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Louis Armstrong and the Development of Modern Trumpet Style

by

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Louis Armstrong and the Development of Modern Trumpet Style

Thesis title

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Abstract

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Jazz musician Louis Armstrong was one of the most famous trumpeters of the 20th Century, perhaps of all time. His prolific career, spanning across five decades, impacts many facets of music to this day, from pop singing to jazz improvisation. One area that is underexplored is the extent to which Armstrong invented modern trumpet playing as we know it. Once Armstrong switched from the cornet to trumpet, he began exploring and demonstrating what was possible on the instrument - its clear, percussive articulations; its manipulability; its resonant, commanding tone; its upper register. Through his live performances and recordings in the late 1920s and 30s, he became the modern trumpet's first major voice, expanding its role from that of an auxiliary orchestral instrument into a soloist's instrument, and popularized it in modern music. By examining the trumpet's history preceding Armstrong's career, his career itself, his approach to the trumpet (the "Armstrong Style"), and his influence on generations thereafter, we can see how Armstrong's approach to the instrument changed the very nature of modern trumpet playing.

LOUIS ARMSTRONG AND THE DEVELOPMENT OF MODERN TRUMPET STYLE

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A dissertation submitted to the Graduate Faculty in Music in partial fulfillment of the requirements for the degree of Master of Musical Arts, University of Colorado Boulder

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Abstract

Jazz musician Louis Armstrong was one of the most famous trumpeters of the 20th Century, perhaps of all time. His prolific career, spanning across five decades, impacts many facets of music to this day, from pop singing to jazz improvisation. One area that is underexplored is the extent to which Armstrong invented modern trumpet playing as we know it. Once Armstrong switched from the cornet to trumpet, he began exploring and demonstrating what was possible on the instrument - its clear, percussive articulations; its manipulability; its resonant, commanding tone; its upper register. Through his live performances and recordings in the late 1920s and 30s, he became the modern trumpet's first major voice, expanding its role from that of an auxiliary orchestral instrument into a soloist's instrument, and popularized it in modern music. By examining the trumpet's history preceding Armstrong's career, his career itself, his approach to the trumpet (the "Armstrong Style"), and his influence on generations thereafter, we can see how Armstrong's approach to the instrument changed the very nature of modern trumpet playing.

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Part 1: A Brief History of the Modern Trumpet and Cornet

As trumpeter and musicologist Edward Tarr summarizes, while the trumpet can trace its origins in human history back thousands of years, the story of the modern trumpet begins with the invention of the valve around 1815[1]. Before this, the natural trumpet's harmonic overtone series limited what notes could be played. This allowed for scalar playing in the trumpet's upper register (and even some chromaticism in the extreme upper register), but gaps of large intervals in the low register. Different systems were developed to meet what Tarr describes as "an increasingly strong need for chromatics in the low register dating back to 1750"[2], such as the stopped trumpet, keyed trumpet, and slide trumpet. While these all chromatically filled in the natural trumpet's large interval gaps in the low register, they had drawbacks: the stopped trumpet and keyed trumpets both struggled with varying tone color between different notes, the slide trumpet's mechanism was "cumbersome"[3]. Adding valves to the trumpet solved the problems of the previous designs: the instrument was fully chromatic without gaps, its tone was homogenous, and it was agile[4]. Different designs for valves were developed through the early 19th Century (Stoelzel valves, disk valves, box valves, etc.), but the most successful was the tube valve system developed by Francois Perinet in 1839 - essentially the same valve system used today[5].

While valves were a mechanical breakthrough, trumpeters were not excited by the new technology. Trumpet historian and technician Rich Ita explains:

> The thing is that trumpet players have three hundred years or more of technique history and music that they've been playing. They don't necessarily like these new valves… they have to relearn a whole thing… and they've been playing masterfully for years and they

[1] Edward Tarr, The Trumpet (London: Batsford, 1988), 156.
[2] Ibid.
[3] Ibid, 157.
[4] Ibid.
[5] Ibid, 161.

> don't wanna… take on this task. So the trumpet guilds and the horn guilds basically reject the introduction of these devices for a long time.[6]

Tarr elaborates:

> While the baroque trumpeter had needed to coordinate only lips and tongue, trumpeters with the new valved instrument had to reconcile three elements one with another: lips, tongue, and fingers. One can easily imagine that because of the convenience and the retention of tradition, and probably also because of the defects of the first valved instruments, there was much opposition to the new instrument, especially from older players. One of them cursed about "the emasculation of the trumpet and horn through the introduction of valves."[7]

Composers were slow to start incorporating the new instrument into their repertoire and continued scoring for trumpeters to play on both natural and valved trumpets. Tarr explains:

> Although the valve mechanism was an essential improvement and had lasting effects on the technique of trumpet playing, oddly enough it brought no enlargement of the trumpet repertoire. On the contrary, the nineteenth century was an epoch in which the trumpet was employed chiefly as an orchestral instrument…one bought the full chromatic range (with uniform timbre on all notes) at the price of greater richness of sound.[8]

Some orchestral composers, such as Brahams and Mendelssohn, maintained the traditions of the classical era and wrote their trumpet parts essentially within the overtone series. Others, such as Wagner, Bruckner, and Verdi began writing more creatively (and higher) for the trumpet, giving sustained cantilena passages to their trumpeters. Other composers, such as Berlioz, however, wrote very confined parts for their trumpeters, giving cantilenas and technically difficult passages to cornets instead, the instrument that was eclipsing the trumpet in modern music.[9]

In 1831, Antoine Halary added valves to a posthorn, thus inventing the cornet.[10] It quickly became a popular instrument amongst brass players. Its shorter, mostly conical tubing

[6] Jeff Purtle, "Trumpet or Cornet? A History of Brass Instruments by Rich Ita," YouTube, July 1, 2022, https://www.youtube.com/watch?v=I0L809skVHc.
[7] Tarr, 158.
[8] Ibid, 163.
[9] Ibid, 165.
[10] Ibid, 168.

made it more agile than the valved trumpets of the day and more accurate in the upper register. While some composers, such as Berlioz and Strauss, found its tone lacking the trumpet's noble character (Strauss thought it was "an abomination"), it was "beautiful, tender, and pleasing."[11] Music historian Brian Harker mentions that Armstrong himself described the cornet's tone "as 'mellow,' 'rich,' and 'pretty.'"[12] Military bands quickly adopted it into their ranks and it became the soprano voice of a new ensemble - a whole choir of valved brass instruments (many of them developed by Adolph Sax) matched in pitch. These brass choirs evolved into brass bands and, with the addition of woodwinds to the groups, wind bands.[13]

With the help of these new ensembles, as well as orchestral composers writing for the trumpet conservatively, the cornet exploded in popularity as the premiere high brass instrument. As Tarr writes, "Nearly everywhere - in France, Belgium, England and the USA - the cornet endangered the existence of the trumpet. Indeed, its tone was less noble, but it was easier to play."[14] Inspired by Paganini's virtuosic technique on the violin, Jean-Baptiste Arban became one of the first internationally-renowned cornet soloists, publishing the first complete method for the cornet in 1864. Others followed suit and further pushed the technical limits of the instrument: L.A. St Jacome, Jules Levy, Matthew Arbuckle, Alessandro Liberati, and Oskar Böhme thrilled audiences all over the world with their abilities. Herbert L. Clarke, the cornet soloist with John Phillip Sousa's band, became especially popular after he began recording with the Victor Talking Machine Company in 1903. These players incorporated a whole range of expression into their playing, enhanced by their pristine technical abilities.

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[11] Ibid.
[12] Brian Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings* (New York: Oxford University Press, 2011), 96.
[13] Jeff Purtle, "Trumpet or Cornet? A History of Brass Instruments by Rich Ita," YouTube, July 1, 2022, https://www.youtube.com/watch?v=I0L809skVHc.
[14] Tarr, 169.

Early jazz bands at the dawn of the 20th Century developed from wind bands, so naturally, the first great high brass jazz soloists were cornetists, such as Buddy Bolden, Freddie Keppard, Bunk Johnson, George Mitchell, and Joe "King" Oliver. Many of these soloists, especially Oliver, emphasized the importance of incorporating novelty into their technique. Oliver was known for his use of wah-wah effects with various mutes to imitate preachers, animals, and crying children.[15] Oliver also emphasized the importance of playing the melody, or as he put it, "playing the lead" of an ensemble, which Armstrong fully embraced over the course of his career. Due to this prominence of the cornet, the trumpet was foreign to the first generations of jazz musicians in New Orleans. As Armstrong himself mentions in his memoir,

> Of course in those early days we did not know very much about trumpets. We all played cornets. Only the big orchestras in the theaters had trumpet players in their brass sections. It is a funny thing, but at that time we all thought you had to be a music conservatory man or some kind of a big muckity-muck to play the trumpet. For years I would not even try to play the instrument.[16][17]

In time, Armstrong would transform the trumpet into a central voice in jazz.

[15] Harker, 10.
[16] Louis Armstrong, *Satchmo: My Life in New Orleans* (New York: Da Capo Press, 1986), 213-214.
[17] In his own writings, Armstrong uses unconventional spellings, punctuation marks, capitalizations, and grammar (or deliberately misuses them), reflecting both the spoken vernacular of the Black American community of New Orleans and the musicality of his own voice. In this investigation, I have chosen to present his quotes without modification.

Part 2: The Role of the Trumpet Up to Armstrong's Early Career

As stated above, the trumpet throughout the 19th Century was constrained to an orchestral role, "noble and brilliant… suitable in expressing martial splendor… and vigorous, violent and lofty feelings" as Berlioz discussed in his treatise on orchestration.[18] This coincided with a decrease in the trumpet's accepted register: "The clarino register had been reduced in Classical works to the twelfth partial (g'')."[19] Its days of being given soloistic roles, even roles covering a range of expression, had been left in the Baroque Era. Tarr writes that the few trumpet concertos from the century "are merely exceptions to the rule."[20] However, as the century closed, some composers were beginning to explore more of the new valved trumpet's potential. While earlier in the century, valved trumpets pitched in low F and G were the standard in orchestras, by the turn of the century, smaller trumpets pitched in Bb/A and C (the same lengths as cornets) were adopted by orchestral players to deal with "the increasing difficulties of orchestral literature" and who "resisted the cornet because of its sound."[21] While the sound of these smaller trumpets had a less full tone in the middle and low registers than valved trumpets in F (which were already less full than natural trumpets), they had more projection and better accuracy in the high register.[22]

Composers embraced these developments in their work. Trumpeters and historians, John Wallace and Alexander McGrattan, write "From around 1900 a high level of virtuosity became the normal expectation of all players in the trumpet section."[23] Strauss expanded the high range to d-flat''' and d'''.[24] Mahler further expanded the range to e-flat''' in his Eighth Symphony

[18] Tarr, 165.
[19] Ibid, 144.
[20] Ibid, 169.
[21] Ibid, 170.
[22] Ibid.
[23] John Wallace and Alexander McGrattan, *The Trumpet* (New Haven: Yale University Press, 2011), 243.
[24] Tarr, 172.

(1907), but permitted the lower octave "as an alternate possibility."[25] Debussy wrote expressive passages for trumpet along with passages that required great finger dexterity, "no doubt under the influence of the French cornetists with their nimble technique."[26] Many composers at the turn of the century, especially Mahler, Ravel, and Stravinsky, along with the Second Viennese School, began writing for the trumpet more soloistically and expressively within the orchestra. However, the dominance of the cornet as the soloist's instrument still prevailed in the thinking of some composers: the famous Ballerina's Dance solo from Stravinsky's *Petrushka* was originally scored for cornet, and cornet (as opposed to trumpet) was also featured in his *Histoire du soldat*. Ironically, the Bach Revival at the turn of the century was another context in which musicians were exploring the modern trumpet's soloistic potential, but these explorations did not make a "sustained impact" the wider musical world until Adolf Scherbaum's influential recordings of the 1950s.[27]

Outside of the art music world, the trumpet's role was changing before Armstrong's rise. While early jazz bands - evolving from the wind band tradition - embraced the cornet, a new type of ensemble was emerging which utilized the trumpet: the dance orchestra. By 1920, dance orchestras were becoming an important part of the musical landscape of the United States. Capitalizing on the commercial opportunities of the "Jazz Age" launched by the Original Dixieland Jazz Band's debut in New York City and on recordings with the Victor Company, these orchestras played for dancers and floorshows at the fine hotels, ballrooms, dance halls, and cafes in the the country's urban centers. Their leaders became some of the most widely recognized recording artists of the day, such as Paul Whiteman, Art Hickman, Vincent Lopez, Isham Jones, and Sam Lanin. These orchestras tended to play "jazz" arrangements of popular

[25] Ibid, 173.
[26] Ibid.
[27] Wallace and McGrattan, 252.

songs and novelty tunes with a slight tint of Black American rhythmic conception, but fostered an European art music aesthetic. The first of these utilized instruments from both orchestral (violins, and sometimes lower strings) and wind band traditions (trombones, clarinets, saxophones) along with instruments associated with what was coming to be known as jazz (banjo; various configurations of drums, cymbals, and percussion - what would become the drum set). Unlike the great wind bands of the day, these groups referred to themselves as *orchestras* - (Edwin Franko) Goldman's *Band* vs. Paul Whiteman and His *Orchestra* - and maintained an orchestral image (along with all of its associations with the upper classes and white society) even when their music sounded like little more than white-washed ragtime or polka. As black dance orchestras appeared later in the decade (e.g. Fletcher Henderson, Duke Ellington, Erskine Tate, Carroll Dickerson), they too cultivated much of this orchestral aesthetic.

Playing into this symphonic image, these groups typically employed trumpeters (although cornetists sometimes were featured as the "hot" soloists). Some of these trumpeters became minor celebrities in their own right. Henry Busse, Paul Whiteman's original trumpeter, co-composed a hit for Whiteman's orchestra, "Hot Lips" (1922), which featured himself using some of the "hot" growling, buzzing, and wah-wah effects associated with jazz cornet soloists of the day. Musical moments like these were some of the first times wide audiences heard jazz (or at least jazz-adjacent) expressions played by a trumpet. Louis Panico, the featured cornetist/trumpeter with Isham Jones' orchestra, rose to prominence when he wrote a method book for jazz players, *The Novelty Cornetist* (1923), explaining how to use some of the "jazz" devices made famous by players like Joe "King" Oliver.[28] Allegedly, Panico studied with Oliver, but what he acquired from Oliver seems to be only in style, not in substance. Harker elaborates on Panico's vaudevillian approach:

[28] Harker, 19.

