CHAPTER ONE

MINDFUL THINKING ABOUT CHORAL SINGING AND ITS PEDAGOGY

“Those who sing chorally are sometimes victims of fallacious ideas.”

This book explores choral singing and its pedagogy. More particularly, it addresses ways that choral music professionals can think and act more purposely to nurture the unique acoustic and interpersonal relationships that define choral singing and contribute to its enduring value. Unless you opened this volume by mistake, you have an interest in such matters.

You may be an undergraduate college or university student who aspires to be a choral teacher-conductor. Some research data suggest that your choice initially to pursue this interest may stem from previous participation in a high school or middle school, church, or community choir (Bergee, Coffman, Demarest, Humphreys & Thornton, 2001). The significant meanings you attributed to that involvement possibly motivated you to consider a professional life devoted to enabling such experiences for others. Respect for a particular conductor-teacher may also have been instrumental in your decision (Madsen & Kelly, 2002; Kantorski, 2002). Coursework, observations, and subsequent singing experiences at the university level have likely reinforced your decision if you are reading this book in your junior or senior year; however, your interest now is probably more focused or intense as graduation nears and you contemplate your imminent entrance into the profession.

On the other hand, you may be a veteran conductor-teacher. With some years of experience under your belt, you are better acquainted with the realities of this endeavor. But the satisfaction you derive from working with choirs and your decision to continue doing so may motivate you now to dig more deeply into particular aspects of your craft. Possibly, you are reading this book in conjunction with a self-devised program of ongoing professional development. Perhaps you have decided to pursue a graduate degree in choral conducting, choral music education, or church music.

If you sing with a church, civic, university, professional, prison, hospital, or nursing home choir, it could be that choral singing simply moves, attracts, or engages you because of its beauty or the sense of community it can engender. Perhaps you serve as an assistant conductor-teacher or section leader in your choir. While you do not contemplate a career in choral teaching-conducting, you do want to learn more about the dynamics of choral singing and its pedagogy.

Whatever the genesis or focus of your interest, you are in good company. Since antiquity, choral singing has played important roles in the lives of individuals, social institutions, and nations. Strimple (2002) captures this panorama simply, but eloquently. Throughout history, he says,
choral singing has “educated children, promoted political agendas, enhanced worship, expanded experiences, created pleasing diversions, and provided hope for people in circumstances of extreme duress…” (p. 9).

Each of us, the author of this book and you, its readers, has cause to believe, perhaps passionately, that choral singing experiences should be cherished, both for ourselves and for others. There is little need to persuade us of the worth of choral singing or the potentially empowering nature of its pedagogy. Of those things we are already convinced, for we believe both in their goodness and in their contributions to the quality of human life.

PROFESSION AND THE SEARCH FOR UNDERSTANDING

Precisely because we subscribe to such beliefs, however, it is important to give an accounting of them. As professionals, we have a responsibility to work toward credible, intelligible understandings of the ideas and practices our values engender. This enterprise is necessary for two reasons: (a) to comprehend and appreciate more fully the complexities and beauty of our chosen art in its own right; and (b) to fulfill an obligation to those in whose company and by whose graces we teach, learn, conduct, sing, listen, and share experiences of singing chorally.

DIMENSIONS OF CHORAL SINGING

We can examine phenomena associated with choral singing and its pedagogy through numerous lenses. Such lenses are not mutually exclusive. Each one, however, affords a slightly different viewpoint, and each lens contributes to understanding the overall richness and complexity of choral singing.

Eight Lenses

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<tr>
<th>Sociological</th>
<th>Psycho-acoustical</th>
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Figure 1. Eight lenses commonly employed to examine choral singing and its pedagogy.

A sociological lens views choral singing as a manifestation of human social behavior. In so doing, it underscores a very basic and, for the most part, irreducible consideration: choral singing is group singing. A singing group may be formally organized and function with some regularity, as is the case with a choir, chorus, glee club, singing society, or choral union. Or it may be informally organized and of a more temporary nature, as happens when friends or the wait staff at your favorite eating establishment serenade you with “Happy Birthday.” A sociological lens
focuses both on the interpersonal dynamics within a group of singers and on the functions of group singing itself within larger social contexts.

