constant motion between accelerando and ritardando in her phrasing at the local level. Harrison's exact choices when combining portamento and tempo change do not coincide with any of the singers in this sample and appear to be the result of a general song-like approach, rather than the imitation of any particular performance.

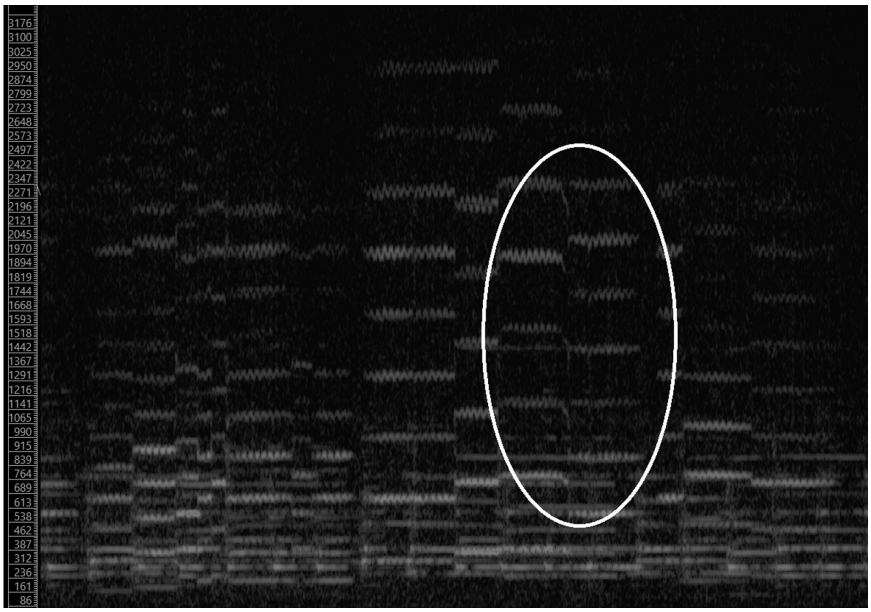
This is also the case of the other instrumentalists in the sample that show vocal-like characteristics in their portamento use. When we study the details of the portamento by each performer, a few interesting patterns and parallels emerge. Although all performers of the same instrument vary greatly in their placements and shapes of their slides, there are some clear similarities between cellists, violinists and singers regarding particular types of portamento, with several instrumentalists performing portamenti that parallel the style and effect of the singers' sliding. We can see, for example, how in bars 9–12, not only Harrison but also Kreisler and Casals slide in a similar manner to Caruso. In bar 10, there is a downward interval of a perfect fourth, which lends itself particularly well to a sigh-like slide with a pathetic character. All performers, with the exception of Butt in her second recording and Casals in his first recording perform a prominent portamento here. Furthermore, Casals and Harrison perform diverging but prominent L-portamento, as well as Kreisler. Caruso, for this same interval, sings a parabolic slide that starts very fast, then slow down and speeds up again at the end, producing a platforming effect in the middle, not unlike the effect produced by the L-portamento by the string performers, as seen in the spectrogram illustrations in Sonic Visualiser in the examples below, although the slide by the instrumentalists appears more fragmented (Audio Example 3.2).



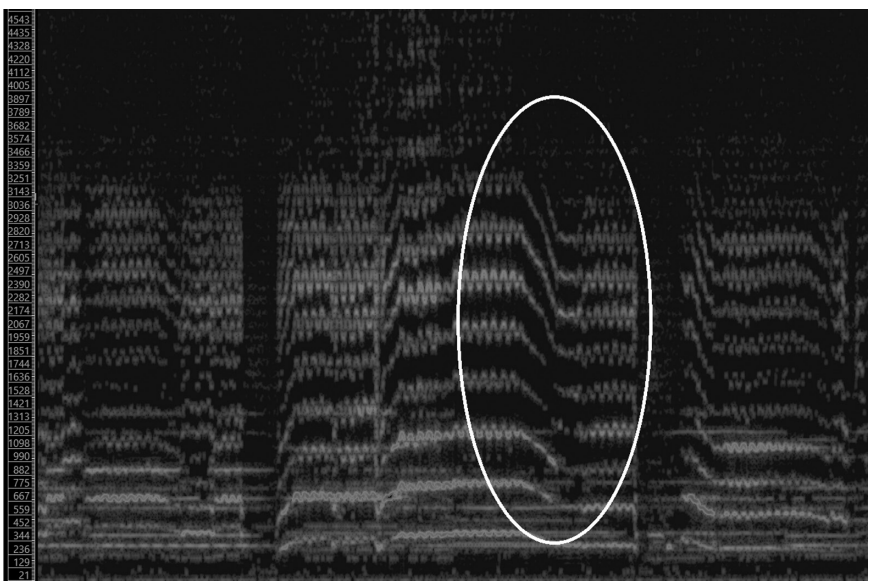
*Example 3.2* Bars 9–10. From above: Casals 1920, Harrison, Kreisler 1914, Caruso.



