

Dudley Buck and the Evolution of American Pedal Technique

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PERFORMANCE PRACTICE STUDY ALWAYS BENEFITS from documents that contain detailed information about performance technique. Ideally, information relating to a specific piece of music would derive from the composer himself, though such documents are quite scarce. Those rare examples that do exist, though they invariably leave unanswered questions, reveal a great deal about performance in a specific place at a specific time. But it would be simplistic to assume that a composer or performer with any longevity would use the same techniques throughout his entire career, especially if that career encompassed the intense revolution in organ building and compositional sophistication of late nineteenth-century America. To accurately assess changes in technique over the course of a career, we would need at least two documents from different times, each with detailed technical information—ideally, annotations to the same piece of music, which would allow for a direct comparison between markings. Since even one such document is difficult to obtain, two would appear to be impossible. However, exactly such a situation exists with the *Studies in Pedal Phrasing*, op. 28, by American composer and organist Dudley Buck (1839–1909). Buck’s indications in this music offer an unparalleled view of the evolution of American pedal technique in the late nineteenth century.

These eighteen pedagogical compositions for manuals and pedals (not a method book, nor merely a series of pedal exercises) existed in two distinct editions during the nineteenth century. The two editions bookend Buck’s career, the first dating from soon after his return to the United States following his studies in Germany, and the second from the period of his later prominence as a composer, performer, and teacher. Although Buck made no changes to the music, he made significant changes to pedalings in the second edition and provided some intriguing commentary about pedal technique in both editions. A comparison of the two editions gives us insight into the changes in his ideas. This article will outline the general differences between the two editions,

| 1869 ed. | | 1894 ed. | | 1894 title | Key |
|----------|-----------|----------|------|--|-----------|
| No. | Vol: Page | No. | Page | | |
| 4 | I:10 | 1 | 3 | Absolute Legato in both Manual and Pedal | B \flat |
| 2 | I:5 | 2 | 5 | Arpeggios based on the Octave | G |
| 3 | I:8 | 3 | 8 | Continuous legato in Pedal | D |
| 5 | I:12 | 4 | 9 | For practice in various “skips” | A |
| 6 | I:15 | 5 | 11 | Absolute Legato in both Manual and Pedal | A \flat |
| 1 | I:3 | 6 | 14 | For acquiring a clear and expert repetition of the same tone with use of alternate feet | C |
| 9 | I:24 | 7 | 16 | For acquiring surety in minor arpeggios, especially in descending | g |
| 7 | I:18 | 8 | 17 | For acquiring steady tempo despite interruptions as between Man. and Ped. | C |
| 11 | II:5 | 9 | 19 | To acquire a quick and clear “speech” in the pedals in shortest phrases | F |
| 18 | II:25 | 10 | 21 | Cradle Song: A study for flexibility of the ankles, and clear execution of thirds with heel and toe of same foot | C |
| 10 | II:3 | 11 | 24 | Passing alternate feet (toes) over and under each other | c |
| 14 | II:12 | 12 | 25 | Heel and Toe in rapid connection | b |
| 15 | II:15 | 13 | 28 | Romanza (Occasional freeing right foot for expressive use of Sw. Ped.) | e |
| 17 | II:20 | 14 | 30 | Irregular Scale-Passages (legato.) | C |
| 16 | II:18 | 15 | 34 | Syncopations, sounding like legato phrases | E |
| 12 | II:7 | 16 | 36 | Special practice in parallel thirds and sixths between Pedal and Left Hand | d |
| 13 | II:10 | 17 | 37 | Chorale. “Allein Gott in der Höh’ sei Ehr’!” [trio] | D |
| 8 | I:20 | 18 | 39 | Chorale. [Old Hundredth; trio] | G |

Table 1 Concordance between editions of the Studies in Pedal Phrasing.

present a more detailed analysis of pedalings in one of the studies, and discuss the larger context in which these changes were made.