Physiologically, choral singing entails particular sets of vocal and aural co-ordinations. Choral singing is different from solo singing, because singers in a choral ensemble coordinate their individual phonation and resonance strategies in ways that vary somewhat from how they would sing as soloists. Such variations arise because group singing tends to emphasize the fundamental frequency ($F_o$) of a tone more than the reinforcement of overtones through the singer’s formant. Also, choir singers involve themselves continuously in an effort to balance the aural feedback they receive from their own voices with what they hear of the rest of the choir. They need to blend their voices in some manner with the perceived sound of the ensemble as a whole. More details about these physical aspects of choral singing will be addressed as this book proceeds. An important point to emphasize at this juncture is that the context of singing, e.g. solo or choral, appears to impact certain physiological dimensions of singing.

From a psycho-acoustical perspective, choral singing occurs at that point where the sound signals from multiple voices overcome the capacity of human ears to sum and fuse simultaneous sound waves into a perceived single sound. Efforts to localize this sound and identify it with its individual sources are disrupted. Our ears become both confused and fascinated by the perceived complexity of this event. Choral singing, in this sense, involves a phenomenon commonly called the “chorusing” or “ensemble” effect. The presence of this effect distinguishes psycho-acoustical perspectives from sociological viewpoints in one important way: Not only is a group of singers often required, but “chorusing” must also occur.

SIDEBAR

AMOST, BUT NOT QUITE:
AN INTRODUCTION TO THE CHORUSING EFFECT

“Sing precisely on the pitch that’s notated!” Choir conductor-teachers sometimes offer such comments in an effort to improve ensemble intonation. But beware of what you wish for. Were choristers indeed able to produce sound with no independent variations in phonation frequency, we would not perceive the resultant sound as “choral.”

Likewise, when choir teacher-conductors address desired cleanness of ensemble attacks by means of such exhortations as “Exactly together!” or “Not a second before, not a second after!,” they speak metaphorically. If each singer did somehow manage to initiate phonation at precisely the same moment and synchronize it perfectly with every other singer, some of the richness of “choral” sound would be lost.

What makes choral sound so appealing and engaging to human ears? Simply put, singers, being the human beings they are, (a) sing with subtle variations in pitch and (b) do not start at precisely the same time. It is this “almost, but not quite” character, particularly in terms of pitch, and, to a lesser degree in terms of timing, that makes the complex, quasi-random sound produced by choirs so distinctive.
Why such is the case can be explained at least partially by the physical phenomena of flutter, beats, scatter, and jitter. Singers cannot sustain a precisely steady pitch to the degree, for instance, that a piano can. That fact is not a value judgment; it simply characterizes one ingredient that makes the quality of a human voice distinctive. Most human voices flutter up and down in an average range of some 10 to 20 cents. Cents is a unit of measurement that denotes frequency ratio (one cent equals one one-hundredth of a half-step; 20 cents = .20 half-steps; 1200 cents = 1 octave).

The normal vibrato of the human voice, for example, is a type of flutter. It lends a quality of naturalness to the voice and marks it as human. Such would not be the case with alleged straight-tone singing. Perfectly straight tones sound mechanistic and artificial, much like electronically-generated sounds before they are enhanced by some means. Human beings cannot naturally produce truly straight tones. It is physically impossible for them to do so, because flutter is a natural product of the human voice organ. Sometimes, contentious debates occur between voice instructors and choir directors based on posited differences between vibrato singing and straight-tone singing. When argued in those terms, however, such disagreements evidence confusion on one notable scientific fact. Human voice vibrato rate and extent can either be controlled or allowed free range, but vibrato cannot be eliminated entirely from human voices. In that respect, these periodic disputes constitute misplaced debates that mistake differences in degree for differences of kind.

With a single voice, fluctuation in fundamental frequency occasioned by flutter does not normally affect overall perceived pitch. But when a group of voices phonates jointly, typically three or more voices in unison, these small differences in fundamental frequency are exacerbated by the production of irregular beats. Beats are fluctuations in amplitude (perceived loudness) occasioned by vocal sound waves that alternately reinforce and cancel each other. Because human voices produce irregular beats, this phenomenon is not as readily perceptible as it would be, for instance, in more stable sound-producing instruments where the amplitude fluctuations tend to be perceived as periodic. However, the irregular beats produced by human chorusing are so numerous and so profuse that the capacity of human ears to identify sounds with their sources is confused. The ears, in effect, give up an attempt to distinguish how many voices are singing in unison. They accept this rich complexity of sound as a unit, but one where the quality of the sound is perceived as somehow disconnected from its original sources.