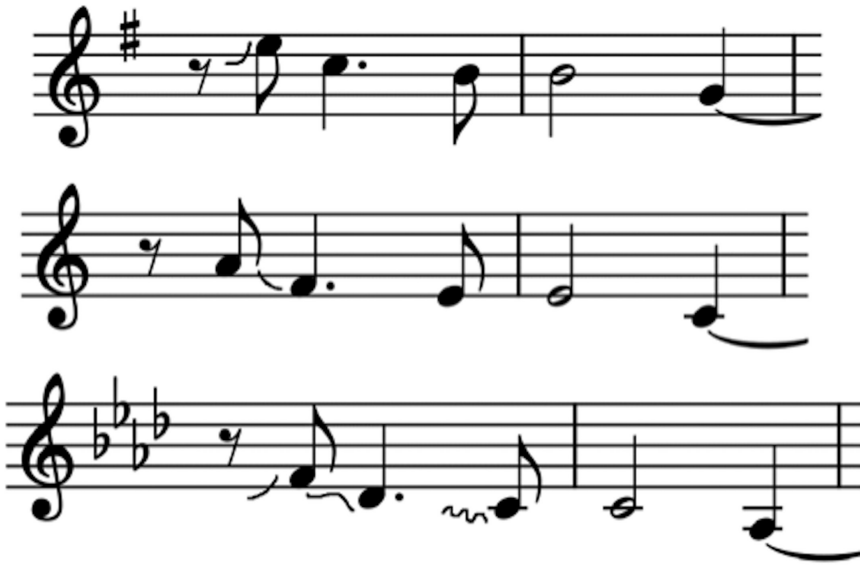

*Example 3.3* Spectrogram showing L-portamento, bar 10, Kreisler 1914.




*Example 3.4* Spectrogram showing L-portamento, bar 10, Casals 1920.



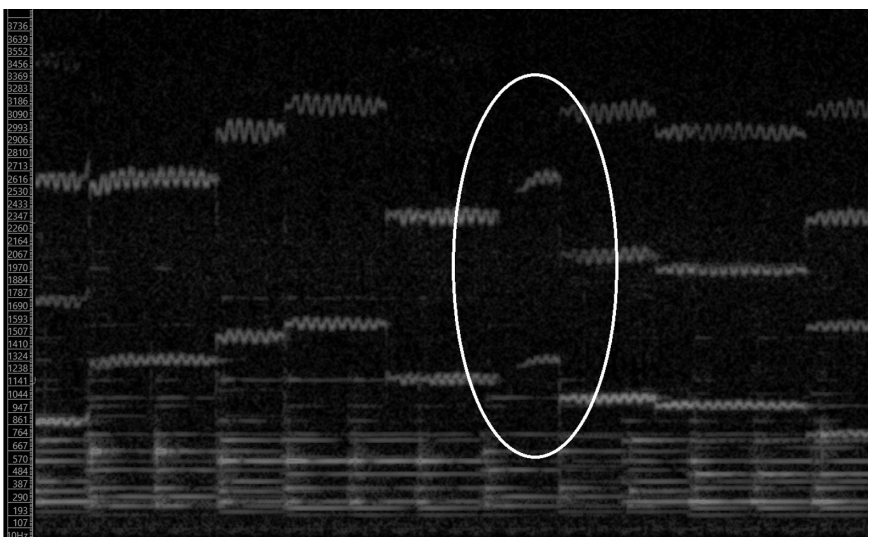

*Example 3.5* Spectrogram showing downward parabolic portamento, bar 10, Caruso.