The *Studies in Pedal Phrasing*, op. 28 were originally published by G. Schirmer in 1868.¹ Revisions took place in 1894 for a new edition, upon which subsequent reprintings were based. The earlier edition was in two volumes of nine pieces each, and was in upright format; the 1894 and subsequent editions collected the re-engraved studies in one volume in oblong format. The order of the pieces was changed in the later edition, though the logic behind either ordering is unclear. The pieces do not appear to be graded by level of difficulty, nor do they seem to be designed to be performed as a set—there is, for instance, no discernible logic to the key sequence in either edition. The only obviously systematic aspect of the reordering was the placement of the two chorale-based studies together at the end of the new edition, where there had been one per volume in the original edition. This article will refer to the pieces using the numbers from the later edition, since this is the more commonly available printed one.² Table 1 offers a concordance of movement numbers and page numbers between the two editions, along with the titles that were added in the second edition and which generally describe the intended technical goal of the piece.

The other significant difference between the two editions is to be found in the prefaces, which contain brief but revealing information about Buck's ideas on pedal technique. Buck provided a preface for each edition, while the publisher provided an additional preface to the later edition. The publisher stated that "continued demand has made it necessary to prepare the present newly-arranged edition, which has also been revised throughout in order to adapt it, in every particular to the progress and requirements of to-day." We will examine Buck's comments more thoroughly below.

The fundamental change in pedal technique represented in the 1894 edition can be summed up as an increased reliance on toe-heel legato, as opposed to an earlier approach that favored an alternate-toe legato.³ Buck alluded to this

¹ The 1868 edition bears the title *18 Studies in Pedal Phrasing*, while later editions have only *Studies in Pedal Phrasing*. The list of Buck's works that accompanies the 1868 edition calls them *18 Pedal Phrasing Studies*.

² A scan of the first edition can be downloaded here: "18 Studies in Pedal Phrasing," accessed June 3, 2011, <http://hdl.handle.net/1802/13128>.

³ A true legato playing style appears to have been the norm by the late nineteenth century, distinct from the "articulated legato" or "ordinary" touch associated with seventeenth-century organ music (for a brief discussion of this earlier touch, see Quentin Faulkner, *J. S. Bach's Keyboard*

change in his 1894 preface, where he directly stated that “the principal change will be found in the more frequent use of ‘heel and toe.’” The earlier edition certainly did not exclude use of the heel, but showed a strong preference for alternating toes. Nor did the later edition eliminate alternate-toe legato passages; in fact, quite a few remain. We will try to understand why Buck changed the pedalings in some passages but not others, and what the technical advantage might be for either approach.

General differences in technique

The most frequent revisions in technique took place in scalar passages, typically consisting of four- or five-note diatonic fragments. Where in the previous edition these passages would almost exclusively be performed with alternating toes, in the later edition combinations of toe and heel are used. No. 15 contains a descending and ascending scale with much use of black keys. The old edition, shown in Example 1a, used strictly alternating toes, requiring a great deal of shifting of the feet from front to back in order to pass one behind or in front of the other.⁴ The later edition, shown in Example 1b, minimizes this shifting, though it does not eliminate it entirely. Examples 2a and 2b show excerpts from No. 12 of four-note scale fragments that, in the new edition, are played toe-heel so as to cover the entire fragment without moving the feet. This appears to be an innovation that offers much greater efficiency, but we will see that Buck did not always adopt it in similar passages. Example 3a shows a longer scale that undergoes a transformation to toe-heel technique. When the opening motive is transposed to an all-white-key pitch in m. 9, however, the alternate-toe

Technique: A Historical Introduction (St. Louis: Concordia Publishing House, 1984), 39–44). The technical means of creating legato clearly varied from country to country and from decade to decade. Organists tend to associate alternate-toe pedaling with the earlier articulated approach of the seventeenth century and toe-heel pedaling with legato music of the Romantic period. However, exceptions abound: evidence of use of the heel in early music exists, and an alternate-toe legato is one focus of the present article.

⁴ The smaller size and different shape of the pedalboards of that time make such shifting more difficult than on modern pedalboards. There was no standard size and shape for organ pedalboards until the twentieth century, but in the mid-nineteenth century they often consisted of twenty-seven keys (C₂ to D), laid out straight (exactly perpendicular to the console, just like manual keys) and flat (i.e., all keys at the same height). The standard adopted by the American Guild of Organists by 1900 called for thirty-two keys (C₂ to G), laid out concave (keys to the sides raised higher) and radiating (fanning out slightly from the rear). This type of pedalboard, also with longer keys (both white and black), was designed to allow more ease of access to all keys, especially those to the extreme ends, and has been used in most twentieth-century American organs.