> When playing a solo, he writes, one should strive primarily for "variety, inasmuch as that quality of avoiding monotony and repetition is essential in any field of entertainment." As a rule of thumb, Panico recommends that "never more than two measures of similarity be used, proceeding into a new idea about every other measure."...The lively but disjointed solos on many early recordings suggest that this philosophy of willful randomness was widely shared.[29]

The trumpeters in dance orchestras had other duties outside of their "jazz" roles. As Harker explains, the first-chair trumpeters had to lead the group with "stylistic precision and predictability on the more straightforward ensemble work" that typically required "formal training and 'legitimate' style"[30] - similar to what was expected of trumpeters in a symphony orchestra. This was especially important in the trumpet's upper register. Harker elaborates:

> High notes represented an important consideration for a bandleader assigning seats in a cornet or trumpet section. Early in the twentieth century, the instrument's normal range was considerably narrower than it is now, and first-chair players - or lead players - were chosen in part for their facility in the upper register - a space from about G above the staff to high C at most. The reason was strictly practical: arrangers usually assigned the highest notes of the chords to the first part in all sections so the melody could be clearly heard, rather than buried in the middle of the texture… To be sure, other aspects of cornet technique were important to bandleaders as well, but the issue of range weighed heavily because of the seemingly universal difficulty of executing high notes on the instrument.[31]

In New York City, Vic D'Ippolito (first trumpet for Sam Lanin) and B. A. Rolfe (first trumpet for Vincent Lopez) earned reputations for accuracy and clear tone in the trumpet's upper register. Armstrong remarked about D'Ippolito that "Vic had tone and he had punch; he was all but a hot man in that band."[32] Rolfe pushed the range even higher. "For his seemingly unnatural command of the extreme upper register, Rolfe was known as a stunt player… He typically decorated simple melodies with his specialty - high-register lip trills - while working his way up

[29] Ibid, 39-40.
[30] Ibid, 94.
[31] Ibid, 92.
[32] Ibid, 93.

to the top of his range, usually double high C."[33] While Rolfe and others were pushing the range of the trumpet (and cornet), their tone changed as they ascended. Harker explains:

> Classical players had already pioneered the extreme upper register. As early as the turn of the century, Herbert L. Clarke was playing up to high F on such virtuoso display pieces as "Carnival of Venice" and "Bride of the Waves." Recordings, however, show that his tone thinned out progressively as he went above high C. Armstrong's hero B. A. Rolfe manifested the same shrinking of tone as he ascended in range. On "Why Do I Love You," recorded with Vincent Lopez around 28 April 1925, Rolfe's high notes actually sound falsetto. This was not poor playing on the part of Clarke and Rolfe, but reflected normal practice among classically trained players in the early part of the century. A weak high register followed naturally from the pedagogy of the day regarding embouchure… Following long-standing practice, early twentieth-century method books for cornet and trumpet admonished players to form a smile, drawing back the corners of the mouth before placing the mouthpiece, and to broaden the smile as the notes got higher.[34]

We can conclude from this that while some trumpeters in dance orchestras were experimenting with high notes, the "shrinking tone" they achieved on them relegated the practice of playing high notes into a novelty status, a "stunt" that had yet to convey a range of musical expression.[35]

In summary, while the trumpet's role outside of art music was growing beyond its traditional use as the "noble" voice of the orchestra, musicians had yet to use it to its full expressive potential. Generally, it was relegated to playing lead melodies in the ensemble passages in dance orchestra arrangements (sometimes having to do so in the upper register). When used soloistically, it was typically for novelty effect (e.g. Busse or Panico), not to move audiences with musical storytelling. Some players, like B. A. Rolfe, were exploring the trumpet's upper register soloistically, but with "shrinking tones" that limited the device to a mere gimmick, not to heighten intensity or excitement. Armstrong changed this.

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[33] Ibid.
[34] Ibid, 97.
[35] I posit that Armstrong parodied this particular "thinned-out high note trumpet" texture in his use of the slide whistle on King Oliver's recording of "Buddy's Habit" (1923) and his Hot Five recording of "Who'sit" (1926).

Part 3: Armstrong's Early Career

Armstrong's musical background reflected the cultural intersectionality that defined New Orleans at the dawn of the 20th Century. Jazz trumpeter and musicologist, Peter Ecklund, describes, "when he was a young man in New Orleans, Louis Armstrong was exposed to opera and the European tradition of light music as well as the blues, ragtime, and African American spiritual music of his native city." He stresses the impact of opera on Armstrong's musical upbringing:

> He was singing even before he took up the cornet. As a child and adolescent he heard recordings of Caruso, McCormack, Henry Burr, and Tetrazzini on his wind-up Victrola. Unlike the early jazzman Sydney Bechet, who was a Creole, Armstrong did not have the opportunity to go to the French Opera in New Orleans. However… Louis almost certainly heard brass bands and concert bands play arrangements of operatic favorites. Katherine Preston's important work indicates that opera was heard by virtually all classes in nineteenth- century New Orleans. Odd jobs brought young Louis into contact with the city's large Italian-American population and he certainly heard their music. New Orleans at the turn of the twentieth century was full of music and much of it was parade music. There were brass bands that played from printed parts, and other, more ad hoc funeral bands, ancestors of the street bands of today, that improvised a rough "heterophony" (neither an exact harmonized melody nor melody plus separate accompanying parts) to familiar themes. The mass-marketed European-style music could be found in New Orleans as well as other cities of Europe and North America. Perhaps especially so, because by all accounts New Orleans at the close of the nineteenth century and the beginning of the twentieth was an exceptionally musical city.[36]

This operatic foundation to Armstrong's worldview later shaped his musical pursuits.

While he dabbled with the cornet previously (his writings discuss how the Karnovskys - a Jewish family in his neighborhood who employed him - helped him buy his first cornet when he was roughly seven years old), Armstrong began formally studying the cornet with Peter Davis when he was interred at the Colored Waifs' Home. Davis had Armstrong working on cornet

[36] Peter Ecklund, "'Louis Licks' and Nineteenth-Century Cornet Etudes: The Roots of Melodic Improvisation as Seen in the Jazz Style of Louis Armstrong," *Historic Brass Society Journal* 13, no. 1 (2001): 92, accessed March 16, 2023, http://doi.org/10.2153/0120010011004.

fundamentals - “Every day I practiced faithfully on the lesson Mr. Davis gave me,”[37] - and he quickly became one of the better young players in the city. Music historian Gary Giddens describes that Armstrong practiced at “every chance” and “worked constantly at developing his embouchure.”[38] He also began experimenting with equipment at this time: “he cut grooves into his mouthpiece so it would hold to his mouth.”[39] Armstrong himself always cited Joe “King” Oliver as his primary influence. Pianist Lil Hardin, Armstrong’s colleague and second wife, highlights the inspiration: “...Joe was his idol and he wanted to play like Joe.”[40] Other cornetists could be found amongst Armstrong’s influences as well. Many musicians hear Bunk Johnson’s tone in Armstrong. Author and historian Edward Brooks argues the influence went further: Armstrong received some basic cornet instruction from Johnson[41] and adopted certain triplet phrases of his.[42] Armstrong probably had some of Herbert L. Clarke’s records in his collection (or at least had access to them) - he owned copies of them later in life,[43] so in all likelihood, he was listening to Clarke and the other great Band Era cornetists closely during his formative years.

Along with these obvious influences, there was another less orthodox source of inspiration that was distinct for Armstrong as a young cornetist. In his article *Louis Armstrong and the Clarinet*, Brian Harker describes how the great clarinetists of New Orleans impacted him:

> According to oral testimony, then, two of the most striking features of Armstrong's style on recordings in the 1920s - digital dexterity and extended range- may have been prized

[37] Armstrong, 40.
[38] Gary Giddens, *Satchmo: The Genius of Louis Armstrong*, (Cambridge: De Capo Press, 2001), 39.
[39] Ibid.
[40] Harker, 22.
[41] Edward Brooks, *Influence and Assimilation in Louis Armstrong's Cornet and Trumpet Work 1923-1928* (Lewiston: Edwin Mellen Press, 2000), 16.
[42] Ibid, 8.
[43] Herbert L. Clarke, “Caprice Brilliante,” LAHM Media Store, 1987, https://collections.louisarmstronghouse.org/asset-detail/1013184.

> and cultivated by a small group of New Orleans cornet players near the end of the 1910s. But what stimulated these musicians to explore these areas? It seems clear that Armstrong, at least, and perhaps others, had become captivated with the playing style of the clarinet. [Cornetist Chris] Miller recalled that when he arrived in New Orleans in 1919, "clarinet players was raising sand in them days." That Armstrong drew inspiration from the clarinetists is evident from the clarinet parts he took the trouble to learn on the cornet.[44]

Harker then recounts a story from clarinetist Sidney Bechet's autobiography in which he heard Armstrong playing the challenging clarinet obbligato from the trio strain of *High Society*. He quotes Bechet directly: "'It was very hard for clarinet to do,' Bechet wrote, 'and really unthinkable for cornet to do at those times. But Louis, he did it.'" Harker concludes, "The figurations typical of clarinet parts in marching band represented a considerable leap from the straightforward melodies assigned to the cornets. By learning to play *High Society*, Armstrong would have had to make a corresponding leap in instrumental technique."[45] This pursuit of clarinet virtuosity on the cornet was shared by a few of Armstrong's peers, such as Henry "Kid" Rena, Sam Morgan, Chris Miller, and Buddy Petit. These younger players would push each other to the extremes of their abilities in carving contests on the street. As Armstrong recounted, "Kid Rena and I used to have some awful battles!" Harker describes how this competition pushed the young players to new heights and Armstrong to experiment with equipment:

> The clarinet idiom also seems to have inspired the young cornetists to expand their ranges. In an interview from 1960 Henry Rena's brother Joe, who initially played clarinet, took credit for getting Henry to start playing in the upper register… Joe even used to file down the rim of Henry's mouthpiece in order to make it shallower and thus easier to play high… According to Joe Rena, Armstrong "copied" Henry in playing high notes, even to the point of filing down his mouthpiece.[46]

[44] Brian Harker, "Louis Armstrong and the Clarinet," *American Music* 21, no. 2 (2003): 140, accessed March 16, 2023, https://doi.org/10.2307/3250562.
[45] Ibid.
[46] Ibid, 142.

With this pursuit of clarinetism and musical worldview inspired by opera, Armstrong stood out when he arrived in Chicago to play second cornet to his mentor King Oliver. Harker goes into detail: "When he arrived from New Orleans in 1922, 'Louis upset Chicago,' recalled clarinetist Buster Bailey. What distinguished his playing? 'His execution, for one thing,' said Bailey."[47] Not to be usurped by his pupil, King Oliver kept Armstrong in a strictly secondary role in his Creole Jazz Band, giving him very few solos - five solos out of a total of thirty-seven recorded tracks.[48] But even in this limited role, Armstrong's singing quality and technique shine through. Ecklund explains: "Opera taught him some great melodies and gave him a sensitivity to the development of melodic line that was far superior to King Oliver's, as well as a model for ornamenting and developing a tune."[49] We see this at work in the first chorus of the trio strain of the Creole Jazz Band's recording of "Froggie Moore" (1924), one of the rare occurrences during which Oliver gives Armstrong the melody. We hear Armstrong shine clearly over the ensemble, with swinging articulations and a full, singing sound. He also employs clarinet-derived arpeggios to elaborate the melodic content starting in Measure 7 of the chorus. We hear this sense of melody informed his compositional logic (along with clarinetisms) in his stop-time chorus on "Tears" (1924).

While Armstrong was playing on cornet during these recordings, his instrument of choice (potentially along with Oliver's) was the Columbia model cornet by the Harry B Jay Company.[50] Rich Ita describes these horns as trumpet/cornet hybrids, and they were marketed as such.[51] While many instruments at the time attempted to fuse the projection of the trumpet with the

[47] Ibid, 147.
[48] Booker, 18.
[49] Ecklund, 96.
[50] Donald Bogle, Richard A. Long, Dan Morgenstern, and Marc H. Miller, *Louis Armstrong: A Cultural Legacy*, ed. Marc H. Miller (Seattle: Queens Museum of Art, New York in association with University of Washington Press, 1994), 2.
[51] Jeff Purtle, "Trumpet or Cornet? A History of Brass Instruments by Rich Ita," YouTube, July 1, 2022, https://www.youtube.com/watch?v=I0L809skVHc.

mellow tone of the cornet (such as Conn's 80A cornet, famously played by Bix Biederbeck), the Columbia was special: it featured interchangeable leadpipes, one with a receiver for a cornet mouthpiece and one with a receiver fit for a trumpet mouthpiece. It appears that Armstrong was using a Conn trumpet mouthpiece with this horn at least some of the time, as we see in a detailed photo of the instrument.[52] This setup allowed him to play the cornet with more trumpet-like qualities - more focused projection, slightly brighter and more resonant sound, easier upper register, crisper articulations, etc. - than on more conventional cornets available at the time, such as Conn's Wonder or Holton's Clarke model.

It was not long before Lil Hardin took notice of Armstrong's talents and urged him to move to New York City to join Fletcher Henderson's dance orchestra, where he further explored his dexterous technique as well as the high register of his playing. This created some friction in the group. Brian Harker explains:

> Armstrong's interest in high notes was closely bound up with his aspiration to play first chair - and, no doubt, with his denial of that privilege by his early employers King Oliver and Fletcher Henderson. "If [Oliver] would have thought of it," Armstrong recalled in 1956, "he'd have let me play the lead. You notice all these records you hear more harmony… because his lead was weak… He should have let me play the lead, knowing I had that first-chair tone." Similarly, "Fletcher only let me play 3rd cornet," Armstrong complained, even though "he'd let me hit those high notes that the big prima-donnas, first-chair men, couldn't hit." To be clear, Armstrong wasn't talking about high notes in a solo; rather, when high notes came along in an ensemble passage, he had to "jump up to first trumpet - hit them cats' high notes and get back to third."[53]

Harker argues that Henderson denied Armstrong the privilege of first-chair for two reasons. Primarily, Armstrong lacked the classical training that would have given him the tools to successfully execute the role of first-chair to Henderson's standards. "Armstrong the

[52] Ibid.
[53] Brian Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings* (New York: Oxford University Press, 2011), 91-92.

crowd-pleaser probably seemed a bit too rough-hewn a personality to entrust with the serious responsibilities of first chair. To Armstrong's protests at being undervalued, Henderson would only respond, 'If you gonna be good someday, you'll take some lessons.'"[54] In turn, this attitude may have been informed by social prejudice: the urban and well-educated Henderson may have viewed Armstrong as too socially uncouth to handle the high-class responsibilities of first-chair (beyond the actual skills required).[55] While Armstrong resented this denial, he would quickly remedy that when he returned to Chicago and switched to the trumpet permanently. Harker explains, "Ultimately, however, he came to fuse the two performance strains, changing the way both lead and solo trumpet players approached their musical assignments."[56]

Upon arriving in Chicago in 1925 to join his wife, Lil Hardin, in her band, Armstrong began recording in the studio with his own group, Louis Armstrong and His Hot Five. It was a setting that showcased the culmination of his development as a cornetist. We hear him push the cornet to its limits in terms of tone, attack, and range. His playing on many of these sides showcases the full extent of his experimentation with clarinet-inspired dexterity. The best example of this is in 1926's "Cornet Chop Suey," which he composed, notated, and submitted as a copyright deposit to the Library of Congress in 1924. The title is a direct reference to the clarinet style Armstrong was exploring in his technique, as Harker describes:

> As a teenager, Armstrong memorized the highly animated clarinet part to the B section of "Clarinet Marmalade." The similarity of this piece's title to "Cornet Chop Suey," with the parallel instrument-food construction, is striking. Could it be that Armstrong composed "Cornet Chop Suey" as a sly tribute to "Clarinet Marmalade," complete with honorary clarinet figures?[57]

Harker answers his own question with the following passage:

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[54] Ibid, 94.
[55] Ibid, 95.
[56] Ibid.
[57] Ibid, 27.