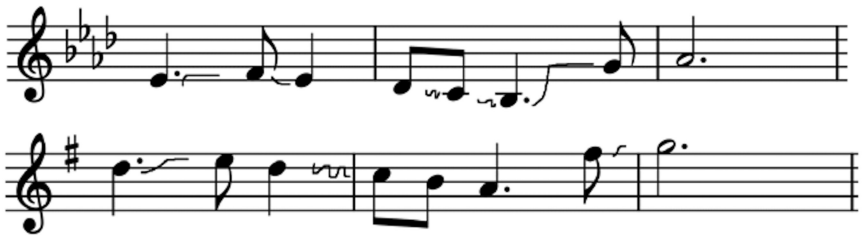
*Example 3.6* Bars 11–12, From above: Kreisler 1914 (seconda volta), Kronold, Caruso.

In the following bar, Caruso and Kreisler also coincide in performing a significant scoop upwards to the first note of the bar, in the style of *intonazione*, while Kronold plays a similar scoop at the following interval.

There is an even clearer parallel between the expressive portamento that Caruso sings in bars 28–30 and how Harrison slides in the same bars. Both



*Example 3.7* Bar 11, scoop with vocal character, Kreisler, 1914.

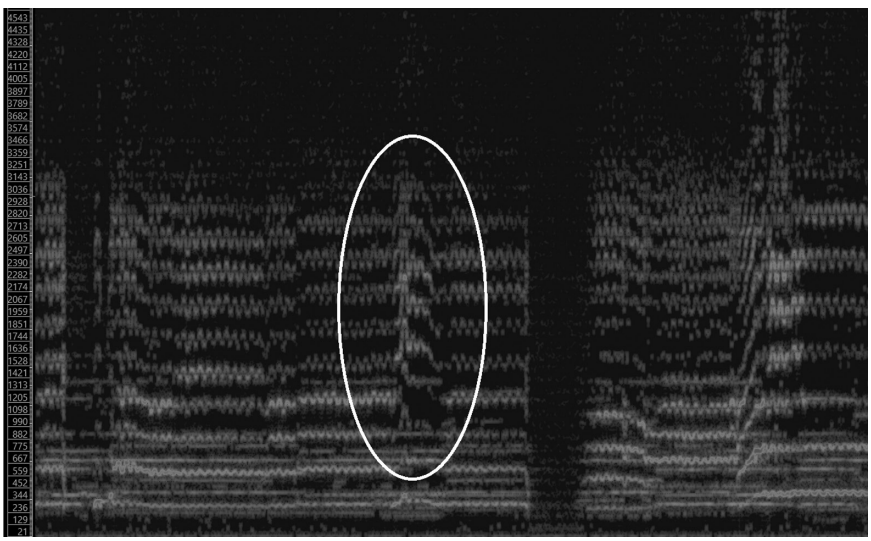


*Example 3.8* Bars 28–30, From above: Caruso, Harrison (seconda volta).

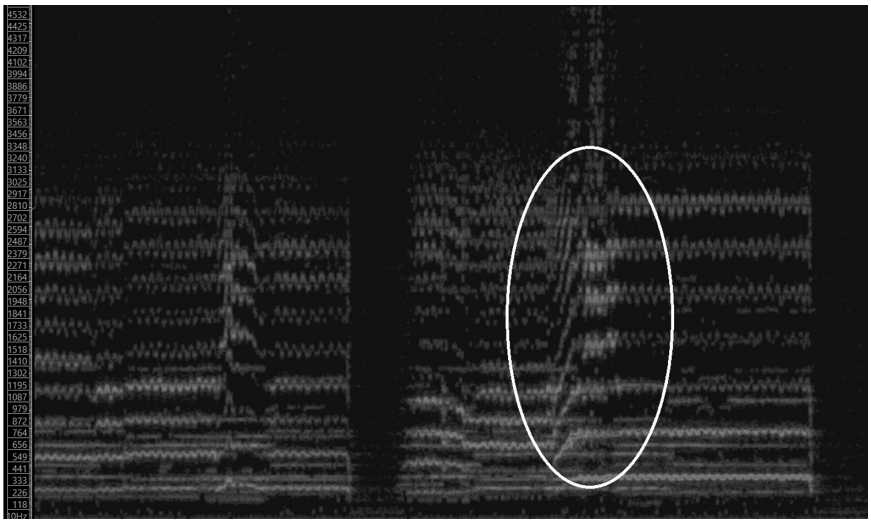
perform a prominent anticipation slide at the first interval, arriving early at the second note and then perform substantial vibrato-glissando at one or two of the following downward major seconds, as seen in Example 3.8 (Audio Example 3.3). Harrison is playing the melody in a very high register on the instrument here, and the effect that her portamenti produce is probably the most reminiscent of singing in the entire comparison (Examples 3.9 and 3.10).