Example 1a No. 15, mm. 13–16, 1868 ed.



Example 1b No. 15, mm. 13–16, 1894 ed.



Example 2a No. 12, m. 1, 1868 ed.

Example 2b No. 12, m. 1, 1894 ed.



Example 3a No. 12, mm. 8–9, 1868 ed.



Example 3b No. 12, mm. 8–9, 1894 ed.



Example 4 Footnote to No. 12, m. 9, 1894 ed.

approach is retained in the new edition (see Example 3b). This confounding inconsistency is explained by a footnote accompanying the passage seen in Example 4: “The student should note by practical trial, why alternation is here preferable to [this] formula. The physical reason should be apparent that the use of heel and toe in rapid passages, containing no sharps (or flats) is difficult and risky in the centre of the pedalboard, and to be there avoided when not absolutely necessary.” We will see evidence of this bias in other places as well.

No. 14, entitled “Irregular Scale-Passages,” shows only a small change between editions and relies heavily on alternate toes in both. The opening passage, in Example 5, uses the same pedaling in both editions. Example 6 shows



Example 5 No. 14, m. 1, both editions



Example 6 No. 14, mm. 50-52, both editions

a passage from the end of No. 14. Where it might seem that the use of an occasional heel would lead to greater efficiency, the preponderance of white keys in this passage led Buck to retain all-toe pedaling, in keeping with his footnote to No. 12. Thus, there appears to be an important technical difference between pedaling diatonic passages using all white keys (Examples 5 and 6) and diatonic passages containing some black keys (Examples 2 and 3). The possible reasons for this difference will be explored below.

Other consistent variants between editions are in passages with neighbor-tone figures. Where in the earlier edition the majority of such passages used alternate toes—often having one foot cross over the other to reach the neighbor tone—the later edition amends these to use heels in nearly every case. No. 2 contains striking examples. Example 7a shows measures 2–4 in the 1868 edition: in the ascending arpeggio the right foot first has to cross over the left to reach the low F-sharp; in the descending arpeggio, the crossover is not necessary, but the left foot does have to reach high up to the F-sharp neighboring tone and then leap quite a bit in order to perform the arpeggio as indicated. Use



Example 7a No. 2, mm. 2–5, 1868 ed.



Example 7b No. 2, mm. 2–5, 1894 ed.



Example 8a No. 2, m. 34,
1868 ed.

Example 8b No. 2, m. 34,
1894 ed.

Example 9 No. 2, m. 38, both
editions

of the right heel would eliminate this, which is exactly what happens in the later edition, seen in Example 7b. The ascending figure also uses the left heel, eliminating the right-foot crossover. Though it is not challenging for the right foot to cross over to reach a black key, because of its higher position relative to the white keys, two adjacent white keys make the technique somewhat more awkward, as in m. 34, shown in Examples 8a and 8b. The later edition eliminates the white-key crossover. In m. 38, in Example 9, Buck uses the left heel in both editions. Why the seemingly inconsistent approach? Why avoid using the heel in general in the earlier edition? The answer to the first question probably lies in the low register of the passage, making a right-foot crossover to the D-sharp extremely difficult. The second question warrants more discussion, below, in light of the information given in Buck's prefaces.

Such changes in neighboring-tone passages are frequent, but none so compounded as in Study No. 8. Example 10a shows the first two measures from the 1868 edition. The alternate-toe approach requires some awkward crossing, but using the heel, as in the revised edition in Example 10b, creates what seems to be greater efficiency. Measures 13–16 of this same piece are especially interesting. The original pedaling, shown in Example 11a, involves frequent crossing and has the right foot travelling in very large intervals quickly across the pedalboard. Then, in m. 16, an alternate-toe approach necessitates a great deal of shifting of the feet forward and backward around each other: the left foot starts forward because of the black key; in the second triplet, the left foot then has to cross behind the right so that the right foot can move forward to the A-sharp black key; the third triplet reverts to the first configuration, and the final triplet requires the left foot to cross over the right to reach the F-natural. The revision, in Example 11b, eliminates all crossing and creates a much more efficient technique. One could speculate that the original intent of the passage was, in fact, to explore the technical challenge of the crossings and that the later edition changes this goal considerably.