> To be sure, running eighth notes suffuse the piece with the spirit of clarinet style. But the most self-conscious clarinet references, the ones that sound almost like quotations, appear in the brief solo spaces mentioned above: the introduction, coda, breaks, and stop-time passages. In these solos Armstrong often employs arpeggios in sawtooth patterns, a hallmark of New Orleans clarinet style.[58]

In addition to this full embrace of clarinet style, Armstrong uses "Cornet Chop Suey" to place himself within the tradition of virtuosic cornet soloists that had risen in popularity and celebrity over the previous five decades. While not based on a theme and variations form in the vein of Arban's or Clarke's *Carnival of Venice*, it is very much a showpiece, one that requires considerable facility and endurance on the instrument; other than Hardin's chorus of solo piano, Armstrong's acrobatics are on display for the entire performance. The piece highlights Armstrong's fast fingers, evenness of sound throughout the cornet's conventional range (here, B natural below the staff to B natural above the staff), his clear tone, the ease with which he changes direction of his melodic line, and his ability to make "distinct changes in melodic character."[59] Harker ascribes to the piece a "serious tone"[60] and an "imposing nature."[61] "...it was meant to impress. Armstrong himself emphasized the concert hall overtones in 'Cornet Chop Suey' when he said, with evident pride, that it 'could be played as a trumpet solo or with a symphony orchestra.'"[62] It could also be played as a cornet solo with one of the premier wind bands of the turn of the century, especially with a band that understood how to navigate the Black American rhythmic tradition, such as James Reese Europe's band. With Hardin billing Armstrong as the "World's Greatest Cornetist" and the local media agreeing with her,[63] "Cornet Chop Suey" serves as an appropriate vehicle to lay claim to the title. While Armstrong was

[58] Ibid, 28.
[59] Ibid, 31.
[60] Ibid, 24.
[61] Ibid, 25.
[62] Ibid.
[63] Ibid, 103.

reaching the heights of his cornet abilities in his recordings with his Hot Five, he was already regularly performing on the trumpet and exploring its possibilities through a lens of his cornet virtuosity.

Ricky Riccardi, author and Director of Research Collections for the Louis Armstrong House Museum, summarizes Armstrong's successful return to Chicago:

> As the story goes, Armstrong returned to Chicago from his somewhat unhappy New York stay with Fletcher Henderson in 1925. He immediately began working with his wife Lil's band at the Dreamland Cafe. He soon got a second job playing with "Professor" Erskine Tate, a violinist, who had led an orchestra at the Vendome Theater since 1919…When Armstrong joined Tate in 1925, it was quite an honor. "I had become so popular at the Dreamland until Erskine Tate from the Vendome Theater came to Hire me to Join his Symphony Orchestra," Armstrong later wrote. "I like to have Fainted.....And for anyone to play in Tate's Band was Really Really Somebody."[64]

Armstrong had immediate success with the group:

> "I went down there and the opening night was sensational," Armstrong continued. "I remember the first Swing Tune we played--Called 'Spanish Shawl.' I wasn't in Tate's Orchestra 2 weeks before I was making Records with them for the Vocalion Recording Company. I became quite a Figure at the Vendome. Especially with the Gals." Armstrong's stay in Tate's band made him something of a hero in Chicago. Audiences screamed at the mere sight of the young trumpeter, who was regularly featured playing tunes such as "Poor Little Rich Girl" or grabbing a megaphone to sing "Heebie Jeebies."... Reviews from the period make Armstrong out to be quite a sensation and when listening to the two surviving artifacts of the Armstrong-Tate collaboration, one can see why.[65]

In this context, Armstrong committed to switching from the cornet to the trumpet. Brian Harker explains:

> One reason for the switch was purely musical. Since the trumpet has a cylindrical bore (as opposed to the cornet's conical bore) it produces an acoustically purer, more brilliant tone…The cylindrical bore also gives the trumpet a more focused sound with less

[64] Ricky Riccardi, "Static Strut/Stomp Off, Let's Go," Blogger, May 28, 2011, https://dippermouth.blogspot.com/2008/07/static-strutstomp-off-lets-go.html.
[65] Ibid.

> resistance, making it a congenial instrument for the taxing high-range excursions increasingly favored by Armstrong. As he himself put it, "the cornet works you harder."[66]

While Harker's first point is true, his second point misunderstands the physics of each instrument. The trumpet's inherent design (especially the models Armstrong was using at this time - more on that below) has increased resistance compared to the cornet, thus requiring less effort from the player to activate the sine wave in the instrument's air column. This gives the trumpet the aforementioned "more focused sound" - it also increases the projection of the instrument and eases the production and execution of notes in the upper register. Harker continues:

> Another significant reason for the change had to do with the cultural meanings conveyed by the two instruments. Initially Armstrong switched because his section mate at the Vendome, Erskine Tate's brother, Jimmy, played the trumpet and Erskine didn't like the way Armstrong's "stubby" little cornet looked alongside Jimmy's sleek trumpet. In part, Armstrong took up the trumpet for the same reason he began wearing fine clothes: to elevate his social status and improve his image with the public. But the regal appearance of the trumpet was only one factor in this regard. In the 1920s, the trumpet was widely regarded as a high-class instrument in musical terms, much more so than the cornet. Whereas cornets were used in concert bands, trumpets were used primarily in symphony orchestras, thereby benefiting from the rarefied ambiance of the concert hall.[67]

Harker then cites John Lawrence McCann's *A History of Trumpet and Cornet Pedagogy in the United States, 1840-1942*:

> Possibly for that reason, "while [famous cornet soloists] were better known to the general public, the star trumpeters of the symphony became, as early as the second decade of the twentieth century, more celebrated within the musical world." Armstrong sensed this hierarchy and was cowed by it… Perhaps, for Armstrong, finally picking up the trumpet did more than mitigate the physical problem of playing high notes. Perhaps adopting this powerful instrument was itself an act of audacity, helping to build the confidence bordering on arrogance that he would assuredly need to face down high F.[68]

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[66] Harker, 95-96.
[67] Ibid, 96.
[68] Ibid.

Exactly when Armstrong switched is a matter of some debate. While some scholars, critics, and historians claim that they can hear the difference between the instruments based on Armstrong's tone on recordings, those claims are difficult to substantiate. While he may have experimented with the trumpet during his tenure with Fletcher Henderson, it was with Tate's band that Armstrong started transitioning to becoming a trumpet player. Evidence suggests that he spent some time playing both trumpet and cornet before giving up the cornet entirely. Armstrong joined Tate's orchestra at the end of 1925, so he probably quickly started playing trumpet soon thereafter as the gig demanded of him. He also started recording with his Hot Five in November of that year. We can safely assume he recorded "Cornet Chop Suey" on cornet, at his session in February, 1926. In May, he went into the studio to record with Tate's Orchestra (more discussion of the session on pg. 25), but since he was playing trumpet during the groups' nightly performances, I can see no reason for him to not use the trumpet during the studio date. In November of that year, on his Hot Five's recording of "Big Butter and Eggman," we hear him say during his vocal, "I'll buy you all the pretty things you think you need… as long as I can keep this *cornet* up to my mouth." One could then maybe assume that Armstrong was using the trumpet for Tate's orchestra, but playing the cornet for recording sessions with his small group. However, confusing matters further, publicity photos for the Hot Five show Armstrong holding a Buescher trumpet. When asked for the date of that photo shoot, Ricky Riccardi responded, "Not the exact date, but most likely 1926, probably after "Heebie Jeebies" was a hit. Multiple photos were taken that day and one of them first turns up in an ad for "I'm Gonna Gitcha," recorded in June, released a few months after, so I'm saying Spring-Summer 1926."[69] This leads me to

[69] Louis Armstrong House Museum. "Louis Armstrong House Museum on Instagram: 'on This Date in 1926'" Instagram, February 26, 2023, https://www.instagram.com/p/CpILKSVLWoQ/?igshid=YTE5MTA4ODQ%3D&fbclid=IwAR0vQjvhf0GescmxfRuGT0t94V6MPgrsUhRyqW4Id1ujjLnucdUWpuHynlI.

suspect that Armstrong was playing enough trumpet with his Hot Five to deem it appropriate to use the trumpet in the publicity photos - perhaps he switched between the cornet and the trumpet for different songs in the recording sessions, for either aesthetic reasons or technical reasons.

It should be noted that Armstrong was playing on equipment that helped him execute his goals more effectively. His first trumpet was a Buescher model 10-22R. This horn is an efficient design featuring a .453″ medium bore, a medium taper on the bell flare, medium wrap, and a nearly balanced valve block, thus lengthening the straight, untapered portion of the bell tail. It also features a rotary valve to pitch the horn in A (as opposed to the standard Bb), which makes sense for Armstrong's work at the Vendome Theater - many orchestral trumpet parts were arranged for trumpet in A at the time, and the rotary valve was a fast and consistent way to pitch a horn down (as opposed to extending the tuning slides, which creates more turbulence in the air column of the leadpipe). The medium bore makes the horn more efficient to play than larger horns of the day (e.g. French Bessons, Conn's 2B) and the medium bell flare gives the horn efficient projection but still allows it to blend in an ensemble, which Armstrong needed in Tate's Orchestra. While this horn is roughly in line with other popular designs from the time (e.g. Conn's 22B and King's Liberty), it is very different from traditional cornet designs, and still more efficient and projecting than some of the popular cornet/trumpet hybrids (e.g. Conn's 80A).

Two years later, Armstrong updated his equipment. In an advertisement promoting his new recordings of "When You're Smiling" and "Some of These Days" in the October 30th 1929 issue of *The New York Amsterdam News*, we see a photo of Armstrong holding a new trumpet, a Conn 56B.[70] While we have no documentation of when he started playing this model, I suspect he probably switched to this horn at some point during his move to New York City that spring.

[70] Louis Armstrong House Museum, "Scrapbook 83 - 1920s-1930s - Page 68," LAHM Media Store, Accessed March 17, 2023, https://collections.louisarmstronghouse.org/asset-detail/1134734.

This horn is even further removed from cornet designs - it's often categorized as a "peashooter" design, featuring a very long bell with a narrow taper and small diameter (4.25″), a very narrow wrap, and a small .438″ bore. (It also features a Bb/A rotary valve - perhaps Armstrong chose this model to retain the option to play in A if needed). This is a very efficient trumpet (it almost feels like playing a kazoo) with truly cutting projection. It is an easy horn to manipulate (shakes, bends, rips, glissandos, etc.), although the tone remains consistently bright and clear - perfectly suited to Armstrong's style. This design is also perfect for recording as a soloist - it projects so clearly, Armstrong did not have to work hard to be heard over his bands on records.

Two years later, in a letter dated October 20th, 1931, a sales manager from the Martin Band Instrument Company thanked Armstrong for buying one of Martin's horns: "We can't begin to tell you how glad we were to learn, from report sent in by Chic Howard of the St. Louis Store of the Wurlitzer Company, of your selection of one of our new Troubadour Trumpets."[71] Martin's Troubadour is another example of the "peashooter" design, sharing many traits with Conn's 56B: small bore (.436″), long and narrow bell with small diameter (4.05″), and narrow wrap. Like the Conn, it is very efficient and easy to manipulate while still maintaining a bright, clear sound with commanding projection.

The following year, while on tour in England, Armstrong began a longer endorsement when Ben Davis of the Selmer company presented him with Selmer's new "Challenger" model, which he enjoyed so much, he played it for the rest of the tour. Armstrong wrote a letter to the company soon thereafter:

> I specialize in the top register and beyond it. A Climax finish on a high F or even high G is frequently vital and these notes come easier on the Selmer than on any other trumpet I

[71] Louis Armstrong House Museum, "Scrapbook 5 - Page 23," LAHM Media Store, Accessed March 17, 2023 https://collections.louisarmstronghouse.org/asset-detail/1098520.

> have ever used…. And as for its tone and timing I find it faultless. You sell a wonderful instrument and I was lucky to have discovered it during my visit to London.[72]

Selmer quickly rebranded the horn as the "Louis Armstrong Special" and a decades-long partnership was born. Armstrong continued using updated versions of this horn for the rest of his career. Like his previous horns, the Selmer is an efficient design. The wrap of the tuning slide and bell tail, while wider than the Martin Troubadour and Conn 56B, is still narrow compared to the standard French Besson or Conn 22B at the time. The instrument is long and relatively narrow with a medium sized bell and a medium bore. Its tone is slightly more rounded while maintaining the projection qualities and manipulability of Armstrong's previous horns.

Regarding Armstrong's mouthpieces, the information is sparse. He once quipped that he just played whatever mouthpiece came in the case, but the truth is more complex. As discussed above, we know he began experimenting with mouthpieces at an early age (cutting grooves into the rim, later filing them down) and that he used a Conn trumpet mouthpiece on his Harry B Jay Columbia cornet. Photos of his Buescher are not of high enough resolution to make out in detail what mouthpiece he is using (although it often appears to be a Buescher blank), but in a famous publicity photo with his Conn, the resolution is clear enough to make out that he is playing a Conn mouthpiece[73] - which one is a matter of speculation. At this time, Conn made many mouthpieces ranging in many sizes, including in cup diameter and depth. Given the music he was making, it is safe to assume that Armstrong was using one of the shallower options, perhaps one of the narrower sizes as well. In advertisements for the Selmer Louis Armstrong Special trumpet, Selmer offers "The Louis Armstrong Mouthpiece. Exact replica of Louis' own

[72] Ricky Riccardi, *Heart Full of Rhythm: The Big Band Years of Louis Armstrong* (New York: Oxford University Press, 2020), 122.
[73] Louis Armstrong House Museum, "Louis With Trumpet," LAHM Media Store, Accessed March 17, 2023, https://collections.louisarmstronghouse.org/asset-detail/1198320.

mouthpiece. Supplied optionally with instrument or separately."[74] The dimensions of this mouthpiece are obscure, but again, one can assume it was probably shallow, potentially narrow, and allegedly had a bore size of a number 30 drill. After rupturing his obicularis oris in 1933, Armstrong was forced to play on mouthpieces that accommodated the damaged tissue. While his pieces were still shallow with tight drills and backbores, he preferred using wider rim diameters. In 1943, he began using Parduba mouthpieces, enjoying the effect Parduba's new "double-cup" design had on his playing. Most of his mouthpieces thereafter (e.g. Giardinelli, Schilke, Al Cass, etc.) were copies or variations on this general design. All of these equipment choices and experiments helped Armstrong execute a new style of trumpet playing, the "Armstrong Style."