Not only Harrison but also Grünfeld and Casals include vibrato-glissando in their recordings, as this particularly expressive one by Casals (1920) in bar 18 when sliding a minor second interval, seen in the spectrogram shown in Example 3.11.

Among the singers, Butt is the most prone to vibrato-glissando, using it as an expressive tool in combination with exaggerated ritardando, as we can see in the last three bars of the aria (Audio Example 3.4). The slower



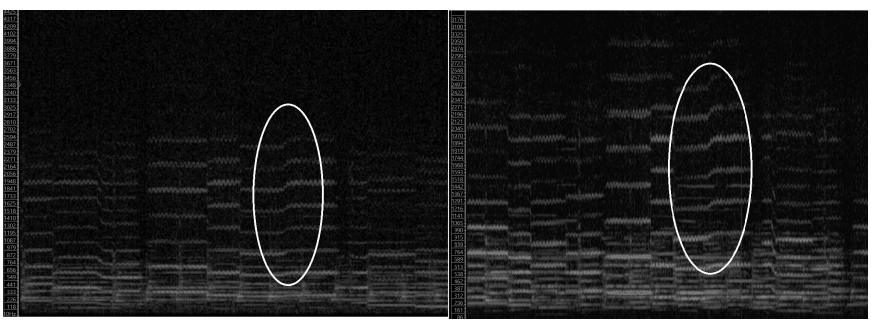

*Example 3.9* Bar 28, anticipation grace portamento, Caruso.



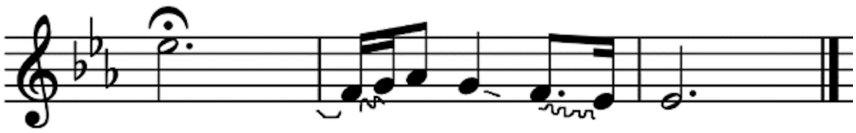
*Example 3.10* Bar 29, Anticipating grace portamento, Caruso.

tempo and the wider vibrato results in a somewhat different effect from the one performed by Casals in bar 18. To illustrate just how much the vibrato is involved in this slide, below is a side-by-side comparison with Albert Spalding senza vibrato single-finger slide for the same interval, which is in a similarly slow tempo (Audio Example 3.5) (Examples 3.12 and 3.13).

A section that illustrates well several nuances of portamento is bars 23–26, where Casals, Kreisler, Heinemann and Caruso provide an interesting comparison. Heinemann, within his rather slow tempo, maintains the tempo quite stable, although he gives the three crotchets in bar 25 a bit of space and his slides here are relatively subtle, compared to other instances



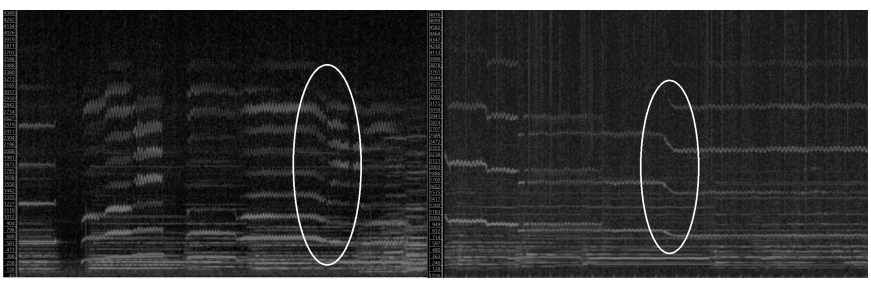
*Example 3.11* Bar 18, Spectrogram, vibrato-glissando. Left to right: Casals (1915), Casals (1920).