Changes in the approach to scalar passages and neighboring-tone figurations are the most obvious differences between the two editions, but there are



Example 10a No. 8, mm. 1–2, 1868 ed.



Example 10b No. 8, mm. 1–2, 1894 ed.



Example 11a No. 8, mm. 13–16, 1868 ed.



Example 11b No. 8, mm. 13–16, 1894 ed.

some more subtle changes as well, one of which involves two-note slurs of step-wise pitches. This is the focus of No. 9 in particular, which emphasizes dotted rhythms in the pedals and has the stated goal of “acquir[ing] a quick and clear ‘speech’ in the pedals in shortest phrases.” The dotted-rhythm motive that pervades the piece is marked consistently with alternate toes in the earlier version and typically with toe-heel in the later, as seen in Examples 12a and 12b. This change does seem dependent on the location of the particular pitches on the pedalboard—measure 1, towards the low end, uses toe-heel, while m. 2, in the center, retains alternate toes. This is further evidence of Buck’s preference for use of only toes on white keys in the center range of the pedalboard even in the later edition. Measures 33–34 (Examples 13a and 13b), show a more extensive change from all-toes to toe-heel.

Another example of changing approaches in two-note slurs is found in the chorale trio on “Old Hundredth,” Study No. 18, shown in Examples 14a and 14b. The two chorale settings are less dependent on artificially derived pedal patterns for technical purposes than the other studies and thus better show the pedaling changes in the context of “real music.” The pedaling in the 1868 edition of “Old Hundredth,” always gives the lower of the two notes to the left foot



Example 12a No. 9, mm. 1–2, 1868 ed.



Example 12b No. 9, mm. 1–2, 1894 ed.



Example 13a No. 9, mm. 33–34, 1868 ed.



Example 13b No. 9, mm. 33–34, 1894 ed.



Example 14a No. 18, mm. 17–21, 1868 ed.



Example 14b No. 18, mm. 17–21, 1894 ed.

and the higher to the right. The later edition mostly uses toe-heel pedalings for the two-note slurs, similar to the example from study No. 9. Buck also seems to be assigning each foot to half of the pedalboard, roughly divided at D. This type of “zone” pedaling is used in other places in the later edition as well, contrasting with alternate-toe pedaling in which both feet move freely over nearly the entire range of the pedalboard.

Study No. 3

Study No. 3 offers several interesting challenges and merits a close study of its own in light of the generalized discussion above. The title from 1894 demands “Continuous legato in Pedal.” The earlier edition uses almost exclusively alternating toes throughout. The later edition changes to toe-heel technique only in certain instances and it is this selective change that is most fascinating. The opening of the piece, seen in Example 15, presents the motive that pervades the whole study, and the pedaling for this passage uses alternate toes in both editions. For the first three measures, this allows the left foot to stay forward because it has the only sharp key; in the fourth measure, the left foot must then cross the right foot to reach the upper E. Two important questions arise from this: First, does the left foot cross over or under the right? Second, why, in this neighboring-tone situation, did Buck not have the right heel take the upper E? The first question can be answered by examining a footnote in Study No. 8 as it appears in the 1868 edition: “The general rule, that in ascending passages the left foot is to be passed over the right, above middle C (not before) and under in descending, holds good in this, and nearly all these Studies.”⁵ Since, in this specific case, the E is above the middle C of the pedal board, and it ascends (at first), this would dictate that the left foot crosses over the right. Additionally, this would allow the left foot to stay forward for the first four measures. Nevertheless, it does seem rather awkward to have the left foot cross over the right, with both on white keys, to the highest note in a passage. Again, why not simply take this note with the right heel?

The next challenge in this example is presented by the three black keys in a row in m. 5, repeated in mm. 6 and 7. This is marked alternating toes, with a footnote affirming that the left foot is to be passed under the right in this



Example 15 No. 3, mm. 1–7, both editions

⁵ Dudley Buck, *18 Studies in Pedal Phrasing* (New York: G. Schirmer, 1868), 1:18. Emphasis Buck's.



Figure 1 Photograph of a pedalboard from a c. 1887 Hook and Hastings organ, at the University of Nebraska-Lincoln.



Example 16a No. 3, mm. 11–14, 1868 ed.