[74] Louis Armstrong House Museum, "Letter to Balstar Beckeld and Michael Cogswell from Dr Irakli De Davrichewy," LAHM Media Store, Accessed March 17, 2023, https://collections.louisarmstronghouse.org/asset-detail/1094148.

Part 4: The "Armstrong Style"

With this switch to the trumpet, Armstrong clearly starts exploring the bravura possibilities of the instrument with gusto, as is evident on his recording of "Static Strut" with Tate. Riccardi explains:

> …the sun really begins to shine when Armstrong steps out front to take a stop-time break that modulates into a solo [that] is simply brimming with confidence and swing. Armstrong might have been playing some pretty revolutionary stuff on the Hot Five records, but this is the man in his element, playing with his working band, sounding comfortable and happy, pouring out a dazzling stream of ideas from out of his horn. Where do I even begin? The beautifully swinging opening part of the solo, which reminds me a bit of a fast "Song of the Islands"? The first break, where he almost gets trapped in a corner, only to fight his way out with a complex, dizzying array of notes? The singing high concert Ab that appears out of nowhere, a sign of things to come? The ridiculous break at the 1:14 mark, opening with a gurgling chromatic run, topped off four barking high Bb's? The blink-and-you'll-miss-it rip that immediately follows? The breaks towards the end of the solo, with yet another piercing high Bb? Incredible!... Pops plays like a man possessed. I will never devalue the Hot Fives as long as I live, but more people should pay attention to "Static Strut" since this is probably how the man sounded on a nightly basis.[75][76]

That "singing Ab" signals the arrival of the bravura style in Armstrong's playing that would be one of the hallmarks of the rest of his career. Here his operatic inspiration comes to the fore, executed easily thanks, in part, to the nature of the trumpet to allow a player to assume the role of the Prima Donna. The repertoire he was playing with his various employers accelerated this operatic development: with Tate's band, Armstrong was performing light classical pieces, including von Suppé's "Poet and Peasant" and Rossini's "William Tell" overtures.[77] Jazz historian Joshua Berrett cites Armstrong's recollections: "We played the scores for the silent movies, and a big overture when the curtain would rise at the end of the film. I got a solo on

[75] Ricky Riccardi, "Static Strut/Stomp Off, Let's Go," Blogger, May 28, 2011, https://dippermouth.blogspot.com/2008/07/static-strutstomp-off-lets-go.html.
[76] As opposed to most of the authors referenced here, Riccardi typically uses concert pitches in his writing, including the description of this solo.
[77] Harker, 136.

stage, and my big thing was Cavalleria Rusticana."[78] His onstage features, such as the aforementioned Intermezzo from Mascagni's *Cavalleria Rusticana*, proved so popular that "Armstrong elicited an audience response foreshadowing the frenzied adulation that followed later icons of American popular music such as Frank Sinatra and Elvis Presley."[79] This popularity inspired Armstrong to work out a similar solo to Puccini's *Madame Butterfly*. With Carroll Dickerson's Orchestra at the Sunset Café, Armstrong was tasked with playing Wagner's *Tannhäuser* and Liszt's *Liebestraum*.[80] Berrett highlights the operatic qualities of Armstrong's features on "hot" numbers:

> Just as big for Armstrong during the break in the movie was the final "red hot number," coming just before the resumption of the movie. During such numbers he could perform like an operatic diva hell-bent on bravura: "When I was at the Vendome in Chicago, I was young and I'd go wild in those solos-up there in the high register all the time, and if I had some chops left, just use 'em some more-hit 40 or 50 high C's." This comment is reminiscent of Henry Pleasants's description of two of Armstrong's favorite singers, Luisa Tetrazzini and Amelita Galli-Curci: "With Tetrazzini and Galli-Curci *fioritura*, crowned by E-flats, E's and F's at the end of a cadenza, was a vocal way of life."[81]

Berrett reinforces this idea of opera's influence on Armstrong by detailing the many operatic quotes Armstrong uses in his improvised solos, such as the quartet from *Rigoletto*, "Vesti la Giubba" from *Pagliacci*, and Don Jose's "Flower Song" from *Carmen*. Opera not only influenced Armstrong's sound concept, but also his conception of how to improvise a solo. He did not merely string together a series of ideas, but developed them motivically and coherently, each corroborating and building upon the last. Like in an aria, Armstrong's phrases and choruses increase in intensity (in rhythm, volume, or register) until a climax near the end, sometimes the last note. Composer and historian Gunther Schuller said of Armstrong's work that "No

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[78] Joshua Berrett, "Louis Armstrong and Opera," *The Musical Quarterly* 76, no. 2 (1992): 221, accessed March 16, 2023, http://www.jstor.org/stable/742312.
[79] Harker, 136.
[80] Ibid, 137.
[81] Berrett, 221.

composer, not even Mozart or Schubert, composed anything more natural and inspired."[82] These operatic components of the "Armstrong Style" were assimilated by other trumpeters - jazz trumpeters adopted his corroborative rhetoric in their solos, and trumpeters across all genres began trying to attain Armstrong's operatic tone, especially in the upper register.

Harker discusses Armstrong's high note innovations:

> A year after taking up the trumpet, Armstrong began exploring the upper register with greater intensity. His explorations led him ultimately to found what might be called the modern school of lead trumpet playing in a jazz orchestra. Part of his influence came from simply playing higher than anyone had done before in jazz. A more important contribution, though, derived from the *way* he played in the upper register. Unlike those of his contemporaries, Armstrong's high notes were loud, fat, and full of power.[83]

Part of what made them sound so full was thanks to Armstrong experimentation with alternate fingerings in the upper register to find their most in-tune versions. For example, we see in video footage throughout his career, he was particularly fond of playing high D with open fingering. Most trumpeters, basing their fingerings in the upper register on the fingerings of the same pitches an octave lower, play high D with the first valve. Played this way, the note is particularly flat. When played open, as Armstrong does, the note is centered and therefore more singing and manipulable (a great example of the contrast between the two fingerings can be heard in the different #WestEndBluesChallenge videos trumpeters posted to social media at the start of the COVID pandemic - the players who use first valve sound very flat compared to those who use open fingering). By tinkering with alternate fingers, Armstrong made sure his high notes were as full-bodied and bold as possible.

Peter Ecklund elaborates on this bold quality:

[82] Harker, 52.
[83] Ibid, 97.

> There is a "heroic" quality to Armstrong's playing. In a lecture in New York on the occasion of Louis' 100th birthday, Stanley Crouch and Wynton Marsalis emphasized the bravura nature of much of his work. Like a great operatic tenor, Armstrong reached for the ultimate in passion and intensity and seemed to toy fearlessly with man's mortal limits in the pyrotechnics of his playing. In Armstrong's case, this bravura came from the heart but was almost certainly inspired and directed more by sensibility of opera than anything else.[84]

Harker elaborates on this "Armstrong Style":

> ...the expressive devices he used in the upper register, devices that together constituted what my old teacher Mark Turner called majestic style. This brawny, aggressive style of playing typified by full-bodied high notes, soaring half-valve glissandos, and electrifying shakes, perfectly suited the romantic showmanship of the swing era.[85]

Harker specifically dissects Armstrong's development of one of his high note devices. Armstrong's "rip" - a "ragged, ascending glissando that led up to the note in question"[86] - evolved as he began ripping to higher notes. He began to strengthen the accent on the goal note by lengthening its value and often "shaking" it, "an exaggerated vibrato effect that Armstrong evidently invented."[87] He then eliminated the intermediate partials by slightly depressing the valves, thereby "achieving a portamento effect like that of a trombone." This device is often dubbed a "half-valve glissando," or simply a "gliss."

Harker also highlights how Armstrong's affinity for the sweet music of the time, especially Guy Lombardo's dance orchestra, informed the "majestic style." Harker defines this sweet style by its "flowing triplets, straight eighth notes, and rubato rhythms,"[88] enhanced by vocally derived ornaments: "glissandi, portamenti, and brief, throwaway tremolandi."[89] Harker then summarizes how this sweetness informs the majestic style:

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[84] Ecklund, 96.
[85] Harker, 107.
[86] Ibid, 101.
[87] Ibid, 102.
[88] Ibid, 128.
[89] Ibid, 129.

> In a miracle of symbiosis, the graceful melodic undulations and soaring half-valve glissandos made the high notes more glamorous, and the high notes rendered the sweet effects more masculine. Armstrong thus became a matinee idol and a sex symbol in a way Guy Lombardo never did, despite the latter's massive record sales.[90]

Grand musical effects like these, while possible on the cornet, are rendered more reliable, replicable, and commanding on the trumpet. Armstrong would continue exploring them throughout his career, pushing the boundaries of what was thought possible on the instrument (his two-measure long glissando on his 1933 recording of "I Gotta Right to Sing the Blues" had some listeners convinced he was playing a slide trumpet).

Armstrong's rhythmic concept, already potent, was enhanced by his switch to the trumpet. Harker cites saxophonist Bud Freeman, who remembered the floor shows at the Sunset Cafe, "…for which Louie, as a member of the band, had to play - and this I think was responsible for a change in his style… He was now playing trumpet, working with acts like Brown and McGraw, a fabulous dance team; Rector and Cooper, another pair of great dancers…".[91] Armstrong summarized his act with Brown and McGraw: "They did a jazz dance that just wouldn't quit. I'd blow for their act, and every step they made, I put the notes to it."[92] Trumpeter Doc Cheatham, who occasionally subbed for Armstrong at the Vendome Theater, recalled:

> … Louis Armstrong made this couple famous, cause he played every step they made. And he screamed the whole act, playing trumpet, and every movement that they made, Louis would make it on his horn, and that made Brown and McGraw one of the most famous dance acts in Chicago… Armstrong was the first one to play that act…So, after that, when [Brown and McGraw] went out [on tour] without Louie they had to have a trumpet player that could play… They had everything written out…[93]

Harker suggests that Armstrong began assimilating Brown and McGraw's tap rhythms and devices into his playing beyond the floorshow at the Sunset Cafe: his augmenting and

[90] Ibid, 131.
[91] Ibid, 60.
[92] Ibid, 61.
[93] Ibid.

diminishing triplet figures, his use of alternate fingerings in a bariolage-like effect, his use of space, the variability of his phrases.[94] The crisp, percussive nature of articulations on the trumpet would have aided Armstrong in this dance-like endeavor. While achieving these kinds of attacks is possible on cornet, the trumpet allowed Armstrong to execute this effect with more precision and less effort. The dance-like (or even drum-like) rhythmic quality of Armstrong's playing is a defining feature of the "Armstrong Style" and part of what made him stand out in the late 1920s. This quality was quickly adopted by the ensuing generations of trumpeters (and all jazz players in general).

We see all of these components of the "Armstrong Style" on display in his 1931 recording of "Blue Again." While not his most acrobatic playing, Armstrong utilizes his various devices for maximum musical impact. He opens the record by turning the original verse into a cadenza (fig. 1) - Berrett compares it to an operatic recitative. For the first three phrases, he evokes the great band cornet soloists from the turn of the century with his double-time phrasing, but instead of using a classical double-tongue, he uses a more swinging articulation - perhaps a fast legato tongue, perhaps even a "doodle" tongue. Finally, he arrives at the fourth phrase building up to a sustained high A, then launching into a swinging, double-time descending phrase very reminiscent of his opening cadenza from "West End Blues," which carries him to the concluding large interval leaps (sixths, sevenths, and octaves) in the low register. His articulation gives every note a percussive, clear attack without feeling truly staccato. His tone is full, clear, and even across the two octave range of the cadenza. When the groove begins and Armstrong launches into the theme, his tone remains rich, his articulation percussive (like a tap dancer) while still relaxed and lilting. These techniques allow him to share the simple melody in a way that engages the listener.

[94] Ibid, 62-67.

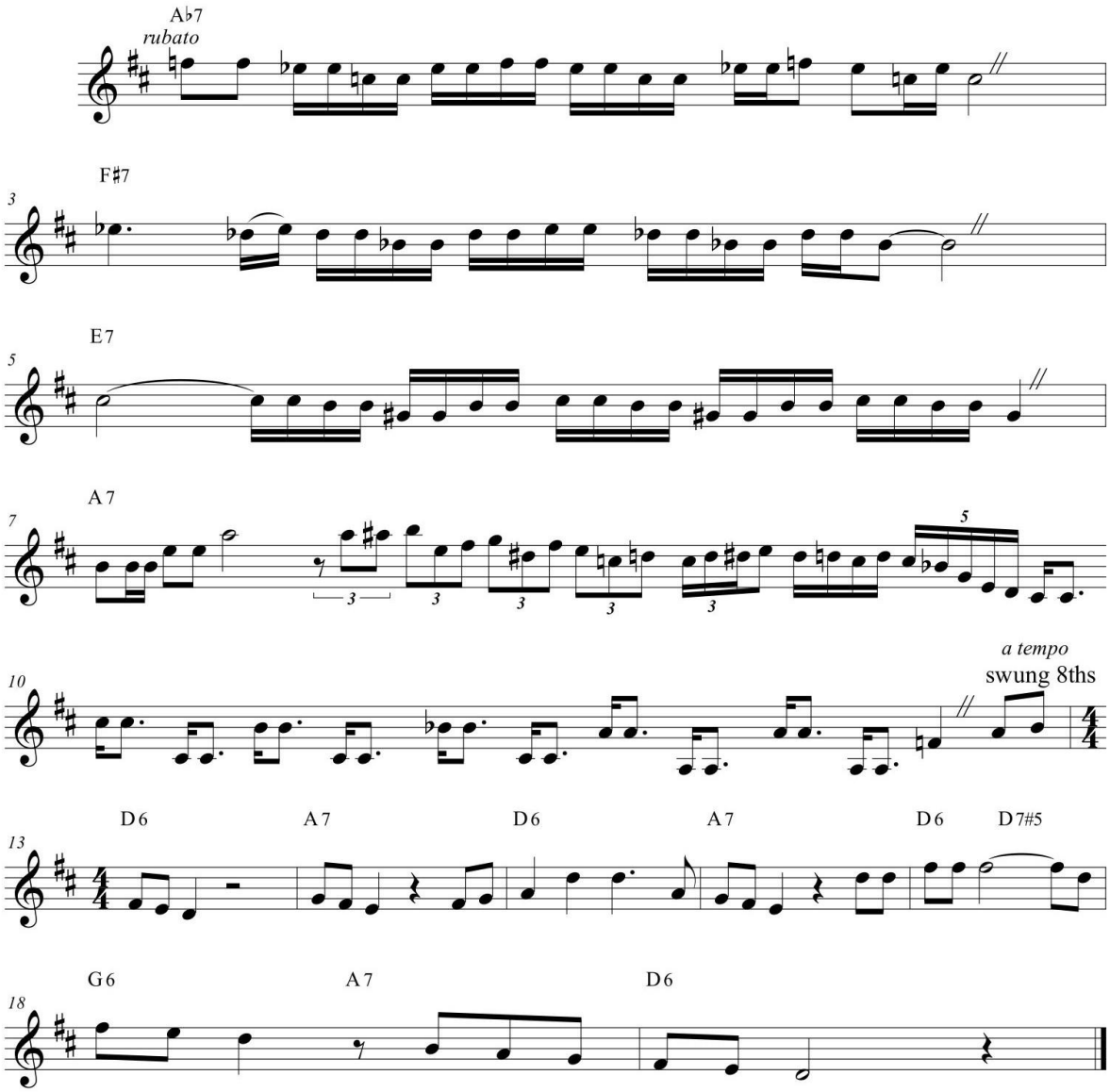

Fig. 1. “Blue Again” opening cadenza, Louis Armstrong

After a vocal chorus, Armstrong picks up his trumpet and launches into a solo (fig. 2) that virtually disregards the original melody, but is instead a masterclass in development. Riccardi refers to it as “trumpet fireworks.” While fully analyzing the solo for its rhythmic and melodic development is beyond the scope of this investigation, the “Armstrong Style” is on full display throughout. His clear, percussive attacks allow him to create a disorienting hemiola effect in mm.