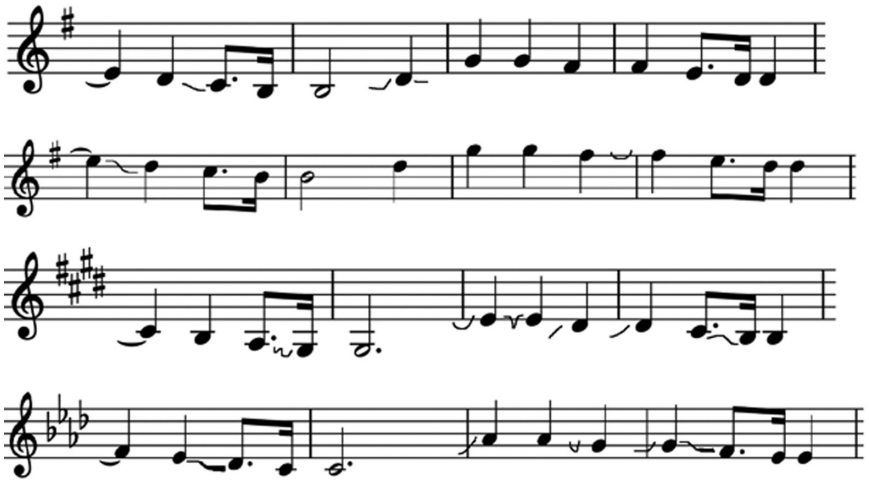
*Example 3.12* Bars 30–32, portamento, Butt, 1917.

of the piece. He sings a short and subtle vibrato-glissando in bar 23 and then gives small *intonazione*-scoops to each note in bar 25, with the second one receiving more emphasis and a clear, continued portamento downward in bar 26 (Audio Example 3.6). Caruso performs the section quite differently, with more pronounced slides and more changes in character. In bar 23, he sings a parabolic slide, which slows down a little bit in the middle of the interval and he differentiates very clearly between the crotchets in bar 25 and the first one in bar 26, which he gives a much softer nuance by making a slower scoop and then sliding down to the f, again changing speeds within the portamento, which creates a more intimate character to the ending of the phrase.

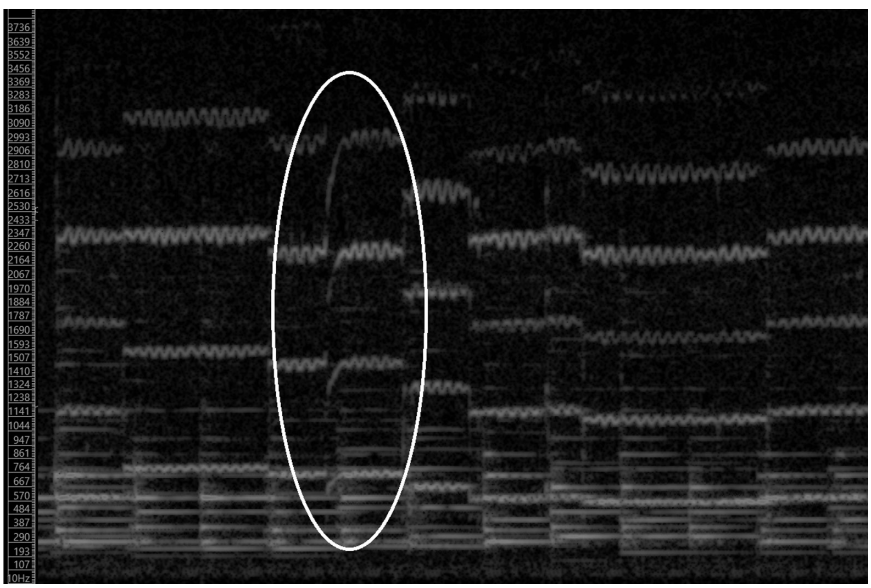
Casals in these bars performs an anticipation slide in bar 24, arriving early at the second note in a way that is reminiscent of singing and immediately after plays a very subtle *intonazione*-scoop at the beginning of the distance between d and g. Casals also places an L-portamento at the same interval that Caruso sings a parabolic slide, which provides nuance. Kreisler, on the other hand, plays a L-portamento that echoes Caruso's parabolic portamento in bar 23, albeit not for the same interval, and also performs an expressive *librar la voce*-scoop, with very vocal quality, for a repeated note (f sharp), in a similar way to Heinemann and Caruso, and the musical result is certainly reminiscent of Caruso's softer character in this instance (Audio Example 3.7). Just we have observed in previous instances, Casals and Kreisler are clearly using a portamento mindset that is related to vocal communication, considering the effects they produce while not imitating the interpretation of any particular singer (Examples 3.14–3.16).