Scatter, the dispersion of pitch or fundamental frequency within a choir or choir section, also contributes to a chorusing effect. One way to look at this phenomenon is in terms of a group “de-tuning” average. How much disagreement with or deviation from a group phonation frequency occurs over some unit of time, typically the duration of single note, constitutes scatter. Ternström (1989) reports that in one non-professional choir, scatter ranged from plus or minus 13 cents in the bass section. That is, approximately two-thirds of the basses, on average, were about one-eighth of a half-step from the group average at any one point in time. Such dispersion in a good amateur choir is not sufficiently great to produce a perception of unacceptable intonation, but it does add to the complexity of choir sound. Experiments with synthesized singing, moreover, suggest that the higher the frequency the less the maximum acceptable scatter (Ternström, 1989).
*Jitter* refers to frequency perturbation due to changes in glottal periodicity. Human vocal fold tissues contain irregularities that result in somewhat less than periodic oscillations. These period to period variations due to built-in oscillation differences among human voice organs produce a very small amount of pitch fluctuation. This kind of fluctuation primarily affects vocal timbre, lending it a degree of perceived roughness. Such roughness, though, is multiplied in group singing.

Timing is another factor that contributes to the chorusing effect. Human voices in a group context can time their individual acts of breathing and phonation onset such that they are perceived as unified. However, slight differences in this synchronization effort remain. This factor has not yet received the same degree of scrutiny by choir acousticians as has frequency variation. But the history of efforts to synthesize a chorusing effect that might be used, for example, in electronic keyboards, may be instructive in this regard.

A synthetic chorusing effect was first obtained by taking an input sound, adding a series of very short time delays, and then randomly mixing these delayed sounds together. Technology has since progressed from these early time domain efforts to the frequency domain techniques common today, because obtaining convincing results by manipulating synchronization was very time consuming (no pun intended). Also, time domain techniques proved not as satisfactory to the human ear as the simpler process of using bandpass filters to split an input sound into numerous frequency bands, which could then be varied in phase and amplitude before being re-mixed. Earlier time domain efforts, however, do indicate that synchronization of voices plays a role in the chorusing effect, though it is likely not as prominent a factor per se as frequency variation.

The subjective, perceived character of chorusing results, then, from the mixture of multiple sound sources all of which exhibit slightly different and not precisely steady frequencies. The complexity of this mixture, whereby the relative phases of the sound signals occasion partial cancellation and reinforcement over a broad frequency spectrum, allows the conglomerate sound to be perceived as something apart from its individual sources. The whole is more than the sum of its parts. Ternström (1989) describes it this way: “In a cognitive sense, the chorus effect can magically dissociate the sound from its sources and endow it with an independent, almost ethereal existence of its own” (p. 10).

Choirs, however, are only one element of the chorusing effect. The acoustic character of the venues in which choirs sing also plays a critical role. The character and complexity of conglomerate choir sound can change, sometimes dramatically, according to the reflections, or relative lack thereof, occasioned by the structure of the room or venue in which a choir sings.

Each of these factors, and more, contributes to what is often called the chorusing effect. In Chapter Two we will examine aspects of these associated phenomena in more detail.
From a musicological perspective, choral singing is typically discussed with some reference to musical compositions, whether scored or improvised. This emphasis in turn invites considerations of composers, musical styles, music theory, relevant societal constructs, and poetry or other textual material as they relate to choral singing. At this writing, the discipline of musicology is in flux.

Since its founding as Musikwissenschaft in the nineteenth century, however, musicology in both its historical and systematic thrusts has largely alleged that there are formal or aesthetic qualities inherent in musical works (particularly those of western art music). Moreover, it presumes that these qualities can be investigated in a positivistic manner, and that such investigation assists understanding, rehearsing, and performing those works. Very generally, what appears to distinguish traditional musicological perspectives on choral singing from the historical perspective to be discussed below is this privileged position customarily afforded choral music in general and western classical choral compositions in particular.