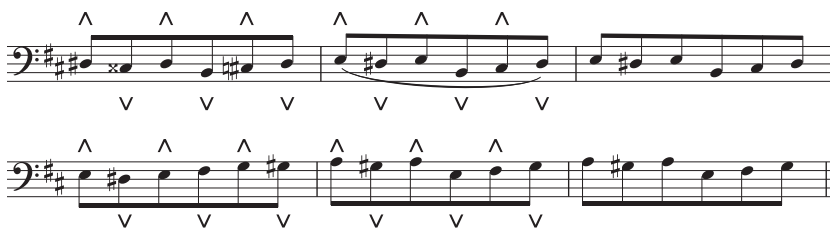


Example 16b No. 3, mm. 11–14, 1894 ed.

instance. Crossing feet on adjacent black keys, especially the shorter black keys of historic organs, takes real agility and requires a more pointed-down toe than might be normal today (see Figure 1).⁶

Measures 11–13, shown in Example 16a, contain even more chromaticism. This time the two editions differ. The 1868 edition shows strict alternation of toes (in measures with no pedalings, the implication is that the all-toe approach continues from earlier). The left foot begins forward because of the

⁶ The longer keys of the modern pedalboard allow more ease in passing the feet around each other, especially on the black keys.



Example 17a No. 3, mm. 17–22, 1868 ed.



Example 17b No. 3, mm. 17–22, 1894 ed.

C-sharp and D-sharp, but the feet must shift at the end of m. 11 so that the right foot can be forward on the F-sharp. They shift back at m. 13. While these shifts are not onerous, the 1894 toe-heel pedalings create greater efficiency by nearly eliminating them. This revision also conforms mostly to the “zone” approach discussed above. It would seem even more efficient to use the left heel at the end of the run, on A and B, leading up to D, but Buck chose not to use the heel here. Once again we see the bias against toe-heel motion on white-key diatonic passages.

Measures 17–22, in Example 17a, present the motive in two different transpositions, along with connecting material, each requiring more sharp keys. The 1868 edition retains alternate-toe pedaling, though a footnote offers a toe-heel alternative with the suggestion that both approaches should be practiced. In this passage one again has the challenge of passing the left foot underneath the right on adjacent sharp keys, and many shifts as the feet change positions in relationship to each other. The 1894 edition, seen in Example 17b, uses toe-heel pedalings to great advantage, requiring much less motion.

Example 18 compares the main motive at three of the transpositions seen so far (D, A, and E), each with its respective pedaling from 1894. We can now return to the question of why Buck chose not to use the heel in the original presentation in D, but did use it in E and A, with seemingly more efficient results. A clue can be found in the footnote quoted earlier, in which Buck stated that “the use of heel and toe in rapid passages, containing no sharps (or flats)



Example 18 Comparison of pedalings in three keys, 1894 ed.

is difficult and risky in the centre of the pedalboard.” In comparing these three transpositions of the motive, the only one in which Buck did not use the heel is the one in which the left foot would be required to play toe-heel on two adjacent white keys, thus placing the heel even farther back on the white key, and perhaps too close to the fulcrum of the shorter keys of an older pedalboard to be easily controlled. Buck avoided toe-heel on adjacent white keys in other places in the studies as well, particularly in faster passages.

Buck’s prefaces and other compositions

After reviewing some of the changes between the two editions, we can turn to the prefaces for clues as to why Buck felt it necessary—or possible—to make changes to his technique, as a teacher and presumably as a performer as well. The 1868 edition states: “The pipes should be made to speak by a quick pressure of the foot, (not a kick) even with the heaviest action. This ensures not only a quiet style of performance, but also avoids frequent disarrangement of mechanism producing ‘ciphering.’” This balance between a decisive attack leading to a clear speech and a quiet style avoiding unnecessary clatter in the pedals is important. The implication of these sentences is that heavy pedal actions (exacerbated by coupling to the manuals) were widespread and that the mechanisms could be temperamental; a heavier action would also increase the difficulty of a decisive attack when pressing the key closer to the rear fulcrum, which would be necessary in toe-heel alternation on white keys in the center of the pedalboard.