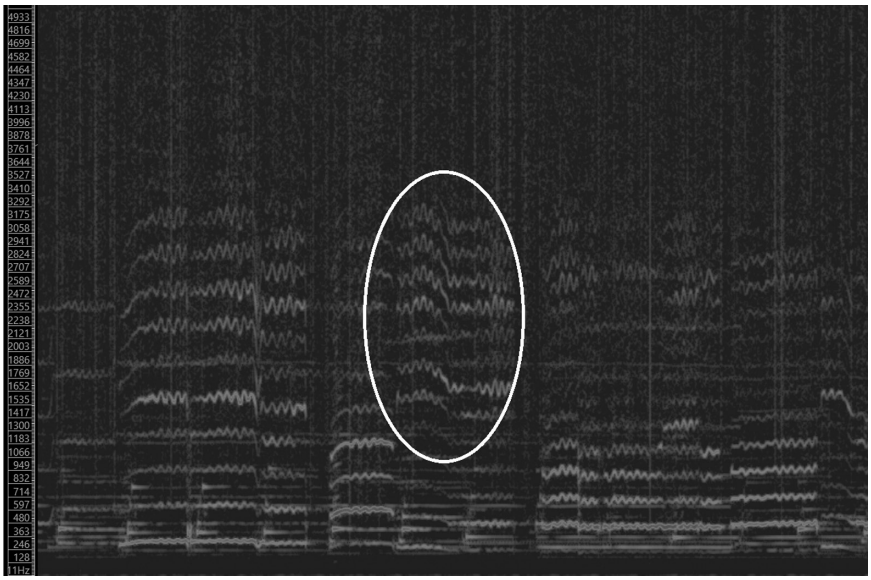
*Example 3.13* Bars 31–32, Spectrogram. Left to right: Butt, 1917, Spalding, 1921.



*Example 3.14* Bars 23–26. From above: Casals 1920, Kreisler 1914, Heinemann, Caruso.




*Example 3.15* Bar 26, scoop to repeated note, Kreisler, 1914.




*Example 3.16* Bars 25–26, scoop portamento for a repeated note, Heinemann.

## Conclusions

As we have seen throughout this study, the idea emerging from recent research that instrumentalists of previous generations viewed, performed and perceived portamento as connected to singing and vocal communication is corroborated when listening to early acoustic recordings of "Ombra mai fu." The singers in this sample seemed to slide more often and integrate portamento in a more complete way with tempo rubato and vibrato than the instrumentalists, but both cellists and violinists shared numerous vocal portamento style patterns with Heinemann, Caruso and Butt, including portamento with varying speed, vibrato-glissando, scoops and anticipating graces. Most of the instrumentalists, with Harrison as the clearest example, also seem to connect tempo rubato with portamento to a surprising extent both overall and at the local level. These vocal elements when adapted to string instruments often produce comparable effects, as demonstrated in the spectrogram examples, but the slides often occur in other locations and change with repeated performances, indicating a more general vocal portamento mindset rather than a direct imitational process. Indeed, the perhaps most important finding in this study is the fact that the vocal mind-set of several instrumentalists seems to expand beyond using a certain type of portamento to include an entire way of conceiving phrasing, using tempo volatility in combination with slides as a means of musical expressiveness.