Some musicologists today question this emphasis and seek to move beyond what they consider its bias. Many other musicologists continue scholarly investigations according to the traditional assumptions of this discipline.

In notated contexts, score-based clues regarding characteristics of the conglomerate vocal sound imagined by the composer, the range and tessitutae of individual parts, and the meaning and declamation of the text receive attention, along with a host of analyses such as form, harmonic structure, composer biography, and comparison with other works provide primary data for musicologists. With improvised choral singing, ethnomusicologists in particular, attend to descriptions of the sound, its historical, ritualistic, or cultural uses and contexts, and the rules for improvisation.

Because it takes seriously non-western, ethnic, and improvisatory musics, and also because it values the contextual dimensions of choral singing over its works manifestations, an ethnomusicological perspective may be considered both a subset and a possible challenge to traditional musicology. In this sense, ethnomusicology tends to be an anthropological approach to music. Titon (2001), for instance, refers to it as the study of “people making music,” an emphasis that tends to avoid a presumption that music making depends on the prior existence of musical works said to transcend particular social contexts.

Psychological and neuro-biological perspectives tend to approach choral singing as a mode of cognition and emotion. Long held dualisms between body/mind, nature/nurture, and thought/feeling are increasingly called into question as scientists and philosophers alike process data now generated with the assistance of sophisticated brain and body imaging, gene research, and new theories of intelligence(s) that include a focus upon how human beings develop and learn in particular contexts. As this research continues to evolve, choral singing, by virtue of its employment of the human body-mind as a musical instrument, may provide a particularly intriguing case study for data acquisition and analysis. Perennial questions about the characteristics and measurement of such constructs as talent, ability, aptitude, teaching, and learning as they pertain to choral singing are within the purview of these psychological and neuro-biological lenses as well.
Therapeutic perspectives view choral singing as a salutary means to affect human well-being, including physical, mental, and societal health. Choral singing in this sense can be an intervention or treatment strategy undertaken, either singly or as one ingredient in a multi-faceted plan, to remedy or restore certain abilities or attitudes compromised by other events, contexts, or disabilities. This continuing perspective has ancient roots, e.g., in the Pythagorean contention that certain kinds of music can affect certain other human behaviors or moods. Today, it informs the use of choral singing as a desirable practice in such institutions as nursing homes, mental hospitals, veterans’ centers, and prisons, and among such strata in the general population as at-risk youth and senior citizens.

While each of the perspectives briefly outlined above possesses sufficient particularity to designate it as a separate, discrete lens by which to look at choral singing phenomena, human thought and practice are rarely so tidy. These perspectives inevitably overlap and interact with one another at various junctures.

Two additional perspectives on choral singing are uniquely equipped, both by tradition and methodology, to consider and monitor the “big picture.” Historical and philosophical lenses, while defined methods of inquiry in their own right, necessarily pervade and contribute to the various methodologies and procedures associated with each of the perspectives thus far described. In this sense, they constitute meta-perspectives on choral singing and its pedagogy.

Historical perspectives on choral singing seek to tell true stories about past characteristics and practices of chorusing phenomena. Both “truth” and “story” are important, interactive variables in such undertakings (Arnold, 2000).

Location and intelligent use of primary source data assist in explication of situated truth by historical perspectives. Primary sources may include documents, manuscripts, journals, newspaper accounts, programs, statistical records, letters, recordings, photographs, or other artifacts. Historical data, however, very rarely speak for themselves. Just as important is the crafting of a story to weave these data into informed patterns of meaning, both for the past and for the present. Historical perspectives, above all, offer arguments, i.e., ways to understand alternative worlds and hence to think about other possibilities.