1-4. In mm. 9-11, he repeats the same rhythmic motif (an evolution of the idea from m.1) eleven times - developing it melodically - each repetition conveying urgency thanks to his tap-like articulation. He suspends this tension by glissing up to a high A in m. 12, then glissing back down, finally releasing the tension with a clear high B in m. 13 that smears down to an F#. His attack on the F# in m. 16 gives the note a vocal quality, sounding like a shout on a single-syllable word ("YES!" or maybe "NO!"). At the beginning of the bridge (m. 17), finally referencing the melody, Armstrong plays more operatically and sweetly with smoother articulations. While his tone has been full for the entire solo, it opens up even more here. He becomes a tap-dancer again in mm. 21-22 with a crisply-tongued double-time arpeggio, ascending to a piercing high B, then rallies the listener with a shaken high A in m. 24 before returning to his original, percussive motives in mm. 25-28. Along with its musically rhetorical function, the recurring nature of these attacking motives serves a programmatic purpose. The tune itself recounts the cycles of toxicity in a dysfunctional relationship, so Armstrong highlights these toxic cycles by berating the listener with different elaborations on this same motive over and over again, reflecting the narrative of the tune - a different day, but the same lovers' quarrel. His articulation, made more percussive by the trumpet, helps achieve both the dizzying hemiola effect along with the attacking quality of the motif. To signal his finale, Armstrong puts a small shake on the F# on m. 28, which launches into one of his few stock phrases in m. 29. To conclude, Armstrong executes a swinging, chromatic climb from high A to high D in mm. 31-32. However, instead of playing every note, he skips the high C#, smearing directly from C♮ to the shaken D. Even at the end of this elaborate and taxing solo, Armstrong's final high D is ringing clear and full. Solos like this one showcased a new way of playing the trumpet, a style that captivated future generations of trumpeters.

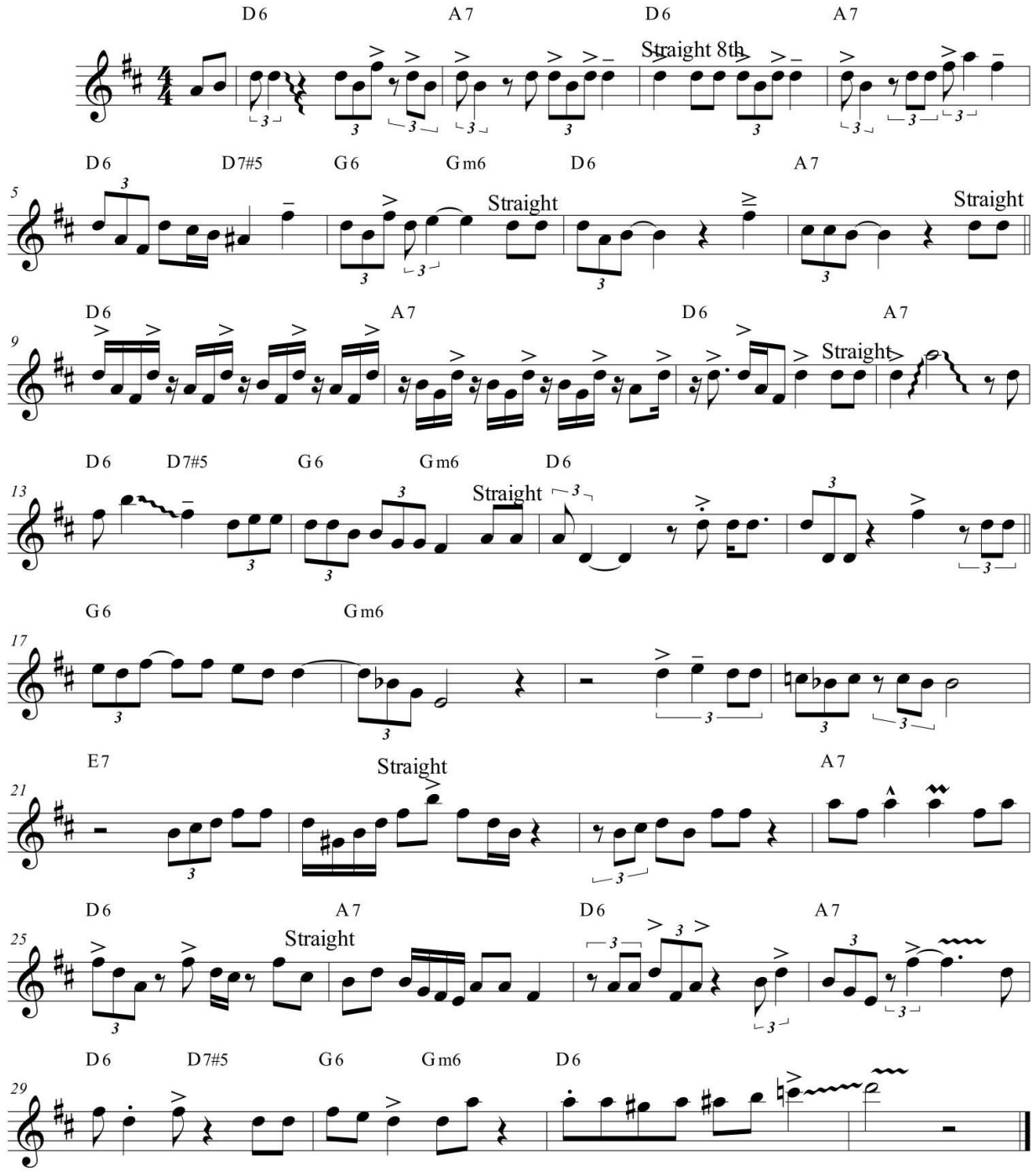

Fig. 2. “Blue Again” solo, Louis Armstrong

Part 5: Armstrong's Impact

Armstrong's influence at the end of the 1920s and early 1930s cannot be overstated, but the common narrative about his musical influence is often skewed. Many scholars, historians, and musicians cite Armstrong's small group sessions with OKeh Records from late 1925 to early 1929 - the sessions with his Hot Five and Hot Seven (some scholars also include the sessions with His Savoy Ballroom Five in this category) - as the records that changed the course of music and made Armstrong a star. This is partially true - we have evidence that musicians were investigating Armstrong's Hot Five records, not only locally in Chicago, but elsewhere in the country, especially in New Orleans, where cornetists like Lee Collins had studied the records thoroughly enough to play Armstrong's solos note-for-note in an attempt to beat Kid Rena in musical battle.[95] Zutty Singleton recalled when Armstrong and Carroll Dickerson's Orchestra were driving from Chicago to New York in 1929: "every big town we'd come to, we'd hear Louis' records being played on loudspeakers and stuff. Louis was surprised - he didn't know he was so popular."[96] However, the reach of these records was limited. Riccardi elaborates:

> Released as "Race Records" by OKeh Records and aimed at the black community, Armstrong's recordings might today be the gold standard for jazz in the 1920s, but at the time, they did not have a tremendous impact on New York musicians. "Louie was great, he had something different and special," reedman Garvin Bushell said about Armstrong's 1924-1925 time in New York, "But he didn't really prove to us that he was God until 'West End Blues' and when he came back to New York the second time." "West End Blues,"... was released in the second half of 1928 and reached a larger audience than the Hot Five recordings usually did.[97]

From 1929 up until his embouchure injury in 1934, Armstrong's career - and reach - shifted dramatically, transforming him from the hottest sideman with Chicago dance and theater

[95] Ibid, 34.
[96] Nat Shapiro and Nat Hentoff, *Hear Me Talkin' to Ya: The Story of Jazz as Told by the Men Who Made It* (Mineola: Dover Publications, Inc., 2012), 170-171.
[97] Riccardi, 16.

orchestras to becoming a super star. As Riccardi explains, it started with OKeh Records' Tommy Rockwell, making some branding changes:

> Rockwell came to OKeh in 1927 and noticed Armstrong was popular with more than just black audiences. Still, with their limited urban marketplace target and with their inherently old-fashioned trumpet-trombone-clarinet-banjo-piano setup, the Hot Fives were not destined to be among the best-selling platters of the period. Rockwell was determined to get him a wider audience and soon started simultaneously releasing his recordings on OKeh's "Race" series and its "Popular" series… Rockwell also replaced the old-fashioned New Orleans instrumentation, which Armstrong didn't even use in public, having him record arrangements by Don Redman and Alex Hill in December 1928…Rockwell ramped up the advertising of Armstrong's recordings, proclaiming him as "The Country's Greatest Trumpet Player."[98]

The changes worked, and Armstrong quickly became a favorite of the popular music world, to the point after the release of his recording of "After You've Gone" just a year later:

> Davis's Triangle Music Pub. Co. Inc. issued new sheet music featuring the image of 44 artists who had performed "After You've Gone," including Guy Lombardo, B. A. Rolfe, Ted Fio Rito, Ben Bernie, Abe Lyman, Red Nichols, and many more - and Armstrong, the only African American of the musicians depicted. He was bringing a totally black sensibility to the lily-white world of pop music and his impact could not be denied.[99]

Over the next few years, his star continued growing to the point that in 1931, Armstrong was the "number one best-selling dance artist on Columbia's [Records] entire roster."[100] [101] The next year, during a lawsuit between Rockwell and Armstrong's new manager, Johnny Collins, over Armstrong's contractual obligations, the A&R man for RCA Victor Records, Eli Oberstein, testified in court that "Armstrong is the largest selling artist on records today, bar none."[102]

After 1929, Armstrong began touring the country and abroad, fronting his own big band (typically dubbed "Louis Armstrong and His Orchestra"), playing arrangements that showcased

[98] Ibid, 16-17.
[99] Ibid, 30.
[100] Ibid, 102-103.
[101] OKeh was purchased by Columbia in 1926, and functioned as a subsidiary of Columbia until 1934.
[102] Ibid, 104.

him as the star, both as a trumpeter and vocalist. He began appearing in films, starting with *Ex-Flame* in 1930 and following with shorts *Rhapsody in Black and Blue* and *I'll Be Glad When You're Dead You Rascal You* in 1932. His records from this period often introduced new popular songs to the world (such as "Exactly Like You" and "When It's Sleepytime Down South"). We hear in his output from this time that he had fully grown into his own as a trumpeter, playing the trumpet in ways no one had ever played it before, such as on "Laughin' Louie". As important as the Hot Five and Hot Seven recordings are in hindsight, his output from 1929 to 1934 is the work that changed the trumpet world. During this period (and his subsequent period of 1935-1946 during his contract with Decca Records) he reshaped trumpet style, fully reinvented the trumpet as a soloist's instrument, and inspired the next generations of trumpet players all over the world.

One of Armstrong's impacts was the demise of the cornet within classical and popular music. The cornet became relegated to school bands[103] - its shorter bell and wrap is easier for childrens' short arms to hold.[104] While the trumpet was already replacing the cornet, Armstrong's stardom as a trumpet player accelerated the change. By demonstrating the new potential for power and bravura on the trumpet, Armstrong inspired the next generation of players to favor it over the cornet. As dance orchestras evolved into true jazz big bands, the trumpet was preferred not for its classical, high-class associations, but for its power of projection and easier upper register. Jazz soloists who started on cornet (such as Clifford Brown, Maynard Ferguson, and Doc Severinsen) eventually switched to trumpet as their careers took off (even King Oliver switched to trumpet later in his career). This also held true amongst classical soloists like Rafael

[103] John Lawrence McCann, "A History of Trumpet and Cornet Pedagogy in the United States, 1840-1942," Order No. 9018556, Northwestern University, 1989, 33, https://colorado.idm.oclc.org/login?url=https://www.proquest.com/dissertations-theses/history-trumpet-cornet-pedagogy-united-states/docview/303717286/se-2.

[104] This is also the reason Ray Nance switched from trumpet to cornet in the 1960s: "Because it's shorter, the cornet is also more comfortable for me to use, since I use the plunger so much and my arms are not long." See Stanley Dance, *The World of Duke Ellington* (New York: C. Scribner's Sons, 1970), 140.