Perhaps surprisingly, the instrument-technical differences in sliding between cellists and violinists and the generation gaps between performers

do not seem to have greatly affected the style and attitude towards portamento in this comparison to any significant degree, but rather the differences between performers appear to be stem mostly from personal musically orientated decisions. Furthermore, instead of showing a declining interest or preference for sliding, several performers performed more portamento or developed their portamento style further in later recordings (Kreisler, Casals) while also maintaining their tempo volatility. The moment-to-moment, local phrasing seems integral to the portamento style displayed in this sample, since many of the portamento combinations and tempo fluctuations are incompatible with a more large-scale arch of musical phrasing.

Since the musical work studied here is an opera aria, it is not entirely surprising that the vocal quality of these portamenti integrate easily into the musical structure. It remains to be seen for just how much of the instrumental repertoire this idea of a vocal portamento-mindset holds true. Nevertheless, considering that his more vocal mindset, as a style approach, is so far removed from the current string performance style, it is something to analyse further and to put in an evolutional perspective. If string performers stopped modelling their phrasing on vocal performance, what model is being used instead for musical expressiveness in string performance today and in which direction are we heading? If we consider that, as Potter suggests, "portamento helped give an illusion of language, re-creating the contour (as opposed to the sound) of speech in exaggerated form," then the absence of portamento must have entailed an important readjustment in how string performers communicate (and to a lesser degree even classical singers) through music.[40] For now, there have been few indications of the vocal mindset returning to either HIP performance or traditional mainstream performance and further study into this topic could, without doubt, provide great insights into how musical communication functions within classical performance and audience reception today, as well as insights regarding how expressiveness in classical music performance relates to that of other musical genres.

## Notes

1 Clive Brown, "Singing and String Playing in Comparison: Instructions for the Technical and Artistic Employment of Portamento and Vibrato in Charles de Bériot's *Méthode de violon*", in *Zwischen schöpferischer Individualität und künstlerischer Selbstverleugnung*, eds Claudio Bacciagaluppi, Roman Brotbeck, and Anselm Gerhard, (Schliengen: Edition Argus, 2009), 87.
2 David Milsom and Neal Peres Da Costa, "Expressiveness in Historical Perspective: Nineteenth-Century Ideals and Practices", in *Expressiveness in Music Performance: Empirical Approaches across Styles and Cultures,* eds Dorottya Fabian, Renee Timmers, and Emery Schubert (Oxford: Oxford University Press, 2014), 82.
3 Milsom and Peres Da Costa, "Expressiveness in Historical Perspective", 83.
4 John Potter, "Beggar at the Door: The Rise and Fall of Portamento", *Music & Letters* 87, no. 4 (2006): 526.