Buck’s effusive enthusiasm in the 1894 preface for “the great improvements made in the ‘action’ of organs to-day”⁷ confirms that innovations in organ building were indeed a factor in changing his pedal technique. It is worth quoting at some length from this preface:

At that time [1868] the stiffness of manuals coupled together and to the pedals demanded much physical exertion. A frequent use of “heel and toe” was then unreliable in making the pipes “speak” clearly and promptly, unless in positions

⁷ Dudley Buck, *Studies in Pedal Phrasing* (New York: G. Schirmer, 1894), 2.

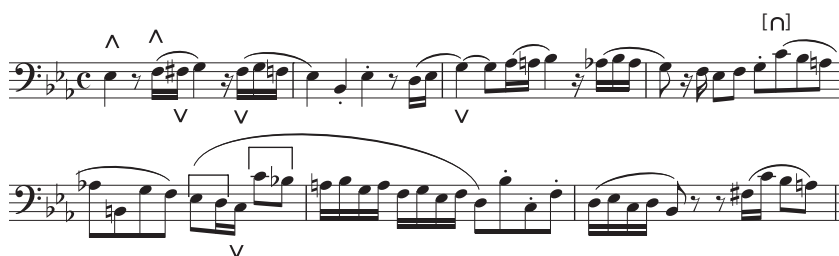
especially favorable to the ankles. [sic] At present this hindrance amounts to relatively little, so great have been the improvements in various actions—pneumatic, tubular, electric, etc. Under these circumstances the use of “heel and toe” becomes of great assistance in simplifying the execution of many difficult passages.⁸

With the rise of tubular pneumatic and electric actions, pedals would have become lighter and speech much quicker than on heavier mechanical actions. Though Buck does not mention it, one presumes that the evolving shape and size of the pedalboard was also a factor: longer keys place the fulcrum farther to the rear of the pedalboard, enabling increased ease of toe-heel technique.

Two other pedagogical comments by Buck, included in the 1894 edition, deserve mention. In Study No. 3, a long toe-heel passage is suddenly interrupted by pedaling marked “alternation, to relieve the ankle”, suggesting that even at this point the mechanism could still cause fatigue to the foot with extensive and repetitive use of toe-heel. In No. 4, Buck states: “Even when the heel is employed in the centre of the keyboard (although the worst position for the ankle), do not let the body sway or move the shoulders.” Buck was obviously concerned about how pedal technique related to overall body movement, showing his acumen and experience as a teacher.

Buck’s published works for concert performance provide similar evidence of the evolution from all-toe to toe-heel technique, suggesting that this evolution was not merely pedagogical. The detailed performance indications in these pieces, including pedaling, trace a development in Buck’s pedal technique across his career. In the “Grand Sonata in E-flat”, published in 1866 (just before the *Studies in Pedal Phrasing*), alternate-toe pedaling prevails, as shown in Example 19, the fugue subject from the fourth movement. Here, a lack of pedalings in some areas can be interpreted as the freedom to find one’s own pedaling, but more likely reflects an assumption that alternating toes are to be used except where marked. This passage works quite well using alternate feet except where indicated by the brackets given by Buck. At one point, though, an unmarked use of the heel (shown in editorial brackets) becomes necessary: the C at the upper end of the pedalboard must be taken by the right foot, but if one alternates toes from there, it leaves the left foot unable to reach the low B-natural in the next measure. Taking this upper C with the right heel aligns well with Buck’s treatment of notes at either extreme of the pedalboard (see Example 9). The bravura pedal passage from the end of the movement, seen in

⁸ Ibid.



Example 19 Fugue subject from “Grand Sonata in E-flat,” *Allegro maestoso*, mm. 10–16. Brackets indicate toe-heel pedaling.



Example 20 “Grand Sonata in E-flat,” *Allegro maestoso*, mm. 67–72.

Example 20, can be played entirely on alternate toes, except at the one indicated place. Not only is it possible to execute these passages with alternate toes, but the music seems to have been written with alternate-toe performance in mind, resulting in motives and figuration as shown in Example 19, mm. 15–16, that strongly resembles repertory from a century earlier, in which all-toe performance would likely have been the norm.