Mendez and Maurice André. McCann summarizes that "The trumpet became the norm for almost all orchestral, band, jazz, chamber music and commercial playing."[105] Even composers that had previously highlighted the cornet were now adopting the trumpet: when Stravinsky reorchestrated Petrushka in 1947, he rescored the famous cornet solo to trumpet.[106]

There were a few exceptions to this trend: classical soloists like Del Staigers and Walter M. Smith continued playing cornet, as did some jazz soloists inspired by Bix Beiderbecke and associated with "dixieland" music (e.g. Ruby Braff, Bobby Hackett, Wild Bill Davison, Mugsy Spanier, Warren Vache), British brass bands (and therefore Salvation Army bands), and a handful of modern jazz soloists, such as Rex Stewart, Thad Jones, and Nat Adderley (although all three of them played the cornet with a trumpet-like approach). This trend of replacement was so dominant that some instrument manufacturers starting targeting the small niche of cornetists who refused to switch to trumpet: when Conn released their 28A Connstellation cornet in 1957, they advertised it as "the 'cornet of tomorrow'... the world's first cornet that looks like a trumpet!" The horn was essentially a trumpet with a cornet receiver.[107] F. E. Olds tried a similar approach: when they designed the Rafael Mendez model trumpet, they made a sister Mendez model cornet by replacing the trumpet receiver with a cornet receiver.[108] By demonstrating the trumpet's capabilities that made it more suited for the music of the time, Armstrong's rise in the early 1930s as a trumpeter - who happened to be the top selling recording artists in the world - caused the trumpet to nearly replace the cornet until the cornet revival at the end of the 20th century.

While many scholars cite Armstrong as expanding the range of the trumpet, Harker provides more detail and evidence:

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[105] McCann, 35.
[106] Wallace and McGrattan, 267.
[107] C. Derksen, "Conn 28A Connstellation (Early Model)," The Conn Loyalist, October 13, 2009, https://cderksen.home.xs4all.nl/Conn28A1956image.html.
[108] Alan Rouse, "1957 Olds Catalog," Olds Central, 1999, http://rouses.net/trumpet/olds57/page14.htm.

> Like Roger Bannister shattering running standards with the four-minute mile, Armstrong demystified high C for younger players, who began to see it as a starting point to greater heights rather than as a goal in itself. In school, "we played all of Louis Armstrong's things note for note," recalled Cat Anderson, Duke Ellington's high-note specialist from the 1930s onward. "All the trumpet players played 'Shine' and made a hundred Cs with the F on top."[109]

Discussing the upper register through an operatic lens, Harker compares Armstrong to opera star Enrico Caruso:

> Caruso is said to have been the first to successfully bypass the break in the male vocal register, nullifying the qualitative distinction between "chest" and "head" voice. Whereas previous tenors sang falsetto in the region above the break, Caruso continued in the full strength of his voice as he ascended in register. His ringing majestic high notes captivated audiences and decisively altered vocal technique, laying the path for future powerhouse tenors like Placido Domingo and Luciano Pavarotti. One could make a similar statement about Armstrong and his influence on the trumpet.[110]

Riccardi provides evidence for how much Armstrong's playing challenged the "common wisdom" about the range of the instrument:

> Harry "Sweets" Edison was a high school student excited by the prospect of Armstrong coming to his hometown of Columbus. Edison's music teacher at school told him the range of a trumpet was from low C to a high C, saying "that's as high as a trumpet player can play." When Armstrong started playing higher than that, Edison recalled "the symphony musicians, they indicated he had a trick mouthpiece, he had a trick horn because there's no horn made and there's no mouthpiece made that a trumpet player can play that high - and that long. His endurance was just, oh, the man could just play all night and still never miss a note."[111]

Riccardi continues with Edison's recount, highlighting that the symphony musicians were so astonished by Armstrong's pyrotechnics, they came backstage demanding to inspect his equipment:

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[109] Harker, 107.
[110] Ibid, 101.
[111] Riccardi, 93-94.

> Edison and some friends waited for Armstrong to come out of the backstage door. The symphony musicians had come by to analyze Armstrong's equipment and were shocked to find that he was using a regular trumpet and mouthpiece. Armstrong told them, "Well, since you're so curious about my mouthpiece and my horn today, I'm going to hit 200 high C's and I'm going to end on a high F!" Armstrong made good on his promise, Edison saying "And when he had hit 200 C's - the mouthpiece never left his mouth - and he ended up on a high F that would just shatter the lights. Oh, it was such a fantastic performance… you would get *chills* really."[112]

One way in which Armstrong broke new ground was in his discovery of the limits of the human body to play in this new kind of way without taking the proper care to do so. While he had suffered the occasional "bad chop day" previously, by his second tour of Europe, he was injuring himself. Riccardi provides details:

> He had now been playing for about two months straight without a rest. His lip started betraying him in Hendon [England], *Melody Maker* reporting "the mere contact of the mouthpiece with his lip was causing him great pain."... "In England, on the stage of the [Holborn] Empire," Armstrong remembered, "my lip split, blood all down my tuxedo shirt,"... A doctor was brought in and after examining Armstrong, insisted that he had to rest for a full month.[113]

As Bill Milkowski's 2009 *JazzTimes* article "Lip Injuries & Trumpet Playing: An Unhappy Marriage" discusses, Armstrong ruptured his orbicularis oris: "As Toronto surgeon Dr. Simon McGrail noted, 'It's not how long you play, it's how you play. If your technique is not good, problems will begin.'" This injury has since been dubbed "Satchmo Syndrome." Milkowski cites Brad Goode:

> "What happens is that by attempting to play very strenuously - either too long or too high - without the proper musculature being engaged, it causes a thinning out of the lip," explains trumpeter Brad Goode, a patient of Dr. McGrail's. "When you continue stretching the lip muscle rather than contracting it when attempting to play high, then the lip muscle itself - which is a big oval-shaped muscle which encompasses both the top and the bottom lip - can herniate. And this leaves people unable to create a seal for air going into the mouthpiece, unable to control their sound, unable to hit the right notes."[114]

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[112] Ibid.
[113] Ibid, 148.
[114] Bill Milkowski, "Lip Injuries & Trumpet Playing: An Unhappy Marriage," JazzTimes, September 18, 2020, https://jazztimes.com/features/columns/lip-injuries-trumpet-playing-an-unhappy-marriage/.

These serious chop troubles continued for the next year, causing Armstrong to take a hiatus from playing for much of 1934. Arthur Briggs, an American trumpeter living in Paris at the time, recalled, "Louie, at the time he was having a little lip trouble, too, 'cause they worked him to death… I don't know what happened, but there was pus coming out of his upper lip."[115] Upon returning to Chicago in March of 1935, he began rehabilitating his playing by getting trumpet lessons from his band's lead-trumpeter and arranger, Zilner Randolph:

> One day, a friend stopped by Randolph's house to see him and noticed that Randolph was giving Armstrong exercises to help strengthen his lip… Speaking privately in 1953, Armstrong said "But I stayed off my trumpet six months. I had to get a beginner's method. Start with whole notes, damn near a whole month. Laaaaa, laaaaa, laaaaa [sings scale in long whole notes]. You'd think I'd never played before."[116]

I suspect that this rupture was caused by three specific issues: 1) Armstrong needed to give himself more rest in general. The fatigue of constant one-nighters is generally grueling on the body and did not provide him with ample recovery time after punishing performances. 2) As Harry "Sweets" Edison described above, during one of Armstrong's 200 high C's routines, "the mouthpiece never left his mouth." This is important - quickly resetting the mouthpiece throughout a performance (between phrases, or even individual notes if given enough time) allows blood to flow back into the lip, bringing oxygen with it, thus allowing the muscle tissue to replenish, reducing strain and risk of injury. If we assume Edison's observations are indicative of how Armstrong typically played at this point in his career, we can surmise that he was not resetting his embouchure enough, thus increasing the damage he was doing to his muscle tissue throughout each performance. 3) He was not pacing his repertoire properly. No one had ever tried to constantly play the trumpet in such a demanding way before (even in baroque trumpet concertos, the trumpet usually does not play during one of the middle movements due to the key

[115] Riccardi, 153.
[116] Ibid, 159.

modulation). He was playing to his limits (and even beyond them) throughout his shows, often with multiple high note routines in each performance. His injuries taught him, and the rest of the trumpet world, that performing in this new style of trumpet playing required proper pacing. Riccardi details the lessons learned:

> By ending each show with over 100 high C's for so many years, Armstrong very nearly had to retire because of the damage he did to himself. Now that his lip was healed, he wasn't going to pull those stunts anymore… "I was only standing on my head, blowing my brains out, to please the musicians…and it didn't do me no good." Armstrong learned his lesson, but was not about to abandon high notes anytime soon.[117]

His recovery made him stronger and more deliberate. Riccardi cites his recordings from the end of 1935 as proof: "Armstrong's upper register work is cleaner than ever before on these recordings, which is almost unfathomable considering the state of his chops earlier in the year. He reaches a sky-high concert F at the end of both 'I Hope Gabriel Likes My Music' and 'Solitude…'"[118] [119] The following year, he recorded another high C routine, "Swing that Music," in which "He's in the upper register for 1:41 and not only does his stamina never waver, he makes it sound easy - perhaps too easy."[120]

He learned how to share the load in his performances, instead of his chops being the feature for the entire show. The first example of this was when his new manager Joe Glaser hired Henry Red Allen, previously a potential trumpet rival of Armstrong's, to play in the trumpet section of Armstrong's band. Riccardi describes the arrangement:

> Allen would not be featured on any of Armstrong's Decca recordings, nor would he engage in any public "trumpet battles." He took the job because he was assured of being featured in live settings and Glaser made good on his promise. When the band played four-hour dances, Allen got one hour to himself before intermission to feature himself and play and sing whatever he felt. "I mean you don't work with many leaders like that!" [saxophonist] Charlie Holmes said… "So Red would get up there and play, play, play,

[117] Ibid, 170.
[118] Ibid, 177.
[119] Concert F being high G an octave above the staff on Bb trumpet.
[120] Ibid, 184.

> he'd play everything he knew. And Red could blow too. And Louis would come back, and just play one note - Toot - and bring down the house…"[121]

I suspect his ordeal with "Satchmo Syndrome" also caused him to be more dedicated in his practicing. While trumpet playing is not an inherently athletic ability per se, it requires the same precision of muscular movement that is required of top level sports players to execute their goals. This precision requires maintenance, which for Armstrong meant doing thorough warmups (often via mouthpiece buzzing[122]) when working nightly, and practicing throughout the day during his rare time off from touring. In a 1964 interview with two high school students for their local radio station in Ravinia, Illinois, Armstrong detailed:

> You can't take it for granted. Even if we have two, three days off I still have to blow that horn a few hours to keep up the chops. I mean I've been playing 50 years, and that's what I've been doing in order to keep in that groove there… I've got to warm up every day at least an hour, you know?[123]

By continuing to better pace himself during performances, sharing the spotlight with his sidemen (which he continued to do with his All-Stars small group during the last 25 years of his career), and maintaining dedicated practice habits, Armstrong was able to still execute some true trumpet pyrotechnics for most of the rest of his career until his general health began to decline. We see these feats on display in a filmed performance of "Tiger Rag" in Stuttgart at the end of 1959: Armstrong rips out 16 high D's while chasing his trombonist, Trummy Young, around the piano, ending the song on high F. The band pauses, starts the introduction to the next song which turns into a surprise encore of "Tiger Rag," in which Armstrong plays a marvelous improvised chorus entirely in the upper register, then spends the next chorus repeating the high D routine while chasing Young again, ending the tune on a high G with both him and Young coming down

[121] Ibid, 196.
[122] Louis Armstrong House Museum, "Timex All Star Jazz Show - November 10, 1958," LAHM Media Store, March 29, 2023, https://collections.louisarmstronghouse.org/asset-detail/1180116.
[123] David Gerlach, "Louis Armstrong On His Chops | Blank on Blank," YouTube, June 25, 2013, https://www.youtube.com/watch?v=wyNRy1To5vg.

to a "ta-daaa!" kneel. He was 58 years old.[124] The next generations of great trumpeters took these lessons from Armstrong to heart, and those that didn't, such as Bunny Berigan and Freddie Hubbard, suffered the consequences - Berigan suffered an aneurysm; Hubbard, too, tore his orbicularis oris.[125]

Armstrong's work after he switched from the cornet to the trumpet helped redefine the role of the trumpet for the next century. Wallace and McGrattan summarize:

> Armstrong's growing mastery of the solo jazz trumpet idiom grew directly out of his jazz cornet playing. His mature style developed from and through his cornet playing, and as a consequence realised the latent capabilities of the trumpet, rendering it for the first time a complete instrument with the full panoply of expressive and technical possibilities. The new idiom invented by Armstrong, through a fusion of the capacities of both cornet and trumpet, became identified as belonging to the trumpet, and marked the re-emergence of the trumpet as a viable solo instrument after a gap of over a century.[126]

We find an obvious example of this impact in the playing of the first generation of jazz trumpet (and cornet) soloists after Armstrong. Harker summarizes the impact of his majestic style on the next generation of players:

> Armstrong performances in this idiom, such as "I Gotta Right to Sing the Blues," can be seen as the direct ancestors of such later bravura performances as Bunny Berigan's "I Can't Get Started" (1936), Ziggy Elman's "And the Angels Sing" (1939), Cootie Williams's "Concerto for Cootie" (third "open horn" theme) (1940), and Ray Nance's "Take the 'A' Train" (second "open horn" solo) (1941). Williams, of course, became famous for continuing the plunger-mute tradition begun in the Duke Ellington band by Bubber Miley. But "with my open horn playing," he admitted, "my influence was Louis Armstrong."[127]

Jabbo Smith was one of the first players to adopt the "Armstrong Style." Seeing Armstrong's success on Okeh Records, Brunswick Records signed a young Smith and recorded

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[124] "Louis Armstrong, Tiger Rag, Liederalle Stuttgart 1959," YouTube, September 18, 2017, https://www.youtube.com/watch?v=ZLktYGWDHHs.
[125] Millkowski.
[126] Wallace and McGrattan, 268.
[127] Harker, 107-108.

him in a series of small group performances. We hear on these takes that he's embraced Armstrong's clear attack, arpeggiated runs, and dazzling upper register. He also began working with many of Armstrong's employers and colleagues. Jazz critic and historian Scott Yanow goes into detail:

> After *Keep Shufflin'* folded in Chicago in November 1928, Smith spent the next year playing with a variety of top local bands including those led by Carroll Dickerson, Sammy Stewart, Earl Hines, Erskine Tate, Charles Elgar, and Tiny Parham. He also took part in what must have been very exciting trumpet/cornet battles with Louis Armstrong. Smith apparently lost every time (no one could top Satch) but his adventurous playing impressed the audiences.[128]

Yanow continues:

> 1929 was Jabbo Smith's year. By then the 20-year old had superior technical abilities, a wild and sometimes reckless style filled with death-defying runs, advanced ideas that hint a little at Roy Eldridge (whose emergence was a few years in the future), and a fearless musical personality. With King Oliver and Bix Beiderbecke declining and Henry "Red" Allen at the starting gate, only Smith was chasing Louis Armstrong… his range, speed, and complexity on such numbers as "Till Times Get Better," "Band Box Stomp," "Sweet And Low Blues," "Decatur Street Tutti," and the explosive "Jazz Battle" result in some very stirring playing. His double-time runs behind Simeon's playing of the melody of "Sweet And Low Blues" almost sounds like bop.[129]

With all of this excitement, Yanow points out Smith "does overreach at times, occasionally being on the verge of losing control" - a quality that Armstrong made sure to polish out of his own playing as he rebranded himself into a pop star. Harker cites cornetist Rex Stewart's recollection of one of the cutting contests between Smith and Armstrong:

> Smith played first. "And I'll say this," Stewart recalled, "he was *blowing*." Smith could play high, too - up to "high F or G." But his high notes paled in comparison to Armstrong's. "Bouncing onto the opposite stage, immaculate in a white suit," Armstrong lifted his horn in response. "I've forgotten the tune," Stewart said, "but I'll never forget

[128] Scott Yanow, "Jabbo Smith: Profiles in Jazz," The Syncopated Times, May 1, 2018, https://syncopatedtimes.com/profiles-in-jazz-jabbo-smith/.
[129] Ibid.