Philosophical perspectives on choral singing invite us to “think about our thinking” with respect to ideas, concepts, values, premises, beliefs, propositions, schemata, hypotheses, and theories as they impact chorusing and its pedagogy. In this sense, philosophers perform the necessary work of inspecting the blueprints and building plans employed by other perspectives for logical weaknesses and unexamined assumptions. Philosophers, however, may also generate new questions and theories amenable to exploration and testing in dialogue with other methodologies. In vernacular terms, philosophers serve dual roles: they are both (a) “crap detectors” whose task it is to expose and prevent “garbage in, garbage out” errors, and (b) weavers of potential futures and new theories, who perform thought experiments in order to analyze epistemological, metaphysical, and ethical matters that pertain to choral singing and its pedagogy. Very succinctly, philosophical perspectives on chorusing phenomena inquire primarily why such phenomena may exist and what they may mean both contextually and universally.
A very obvious, but sometimes overlooked, characteristic of choral singing is that, by and large, it is singing with words. Choral music has text. That fact presents a philosophical quandary for those perspectives argued primarily from the stance of absolute music, or “music alone.” As Peter Kivy (2002), a prominent philosopher of music and proponent of a music alone perspective, concedes “…………..” (p. ). Choral music professionals, therefore, probably need to exercise some caution when applying to a choral singing context certain arguments and analyses from those who do philosophy from a music alone perspective. The basic issue is this: Either one assumes that words sung chorally do what words generally do, i.e., carry or evoke referential and more or less specific meanings, or one assumes that, when words are paired together with music, music is such the stronger partner that it overcomes or supercedes any referential aspects of ordinary language. Teacher-conductors who adopt the latter assumption, of course, have less to worry about. Their work with choral diction can be confined to its effects on tone quality and intonation. Whether or not the words are actually intelligible as such would not ultimately matter. (I have sometimes contemplated if that argument would fly with audience members or festival adjudicators who might take issue with my choir’s diction!).

Each of these perspectives, --sociological, physiological, psycho-acoustical, musicological, psychological, neuro-biological, therapeutic, historical, and philosophical--, affords important and revealing ways of looking at choral singing phenomena. Still, choral singing, at times, remains a rather fluid concept.

Think, for instance, about the possible permutations when attempting to distinguish between the sociological construct of group singing and the psycho-acoustical construct of chorusing. Through a sociological lens, choral singing occurs when any group of people comes together to sing. A psycho-acoustical lens focuses instead upon the presence of a chorusing effect. But, as we have seen, a continuing chorusing effect occurs with not just any group, but rather a group where certain variables are in place, e.g., a requisite number of singers per vocal part. One could, of course, suggest that chorusing is simply a species of a larger genus called group singing. But that might not always be the case, because reflected sound waves from the rooms or venues in which groups sing also play a role. Their contribution complicates matters when it comes to fixing a minimum number of voices necessary to produce a chorusing effect. To illustrate, consider the following possibilities.

**Particular Considerations**

**Consort Singing.** A solo quartet (four singers, one singer performing each of four vocal lines), although it is certainly group singing, is not typically a consistent illustration of chorusing. Only when these voices combine temporarily on unison tones does a strict chorusing effect occur. If one considers simply the original sound sources themselves, then chorusing would likely require three singers on a unison tone. However, in a very live room acoustic, two singing voices might suffice, because the room reflections themselves could tend to function as a third voice.

Similarly, under the right room conditions and dependent upon spacing and placement of the voices, a duet of two singers might conceivably achieve a chorusing effect. This circumstance would apply especially to those moments when the two voices were singing in unison.
**Fused Sound Singing.** Barbershop quartets with one voice per part, and also perhaps close harmony vocal ensembles with one or two voice per part, such as the smaller *a cappella* groups currently popular in school, university, and professional contexts (e.g., the King’s Singers), present still another case. When these ensembles have moments of unison singing by three voices (or perhaps two voices, depending on the room acoustic and other factors), there may be a passing chorusing effect. Generally, however, and even more importantly, the overall singing character of these groups, especially barbershop quartets, is such that the very precise tuning and more carefully controlled vibrato singing to which they aspire occasions a fusion that produces perceptually a unified, stable, and almost instrument-like sound. In other words, here is a case of group singing that purposely seeks to avoid the chorusing effect, even when this effect might otherwise be achieved.

**Solo Choral Sound.** Overtone singing by one vocal sound source, as in the case of Tuvan throat-singers, represents a particularly intriguing phenomenon. Even though they are produced simultaneously, however, such multiple sounds from one voice would likely not constitute a chorusing effect per se, because two or more perceptually separate tones are produced. But add very reverberant venue reflections, and theoretically there could be perceived choral singing that involves only one human sound generator. In that case, chorusing occurs without group singing at all. The same principle might prevail with simply one singer who finds herself in an environment that produces multiple echoes.