A somewhat different approach to pedal technique is reflected in the *Variations on a Scotch Air*, published in 1871. Here, while the unmarked notes in Variation 5 (see Example 21) can be achieved using alternating toes, we can see Buck breaking some of the “rules” established by his pedal studies as he notates, for example, white-key toe-heel combinations in rapid passagework, towards the end of m. 4. It is also interesting to see the chromatic scale in m. 4 continued for so long with the toe-heel alternation in the right foot, rather than



Example 21 Variations on a Scotch Air, Var. V, mm. 1–4.



Example 22 *Sonata No. 2, Allegro moderato ma energico, mm. 22–23*

using the alternate toes technique, which would have been possible for most of the passage.

By the time of the publication in 1877 of Buck's second sonata, op. 77, the organist-composer's pedal technique appears to have moved significantly further in the direction of a technique that incorporates the heels. The passage in Example 22, as marked, clearly does not favor the alternate-toe approach. Similarly, the figuration itself doesn't seem to be derived from alternate-toe playing in the same way that the figuration in the first sonata did. This suggests that even ten years after the first publication of the pedal studies, and well before their revision, Buck's pedal technique had evolved to a great degree.

The complete picture, taking into account the pedal studies and Buck's other compositions, is one in which pedal technique continues to rely on alternating toes, while beginning to expand to include a newly important role for the heel. An important technique for performer and pedagogue for several centuries, the pervasive use of all-toes appears to have been falling out of favor at the end of the century. For particular kinds of figuration, the use of the heel had become essential—and normal. Buck's revised pedalings in the studies are a snapshot of a technique in flux, adopting a new approach but still tied to an old one, with all of the ambiguities and self-contradictions that might arise from such a situation.

Larger context

In order to view Buck's changes as indicative of American technique in general, we need to see evidence from other Americans. An in-depth survey would be beyond the scope of this article, but an overview of nineteenth-century American organ tutors offers a useful window onto the landscape.⁹

Buck was not the first to advocate the use of the heels for the American organist. As early as 1845, Thomas Loud's *Organ Study* comments that the "execution of difficult passages, upon [the pedals] has of late been progressing

⁹ For a detailed survey of American organ methods, see Margaret Sihler Anderson, "The Organ Without a Master": A Survey of Nineteenth Century Organ Instruction Books in the United States" (PhD diss., University of Minnesota, 1977).

into use both in Europe and this Country... It may be remarked that the oldest method is the alternate use of right and left foot, the more modern is the double motion of using alternately the toe and heel, in addition to the use of both feet.”¹⁰ Loud’s brief set of exercises begins with only alternating toes, then moves to toe-heel.¹¹ Fifteen years later, J. A. Getze, in *The Young Organist* (1859) would reinforce the idea that the use of the heel was not only possible, but indeed preferable, in certain situations: “When several notes follow each other Diatonically, it is necessary to pass one foot over or under the other... Besides the method of using both feet on the Pedals, there is another, which consists in employing alternately the toe and heel of the same foot. This is very advantageous in playing chromatic passages.”¹² This distinction between diatonic and chromatic passages is intriguing and sheds further light on Buck’s markings.

By the end of the century, a normative use of the toe-heel alternation is reflected in Henry M. Dunham’s *Organ School* (1893), though, as with Buck, Dunham is sensitive to the ergonomic requirements of the different parts of the pedalboard: “In determining the pedaling for diatonic passages not marked, use alternate feet as much as possible when in the middle part of the pedal keyboard, and heel and toe when at either of the extremes.” Dunham goes on to give quite specific instructions: “In irregular pedal passages requiring the use of both alternate feet and heel and toe playing, keep the feet in the same relative position as far as practicable; that is, if the right foot is in advance of the left, ... in the keys that follow do not change the relative position of the feet until it is necessary to do so.”¹³ This is the most codified technical information so far. The emphasis on different approaches in different ranges of the pedalboard and the efficiency connected with relative position of the feet are aligned with the approach in Buck’s revised edition of the studies. Dunham illustrates his instructions with a passage from a W. T. Best arrangement that makes much use of alternate feet in diatonic passages.

By 1899, Arthur Page’s book *On Organ Playing* derogates alternate-toe playing to a great degree:

¹⁰ Thomas Loud, *Organ Study* (Philadelphia: Loud’s Piano-Forte & Music Store, 1845), 47.

¹¹ This fascinating method also contains examples of double pedal, including imitative counterpoint between the two feet, as well as pedal glissandi. It is difficult to imagine practical application of these techniques in contemporaneous repertoire or service playing.