> his first note. He blew a searing, soaring, altissimo,[130] fantastic high note and held it long enough for every one of us musicians to grasp. Benny Carter, who has perfect pitch, said, "Damn! That's high F!"... Louis never let up that night, and it seemed that each climax topped its predecessor. Every time he'd take a break, the applause was thunderous.[131]

Jack Purvis was another early adopter of Armstrong's innovations. In his 1929 recordings, we hear him using many of Armstrong's devices - rips, smears, percussive attack, rhythmic freedom, bravura character. He freely acknowledged the influence of Armstrong: he entitled one of his compositions, recorded on December 17th, 1929, "Copyin' Louis." The record bears much resemblance in its bullfighting character to Armstrong's recording of "Tight Like This" from a year earlier.

Armstrong inspired Oran "Hot Lips" Page, as Todd Bryant Weeks discusses in his biography of Page: "There were other players who originally held sway during the 1920s, but for the teenage Oran Page and so many others, Armstrong's early recordings must have been a revelation of the highest order."[132] Weeks continues:

> Like so many trumpeters, Lips Page originally picked up on Armstrong's tone, his ability to interpolate the blues into anything he did, and his modern phrasing…The jazz historian Chris Sheridan has written incisively about Lips and Louis and remarked that Lips's performance on "Blue Devil Blues" has echoes of the Armstrong of "West End Blues" and "Tight Like This." Lips himself labeled one of Armstrong's earliest recordings as a leader, "Yes! I'm in the Barrel," as a prime early stylistic model, and Count Basie apparently heard Lips playing this tune during the summer of 1927…"Of the men who influenced me on trumpet," said Lips in the same interview, "Louis Armstrong was the most important. I could sit today and listen to the 'Hot Fives' all night." In another interview, Lips cited Armstrong's version of the tune "Yes! I'm In the Barrel," as an early favorite. Budd Johnson claimed that during this period Lips was playing "everything that Louis Armstrong ever put out, note for note. If you put one in one room, and one in another you could hardly tell them apart." Though this is ultimately reductive, it does point to an early fascination with Armstrong that sometimes extended to mimicry. Lips

[130] "Altissimo" was commonly used by early jazz musicians, including Armstrong, to reference notes on the trumpet above high C.
[131] Harker, 98-99.
[132] Todd Bryant Weeks, *Luck's in My Corner: The Life and Music of Hot Lips Page* (New York: Routledge, 2008), 42.

> has been referred to more than once as a "sensational Louis Armstrong impersonator," and the Kansas City trumpeter Richard Smith recalled Lips's doing Armstrong's material with the fledgling Basie band as late as 1935: This should not necessarily be taken as evidence of a lack of individuality on Lips's part; many other stars of the trumpet found themselves in similar situations during their career, such was Armstrong's dominance in the field.[133]

Rex Stewart, one of the few cornet soloists who did not switch to the trumpet (although his cornets, like the King Master, employed many trumpet-like features in their designs), adapted Armstrong's style to the cornet as Armstrong's replacement in Fletcher Henderson's orchestra. He highlights his admiration for Armstrong in his memoir *Boy Meets Horn* with an anecdote about a band photo: "…the photo was one of my favorites because I fancied that I looked like a young Louis Armstrong. He was my hero - and idolized by all of us in the gang. But look alike or not, that's as far as it went, because nobody ever did fill King Satchmo's shoes and I doubt if anyone ever will."[134] He continues discussing Armstrong's impact:

> Going back to the early days… the violin, was then the most popular instrument. It was dethroned as the leader of musician ensembles by its natural successor, the cornet. As we know, jazz started out with humble origins… As jazz progressed the trumpet became the dominant instrument, and the story of modern jazz trumpet starts with two words: Louis Armstrong. In other words, if you play a horn, somewhere along the line you play something that Louis has created. Armstrong is the sturdy trunk of the tree and all of those fellows that followed, disciples or not, became the offshoots and branches. There are people who say I belong to this select company. Yes, I admired him mightily and *tried to imitate him*,[135] but I rather doubt that I came close, despite Louie's having chosen me as his successor in the Henderson band. But I do accept the role of link between Louie and Roy Eldridge, as I first developed a style that Roy liked and he told me that he had followed it.[136]

A whole host of trumpet soloists based their careers on Armstrong's. When Lil Hardin was putting together her own big band in the 1930s, she hired Valaida Snow, whom Riccardi refers to

[133] Ibid, 43-46.
[134] Rex Stewart and Claire Gordon, *Boy Meets Horn* (Ann Arbor: University of Michigan Press, 1991), 53.
[135] Italics added by the author.
[136] Ibid, 194-195.

as an “Armstrong disciple”;[137] her nickname was “Little Louis.” Some outright copied: on Chick Webb’s recording of “On the Sunny Side of the Street,” trumpeter Taft Jordan not only contributed an Armstrong-esque vocal, but also played “Armstrong’s solo before Armstrong had the chance to record it.”[138]

Major white trumpet stars of the 1930s and 40s also were shaped by Armstrong’s playing. Bunny Berigan idolized Armstrong to the point that when asked “what a musician needed on the road, Bunny Berigan quipped, ‘A toothbrush and a picture of Louis Armstrong.’”[139] We hear Sonny Dunham adopt the hallmarks of Armstrong’s “majestic style” in his 1937 recording of “Memories of You” with the Casa Loma Orchestra (coincidentally, Armstrong had made a hit record of the tune back in 1930). Scott Yanow referred to Armstrong as one of Harry James’ “heroes” as well, and cites James’ performance of one of Armstrong’s showpieces, “Shine,” during Benny Goodman’s famous 1938 Carnegie Hall concert as a tribute to Armstrong.[140] Harker references a quote of admiration from him: “As late as 1938 white trumpet star Harry James remarked ‘I’ve never heard a trumpet player whose tone didn’t thin out considerably when he played above high C - with the exception of Louis’s’.”[141] One could even suspect that part of the reason why James began playing a Balanced Action model trumpet from the Selmer company is because Armstrong had so much success with the design.

Armstrong inspired future generations of jazz soloists as well. Roy Eldridge cited lessons he learned directly from Armstrong’s playing:

> "I was very technical then," Mr. Eldridge recalled, "but I couldn't swing. Chick Webb used to say, 'Yeah, he's fast but he's not saying anything.'" Mr. Eldridge learned to say

[137] Riccardi, 152.
[138] Ibid.
[139] Giddens, 111.
[140] Scott Yanow, “Harry James: Profiles in Jazz,” The Syncopated Times, May 23, 2019, https://syncopatedtimes.com/harry-james-profiles-in-jazz/.
[141] Harker, 108.

> something when he saw Armstrong for the first time, at the Lafayette Theater in Harlem in 1932. "I didn't think so much of him at first," Mr. Eldridge conceded. "But I stayed for the second show, and I suddenly realized he built his solos like a book - first, an introduction, then chapters, each one coming out of the one before and building to a climax."... In New York, he combined the fiery virtuosity he had shown playing "Stampede" with the insights he had gained from Armstrong to create the brash, crackling attack that became his musical identity. "I liked to hear a note cracking," he later told Barry Ulanov of Metronome magazine. "A real snap. It's like a whip when it happens."[142]

Ray Nance, Ellington's star trumpet soloist in the 1940s through the 1960s, cites Armstrong as one of his influences. Harker provides details about how Armstrong's upper register in the 1920s shocked Nance:

> The occasion was Collegiate Night at the Savoy Ballroom in Chicago. Armstrong was playing "Tiger Rag" with Carroll Dickerson. "He used to play those choruses and make one hundred high Cs. A cat in the wings was counting them. When Louis got to ninety-nine, he'd hit C and rattle it - eeeEE! By then, people were hardly able to control themselves… Then he'd rear back, roll his eyes, take a breath, and hit that note - bam! The whole place would be in pandemonium. I'm telling you, that was the greatest thrill I've ever had in my whole life."[143]

In a biography of Buck Clayton, one of Count Basie's trumpet soloists, David Radlauer discusses Armstrong's impact on Clayton:

> It was around this time, and well into his development, when Clayton first encountered Louis' music, writing "I guess I was spellbound." Armstrong was then performing at, and broadcasting from Sebastian's Cotton Club in L.A. In their first meeting, Pops showed Buck how to make a gliss (glissando: a bent note)...[144]

In the 1970 film *Good Evenin' Everybody* documenting the Newport Jazz Festival's 70th birthday tribute for Armstrong, Dizzy Gillespie says of Armstrong "if it weren't for him, there wouldn't be any of us, so I'd like to take this moment to thank Mr. Louis Armstrong for my

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[142] John S. Wilson, "Roy Eldridge, 78, Jazz Trumpeter Known for Intense Style, Is Dead," The New York Times, February 28, 1989, https://www.nytimes.com/1989/02/28/obituaries/roy-eldridge-78-jazz-trumpeter-known-for-intense-style-is-dead.html.

[143] Harker, 99.

[144] David Radlauer, "Buck Clayton's Jazz World, Part One," The Syncopated Times, November 17, 2021, https://syncopatedtimes.com/buck-claytons-jazz-world-part-one/.

livelihood." Gillespie then launches into a loving parodic tribute to Armstrong on Armstrong's old hit record "I'm Confessin' that I Love You."[145] Kenny Dorham recalled in an interview what inspired him to start playing around the age of 8: "...I got a chance to listen to 'Pops' on some records, and it kind of started from there."[146] Woody Shaw stated "the catalyst for my whole conception was Louis Armstrong…"[147] In an interview at the 1999 Marciac Jazz Festival, Clark Terry said of Armstrong "We're all Louis' kids… he started it - he started it all and he paved the way for us."[148] Referring to the breadth of his innovations, Miles Davis said of Armstrong "You know you can't play anything on the horn that Louis hasn't played - I mean even modern."[149]

Armstrong's impact on trumpet soloists extends beyond the jazz tradition. In the late 1920s and early 1930s, a young Rafael Mendez was living in Michigan (first working at the Buick autoplant in Flint, then moving to Detroit).[150] No doubt, he was hearing Armstrong on records and radio broadcasts as Armstrong was becoming the top selling musical artist in the world at the time. We hear much of Armstrong's "majestic style" in Mendez's playing - the operatic tone, the wide vibrato, the commanding upper register. Mendez personally gives us clues to the influence: in 1957, he recorded a pop album entitled *The Singing Trumpet* with the accompanying orchestra arranged and conducted by Russel Garcia, a regular collaborator of Armstrong's. Four of the songs on the record - "Body and Soul," "Memories of You," "I Surrender Dear," and "On the Sunny Side of the Street" - are tunes Armstrong made famous

[145] Getmygat, "Louis Armstrong - Good Evening Ev`Rybody (2010)_1 - Video Dailymotion," Dailymotion, April 21, 2014, https://dai.ly/x1qa496.

[146] Arthur Taylor, *Notes and Tones: Musician-to-Musician Interviews* (New York: DaCapo Press, 1993), 230.
[147] Linda Reitman, "Woody Shaw Interview: 'We Are Linked to a Legacy' (Downbeat 1983)," woodyshaw.com, October 16, 2016, https://woodyshaw.com/blogs/news/linked-to-a-legacy.
[148] "Trumpet Summit (w/ Terry, Faddis, Hargrove, Marsalis + More), Jazz in Marciac, France 1999 (Part 2)," YouTube, December 30, 2020, https://www.youtube.com/watch?v=8pA-kzte0Fk.
[149] Giddens, 6.
[150] "Rafael Méndez Library," Rafael Mendez Library | School of Music | ASU Herberger Institute for Design and the Arts, accessed March 16, 2023, https://mendezlibrary.asu.edu/biography/.

back in the early 1930s. In his closing cadenza on “Body and Soul” (fig. 3), Mendez plays three phrases (bracketed and labeled A, B, and C) that loosely quote Armstrong’s famous opening cadenza on “West End Blues” from nearly thirty years earlier (see fig. 4).