5 Kate Bennett Wadsworth, "'Precisely marked in the tradition of the composer': the performing editions of Friedrich Grützmacher" (PhD diss., University of Leeds, 2017), 74–75.
6 Daniel Leech-Wilkinson, "Portamento and Musical Meaning," *Journal of Musicological Research* 25 (2006): 240.
7 Carl Flesch, *The Art of Violin playing* (New York, NY: C. Fischer, 1923–28), 32.
8 See p. 10 for further discussion and visual examples.
9 Flesch, *The Art of Violin playing,* 32.
10 Mark Katz, "Portamento and the Phonograph Effect," *Journal of Musicological Research,* 25 (2006): 213. The question of whether upward or downward portamento is to be preferred has historically received different answers, as we will notice later on in this study.
11 Williams, Emma. *The Singing Violin: Portamento use in Franz Schubert's violin music*. PhD Thesis. The Hague: The Royal Conservatoire of the Hague, 2019.
12 Brown, "Singing and String Playing in Comparison: Instructions for the Technical and Artistic Employment of Portamento and Vibrato in Charles de Bériot's *Méthode de violon",* 93–95.
13 Zurita, Trino. *La interpretación del violonchelo romántico. De Paganini a Casals.* Barcelona: Antoni Bosch editor, S.A., 2016, 290.
14 Zurita, *La interpretación del violonchelo romántico. De Paganini a Casals*, 258–259.
15 Corri, 1782, quoted in Williams, *The Singing Violin: Portamento use in Franz Schubert's violin music.*
16 Kai Köpp, "Die hohe Schule des 'Portamento' Violintechnik als Schlüssel für die Gesangspraxis im 19. Jahrhundert," *Dissonance, Schweizer Musikzeitschrift für Forschung und Kreation* nr. 132 (2010): 22.
17 Zurita, *La interpretación del violonchelo romántico. De Paganini a Casals*, 282.
18 Indeed, several sources state that the aria was one of the pieces included in the first music broadcast on radio in 1906 by Reginald in Brant Rock, Massachusetts. See Christopher H. Sterling and John Michael Kittros, *Stay Tuned: A History of American Broadcasting* (New Jersey: Lawrence Erlbaum), 30.
19 The popularity of the piece is underlined by the fact that there were at least another 15 recordings of "Ombra mai fu" produced during this same period by other instrumentalists and singers, most of them lesser-known performers.
20 Emil Kross, *Largo.* Arrangement for "Violine oder Klarinette in C" and piano (Lepizig: Bosworth & Co., 1900); Gaston Borch, *Largo From "Xerxes".* Arrangement for cello and piano (New York, NY: C. Fischer, 1910).
21 Leech-Wilkinson, *The Changing Sound of Music,* Chapter 3.1, paragraph 25.
22 As Leech-Wilkinson concludes, "pianos had to be played fortissimo, and right into the singer's ears; and we have seen how in ensemble recordings all the musicians were playing loudly and right on top of one another. Singers were required to exaggerate vowels, roll their Rs, sing S as Sh and had to maintain the most even tone possible, at the same time as moving towards and away from the horn as required. In these sorts of conditions, anything like a normal musical performance must have been extremely hard to produce." Daniel Leech-Wilkinson, *The Changing Sound of Music: Approaches to Studying Recorded Musical Performance* (London: CHARM Project, 2009).
23 In this sample, the recording of Beatrice Harrison is of particularly poor quality regarding timbre.
24 Day, *The changing sound of music,* 4.
25 A. H. Wagner, "An Experimental Study in Control of the Vocal Vibrato," *Psychological Monographs* 40, no. 1 (1930): 160–212.
26 This style is characterised by precisely and absence of portamento, long sostenuto phrasing, continuous vibrato and relative tempo stability without accelerando.

27 Katz, "Portamento and the phonograph effect," 211–232.
28 Elias Dann, "The Second Revolution in the History of the Violin: A Twentieth-Century Phenomenon," *College Music Symposium* 17 (1977): 64
29 Leech-Wilkinson, "Portamento and musical meaning," 233–261.
30 Potter, "Beggar at the door," 523–550.
31 Leech-Wilkinson has promoted the Second World War as the most significant period for the decline, and Potter in his Schubert song study notes 1932 as the peak year for portamento with "a noticiable reduction in portamento use during the war years" (Leech-Wilkinson, "Portamento and musical meaning").
32 Potter, "Beggar at the door", 540. This can be compared to some sources preferring upward portamento, as Emma Williams notes: "in both vocal and instrumental treatises of the 19th century, the general consensus was to use fewer portamenti when descending. In singing, Lablache, Corri and Garcia, along with others, advised using more portamento when ascending and less when descending" (Williams, 2019, online).
33 Bennett Wadsworth, "'Precisely marked in the tradition of the composer'", 75.
34 Gabrielle Kaufman, *Gaspar Cassadó: Cellist, Composer and Transcriber*. London: Routledge, 2017. Chapter 3, "Cassadó, the performer: Cello performance in the early twentieth century," 71–108.
35 Rebecca Plack, in her PhD thesis on performance style in singers, discusses whether all slides are conscious choices, since "performance gestures have roots in a singer's vocal habits"; see Rebecca Mara Plack, "The substance of Style: How Singing creates Sound in Lieder Recordings, 1902-1939," PhD diss., Cornell University, 2008: 19. In the present study, the idea of habits as involved with producing portamento could possibly be relevant but would not alter the consideration of slides as expressive or technical elements as seen here, since there are markers, such as the musical characteristics, types of placements and changes for repeated performances that infer expressive intent.
36 Potter, "Beggar at the door," 528.
37 It is, of course, also possible that these decisions were derived from unknown issues regarding the recording setting or the technology used to record.
38 Milsom and Peres Da Costa, "Expressiveness in historical perspective," 83.
39 Potter, "Beggar at the door," 531.
40 Potter, "Beggar at the door," 550.
41 Please note that not all information on transfers is available.

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