¹² J. A. Getze, *The Young Organist* (Boston: O. Ditson, 1859), quoted in Anderson, “The Organ Without a Master,” 155.

¹³ Henry M. Dunham, *Organ School* (Boston: New England Conservatory of Music, 1893), 67.

There is a large amount of fundamental error to contend against, the toe being used too much, often to the entire exclusion of the heel... The heels should be used as freely as the toes from the very beginning... The clatter is often dreadful, especially if any unusually energetic “toe-ist” is operating. We contend that any system which demands that the toe shall be almost under the organ stool one instant and then be dashed forward suddenly to get at a short key must of necessity be a bad one, and yet some writers require “alternate toes as far as possible in all scale passages.”¹⁴

Page’s detailed analysis of the benefits of using the heels is quite convincing, especially since his aim is for a quiet, neat, non-acrobatic performance. Ironically, his primary example is the pedal solo from the “Little” Prelude and Fugue in B-flat major attributed to J. S. Bach. Today’s historically informed performer would certainly play this passage with alternate toes, and indeed, Page suggests that a performer in 1899 might have made the same choice: “This method just given [alternating toes] would probably be adopted by most players, and would be considered entirely satisfactory,” he reports—before going on to express a very clear negative view of this approach: “but that proves nothing but want of thought on their part. It is very like playing the passage with alternate hands on the manuals, and if nothing better could be found there would be no more to say.”¹⁵

Page was English, but his book was published and used in the United States. Its diatribe against “toe-ists” is ample evidence of the persistence of alternate-toe pedaling in performance and pedagogy, both in England and the United States, at the end of the century.

Finally, Ernest Douglas’ *Method of Organ Playing* from 1904 alludes to the interrelationship of technique and composition: “Pedal technique has been greatly developed within the last decade or two. Formerly very little use was made of the heel; but with the easier action and quicker response of modern organs it was found feasible, especially in scale-like passages, to use alternate toe and heel instead of toes only, and this advanced technique has opened up a broader field for organ compositions.”¹⁶ A comparison of the excerpts from Buck’s two organ sonatas above reinforces the idea that new techniques and new mechanisms allowed for new musical patterns in the feet.

¹⁴ Arthur Page, *On Organ Playing* (Boston: T. J. Donlan, 1899), 18–20.

¹⁵ *Ibid.*, 19.

¹⁶ Ernest Douglas, *Method of Organ Playing* (New York: J. Fischer & Bro., 1904), 1.

From Buck's *Studies* and the excerpts from other method books, a general set of guidelines for performance practice can be inferred:

- On organs built before about 1875, alternate toe pedaling is preferred except at the extremes of the pedalboard or when the right foot is operating the swell mechanism. Frequent crossings of the feet and/or large leaps in one foot were acceptable to achieve this.
- Diatonic passages involving mainly white keys should be played with alternate toes on all nineteenth-century pedalboards.
- Chromatic passages and/or diatonic passages with many black keys should be played with toe-heel combinations on organs built after about 1875.
- The performer should aim for a still upper body and quiet pedal technique.

It would be foolish to conclude that the heel was never used in the mid-nineteenth century—clearly it was, but only under certain circumstances that may well have differed from one performer to another, or even from one instrument to another. That two (or more) technical means exist to achieve the same musical goal should not be surprising. What difference, then, does it make whether a performer chooses to create legato with or without the heel? From the above evidence, there appear to be many ergonomic advantages to using the heel, advantages that may not have existed before certain developments in organ pedal actions. Alternate-toe legato, on the other hand, may be an important tool for a player who performs frequently on historical instruments or for a performer who simply wishes to experience first-hand (first-foot?) the historical development of pedal technique. As performers, our unrealistic desire to attach a single performance practice to a composer or musical work is an unfortunate oversimplification.

What, then, should a historically informed musician do when a composer, like Buck, changes his practice and leaves such a clear trace of this change? Which practice do we adopt as performers and teachers? We're faced with the rather impractical and daunting possibility of learning two different sets of pedalings, one for use on earlier organs and one for use on later ones. Which-ever practice we choose, this unique record of one performer's changing attitudes towards pedal technique offers a fascinating glimpse into the growth of the American organ performance tradition.