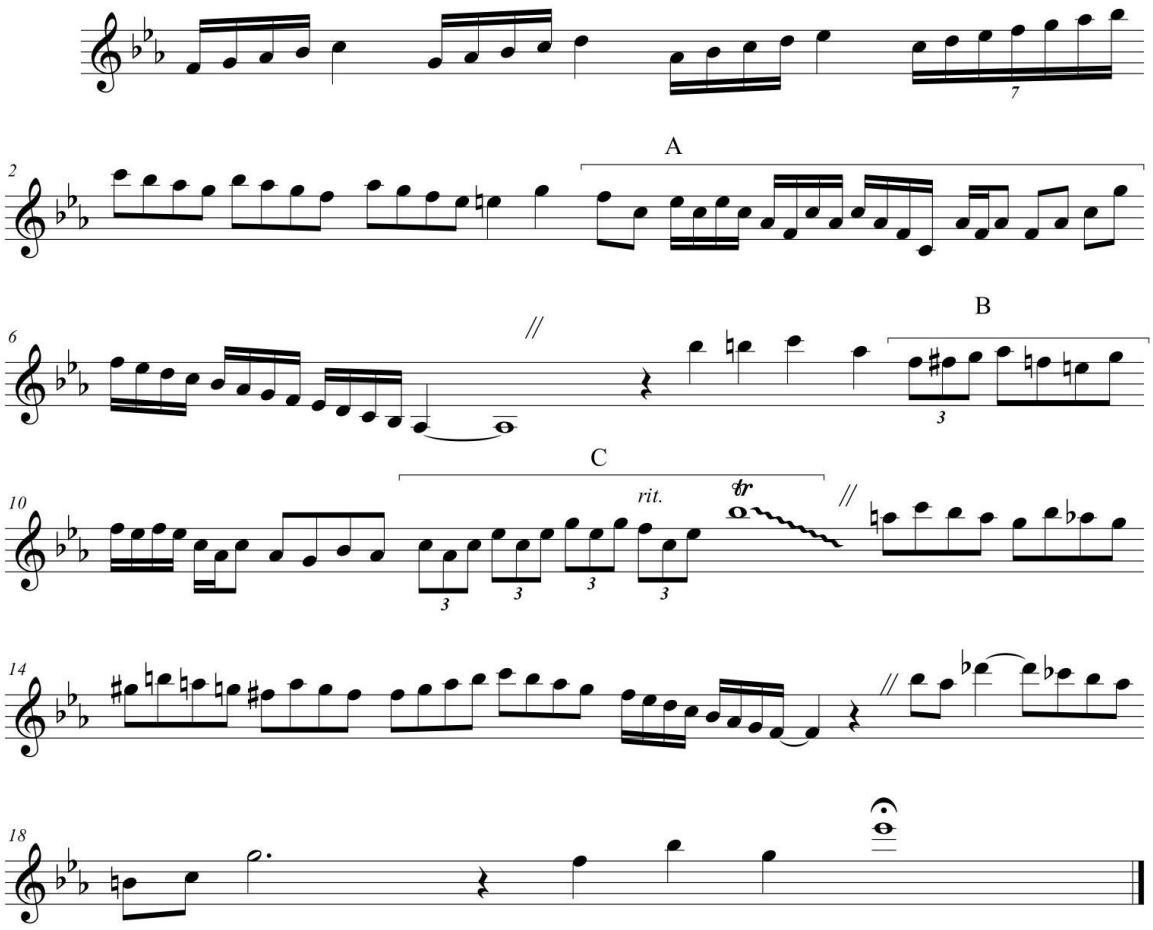

Fig. 3. “Body and Soul” closing cadenza, Rafael Mendez

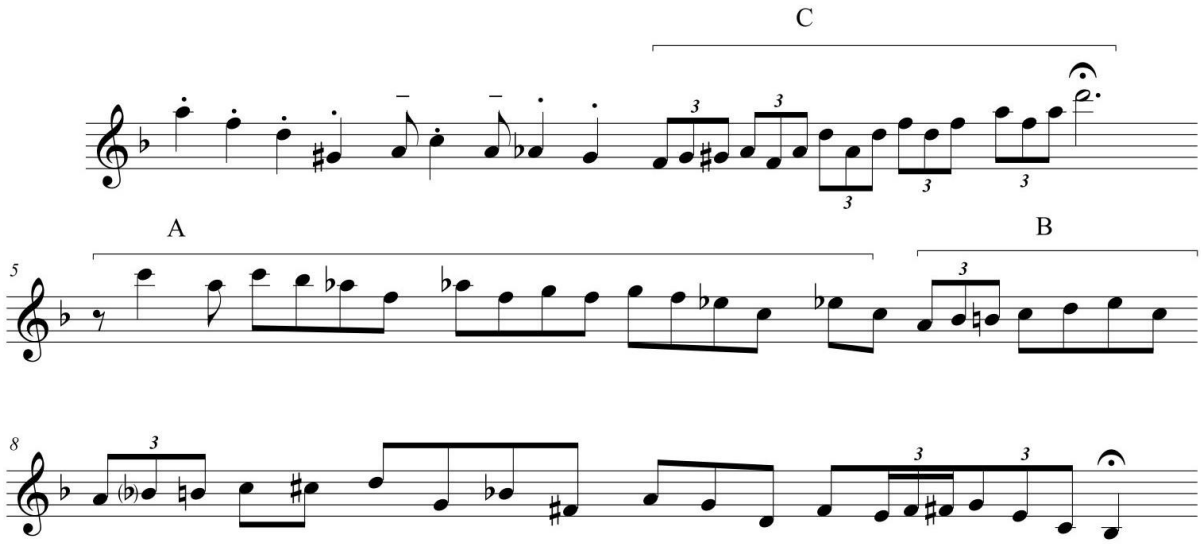

Fig 4. “West End Blues” opening cadenza, Louis Armstrong

Ronald Romm, one of the founding members of the Canadian Brass Quintet, also cites Armstrong as a role model in an interview from 2009: “When I was about nine, I came home for lunch and heard these fantastic sounds coming out of the radio. I asked my mother ‘who is that?’, and she said ‘that’s Louis Armstrong, playing trumpet’, and I said ‘that’s what I want to do.’”[151] Romm later paid tribute to him with the Canadian Brass in their recordings of some of Armstrong’s old showpieces (e.g. “St. Louis Blues,” “Muskrat Ramble,” “Royal Garden Blues”); in their recording of “Chinatown, My Chinatown,” he and Fred Mills both pay direct homage to Armstrong’s high note routine on the same tune. Armstrong’s impact, through Romm, further shaped the group to the point that the quintet recorded a whole tribute album to Armstrong, *Swing That Music* (2009), well after Romm’s departure.

Across the ocean, French classical trumpet soloists were learning from Armstrong as well. Maurice André thought very highly of Armstrong, whom he met in 1958:

[151] Terrence London, “Terrence London Talks with Ronald Romm,” Ronald Romm - meditations for trumpet, 2009, https://canadianbrassstore.com/content/articles/RommInterview/RonaldRommInterview.html.

> Every note sings and lives… every note signifies something… one is flabbergasted by a mastery such as this and by something so natural!... Before everything, Louis Armstrong, he is a natural man, and he also *is* nature like we say of certain students and certain virtuosos… that is to say that everything he plays or sings, and probably everything he does in life, is marked by presence… formidable… monstrous!... And he has a big heart in the same way! And then this tone… It is unique… you see… this tone, it is all of his generosity, the grandness, the simplicity and the nature of this man.[152]

Armstrong showed the composers of the great mid-century French solo trumpet repertoire what was possible on the trumpet and began writing for the instrument differently, combining the French tradition of cornet-inspired dexterity with the "Armstrong Style," especially regarding his full-toned upper registers and clear, crisp attacks. Henri Tomasi described his famous 1948 trumpet concerto as an attempt to "forge a synthesis of all the trumpet's expressive and technical possibilities, from Bach's time to our own, not forgetting jazz." Musicologist Jean-Pascal Vachon recounts Armstrong's influence on André Jolivet's second trumpet concerto (1955):

> Concerning the work's technical demands Raymond Tournesac, the soloist at the première, stated that at the first read-throughs, reacting to his comments about the work's difficulty, Jolivet had told him: 'But, my dear fellow, Louis Armstrong is doing wonders in the top register. Why should this be impossible for a classical player?… So, to work, old boy! Armstrong manages it well enough!'[153]

In a biography of Maurice André, Michel Laplace recounted a conversation with André in November 2011, "I recalled that Jolivet had advised him to get inspiration from Louis Armstrong," to which André's retort highlighted that Tomasi had also given him the same advice to channel Armstrong's style: "...Maurice's response to me was 'Tomasi, too!'"[154] André

[152] Michel LaPlace, "Maurice André, Trumpet Master of the XXth Century," *International Trumpet Guild Journal* 36, no. 4 (2012), Special Supplement: 7-8.
[153] Jean-Pascal Vachon, "Liner Notes," Liner Notes for Ole Edvard Antonsen, *French Trumpet Concertos*, São Paulo Symphony Orchestra, Lan Shui, conductor, recorded February 2010, BIS Records 7318599917788, 2013, 8.
[154] LaPlace, 4.

eventually paid tribute to Armstrong in 1982 with his recording of "La Vie en Rose," which Armstrong had recorded in 1950.

Armstrong's influence can also be found in the work of German composer Bernd Alois Zimmermann in his groundbreaking trumpet concerto, *Nobody knows de trouble I see* (1954), which Tarr describes as "the most significant trumpet concerto of our time - and also the most difficult…"[155] The piece is a hair-raising, post-tonal journey alluding to the Black American spiritual of the same name. The piece is full of jazz inflections originally popularized by Armstrong: "shakes, trills and arrows pointing glissandos upwards and falls downwards, with footnoted instructions, signpost the characteristics of trumpet players in the Armstrong tradition."[156] It is worth noting that Armstrong had recorded "Nobody Knows the Trouble I've Seen" back in 1938. Scottish composer Iain Hamilton used many of the same trumpet techniques in his *Concerto for Jazz Trumpet* (1958).[157]

By changing the accepted sound concept of the trumpet's upper register from a falsetto tone to a powerful tone, Armstrong shaped the sound of lead and commercial trumpet playing. Harker summarizes:

> First-chair jazz trumpet players in the 1930s and 1940s began assimilating characteristics of majestic style into their lead playing with the ensemble, either through arrangers' notated instructions or through their own initiative. It took a while for Armstrong's lead-playing followers to match his strength in the high range… By the 1940s, though, lead players had begun superceding him… [Gunther] Schuller especially marveled at [Charlie] Barnet's first trumpeter Al Killian, who routinely unleashed "full, round, fat altissimo Bbs and As." The description recalls Rex Stewart's characterization of Armstrong's duel with Jabbo Smith. Postwar lead players continued to build on Armstrong's early 1930s style. Snooky Young, widely regarded as a founder of modern lead style, acknowledged Armstrong as his "main influence."... After having been denied first chair by Oliver, Henderson, and the conductor of *Great Day*, it must have been sweet

[155] Tarr, 176.
[156] Wallace and McGrattan, 254.
[157] Ibid.

> revenge for Armstrong to observe his own special approach to "top notes" adopted as the standard by virtually every lead player in the country.[158]

Notable lead and commercial trumpeters cite Armstrong as an influence. Doc Severinsen once said "Anybody who ever put a trumpet to his lips had to have Louis Armstrong in his heart."[159] An article from the International Trumpet Guild recounts that during a 2019 clinic at Henderson State University, Severinsen invoked Armstrong as a point of study: "Doc focused on the big picture: how to approach improvisation, historical precedents, and what to listen for in recordings. Although he did not play, Doc sang several of Louis Armstrong's trumpet solos – his style, pitch, and vocal quality accurately portrayed Armstrong's character."[160] He also recorded a loving tribute to Armstrong, "I Remember Louis" in 1974.

Lew Soloff recounted how Armstrong inspired him to play the trumpet:

> My uncle Jesse, who was a piano player and very influential on me, played me Louis Armstrong record after Louis Armstrong record from the time I was five years old…and I had a favorite record, which he later gave me, which is called "I Hope Gabriel Likes My Music." And in this record, he plays a solo… and he played an F major scale, G major on the trumpet… going up to a high G. But in my memory, I remember very clearly, it wasn't a loud screaming high G, it was just beautiful, just beautiful going up there. That was a big influence on me.[161]

Many high note specialists cite Armstrong as an inspiration. As mentioned above, Cat Anderson learned Armstrong's solos as a teenager. Maynard Ferguson said that his main influences were "Louis Armstrong and my mother."[162] Ferguson first played with Armstrong at the age of 13 when Armstrong invited him to sit in with his band and the two became good

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[158] Harker, 108.
[159] "Doc Severinsen: Tribute to Satchmo (Louis Armstrong)," YouTube, YouTube, April 1, 2021, https://www.youtube.com/watch?v=arIEe8bPfC4.
[160] "Doc Severinsen at Henderson State," The International Trumpet Guild, 2009, https://trumpetguild.org/content/itg-news/1677-doc-severinsen-at-henderson-state.
[161] Michael Davis, "Bone2pick: Lew Soloff Interview," YouTube, YouTube, March 3, 2014, https://www.youtube.com/watch?v=W4e0i0vxMIE.
[162] Harker, 108.

friends.[163] Additionally, Armstrong shaped dance and commercial trumpet playing overseas. Cuban trumpeter Alfredo Chocolate Armenteros, who rose to fame playing with Arsenio Rodrigeuz and Machito, studied Armstrong's playing to hone a "jazz sensibility."[164] Given all of the above examples, we can see that Armstrong left a profound impact on trumpet playing that is still felt throughout the trumpet community.

[163] "Biography," Maynard Ferguson, accessed March 16, 2023, https://maynardferguson.com/biography/.
[164] Chuy Varela,"The Cuban Louis Armstrong / Trumpeter Alfredo `Chocolate' Armenteros Coming to Yoshi's," SFGATE, San Francisco Chronicle, August 6, 2012, https://www.sfgate.com/bayarea/article/The-Cuban-Louis-Armstrong-Trumpeter-Alfredo-2745396.php.

Part 6: Conclusion and Areas Warranting Further Investigation

When Louis Armstrong began playing the trumpet in 1926, he was exploring an instrument whose role had mostly been limited to "noble" voice in symphony orchestras for the last century. His jazz cornet background, his interest in clarinet virtuosity, and his operatic inclinations informed his approach to trumpet playing. The nature of the trumpet - with its resonant sound, ease of projection, practicable upper register, and its propensity for percussive attack - allowed him to pursue these ideas with more ease and consistency. Through these explorations, Armstrong began changing what was considered possible on the instrument - expanding the expected range and endurance of trumpeters, inventing new expressive devices, changing the sound concept in the upper register - and augmenting the role of the trumpeter into a soloist. Thanks to his stardom, Armstrong's innovations were quickly heard by musicians all over the world, who began adapting components of the "Armstrong Style" into their own playing, changing the nature of jazz trumpet playing, commercial trumpet playing, and even classical trumpet playing, especially amongst soloists. Trumpet ers today, including myself, still feel his impact.

In the process of investigating this subject, I have come across different points that need further illumination. 1) Along with the composers mentioned above, did other 20th Century classical composers start thinking about their trumpet writing differently after hearing Armstrong demonstrate the trumpet's capabilities? I can only speculate in this specific case, but we see a major difference in Gershwin's trumpet writing between *Rhapsody in Blue* (1924) (orchestrated by Ferde Groffe) and *An American in Paris* (1928). While the trumpet solos in *Rhapsody* merely showcase the "jazz novelty" of the wah-wah trumpet, the lyrical solo in the Andante section of *American* highlights many features of the Armstrong "majestic style." Perhaps Gershwin heard

Armstrong at the Vendome Theater around 1927 and realized he could write for the trumpet more expressively. 2) To what extent did Armstrong shape the origins of high-note trumpet playing in Latin America, specifically in Cuba and Mexico? As the top-selling artist in the world in the early 1930s, his records were distributed overseas. Was Félix Chappottín studying his work at the time, and using it to shape his own trumpet playing as one of the founders of "trompeta typica" in Cuban son montuno? 3) Along with those mentioned above, were there other reasons why the cornet fell out of favor in the 1930s? Perhaps changes in microphone technology or the sonic qualities of radio preferred the trumpet. 4) How did Armstrong's image as a trumpet player shape the image and expectations of trumpeters in popular culture? To what extent did he create the idea that a trumpeter could be a star and that a potential career path for trumpeters was to tour the world as a soloist performing popular music for the masses? Investigating any of these questions would yield fascinating answers - I hope to explore them in the future.

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