**Distinguishing Between Choral Singing, Small-Group Singing, and Choir Singing.** Given such considerations, and in order to be perfectly clear in our thinking, a distinction between small-group singing and choir singing may be helpful. Group singing occurs whenever two or more people sing together. Both consort and fused sound ensembles such as barbershop quartets are examples of small-group singing. Choir singing, on the other hand, transpires when a group of people produces a chorusing effect. Typically, that would require a minimum of three singers per part, though as we have seen, sometimes less than three singers will do, depending upon venue acoustics. For the sake of convenience and in deference to common usage, we can say that “choral singing” and “group singing” are synonymous, umbrella terms, but that choral/group singing includes both small-group singing and choir singing. Indeed, those who serve as directors of choral activities in schools and churches frequently find themselves working with small vocal groups as well as choirs, and often with soloists as well. The reason for exploring these distinctions is that acoustically, and, to some degree, physiologically, small-group singing and choir singing tend to require somewhat different approaches.

To summarize: Ambiguous terminology may sometimes represent conceptual perplexity, which can lead, in turn, to confusion in methods and techniques. “One size does not fit all” is an apt reminder in this respect. Choral or group singing is a conceptual umbrella that embraces both choir singing and small-group singing. But there are empirically demonstrable differences in sound and vocal technique between choir singing and many forms of small-group singing, including vocal consorts and fused-singing ensembles. One would not, for example, cultivate the sound of consort or barbershop singers in precisely the same way one builds choir sound, because the continuing chorusing effect inherent to choir singing introduces a new variable whereby the whole is inevitably more than the sum of its individual parts.
<table>
<thead>
<tr>
<th>CHORAL SINGING GROUPS</th>
<th>Number of Voices on a Part</th>
<th>Chorusing Effect Without Considering Room Reflections (yet not assuming an anechoic chamber)</th>
<th>Chorusing Effect in Partnership with Adequately Reverberant Room Reflections</th>
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<tr>
<td><strong>Small-Group Singing:</strong></td>
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<tr>
<td><strong>Vocal Consorts</strong></td>
<td></td>
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<td>Solo quintets, quartets, trios, duets</td>
<td>1</td>
<td>No**</td>
<td>Negligible***</td>
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<tr>
<td><strong>Fused-Singing Groups</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Barbershop quartets</td>
<td>1</td>
<td>No</td>
<td>No ***</td>
</tr>
<tr>
<td><em>Smaller a cappella groups (4-8 part singing)</em></td>
<td>1 (sometimes 2 on some parts)</td>
<td>No**</td>
<td>**In moments of temporary unison singing (depending upon how many singers are in unison), choir singing occurs; thus, for that moment, there may be a short-lived chorusing effect.</td>
</tr>
<tr>
<td><strong>Larger-Group Singing:</strong></td>
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<tr>
<td>**Formal</td>
<td>Ongoing**</td>
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<tr>
<td>Choirs, Choruses, Glee Clubs, Chamber Ensembles, Regular Congregational Singing etc.</td>
<td>3 (sometimes 2*) or more</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>**Informal</td>
<td>Temporary**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impromptu Sing-a-longs, Caroling, Campfire Singing, Group Serenades, Assembly Singing of National Anthem, etc.</td>
<td>3 (sometimes 2*) or more</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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</table>

*Dependent upon the character of room or venue reflections

**In moments of temporary unison singing (depending upon how many singers are in unison), choir singing occurs; thus, for that moment, there may be a short-lived chorusing effect.

***In extremely reverberant environments, however, depending on spacing of singers, there could be some continuing chorusing effect, even when not singing in unison. Barbershop quartets, for example, would not fare well in vaulted stone cathedrals.

Figure X. Types of Choral Singing Groups and Their Propensities Toward a Chorusing Effect.
Computer Generated or Engineered Choral Sound. Listen to the background vocals on a recent movie soundtrack. Chances are those /u/ and /a/ sounds are not produced by human beings, except indirectly, i.e., by sound engineers. Such background chorusing is the product of increasingly sophisticated voice syntheses. Those efforts have not yet succeeded in completely synthesizing a realistic sounding choir, but achievement of that objective will likely occur in the not too distant future.

This development raises a number of interesting issues. In terms of research, for instance, the painstaking efforts to create mathematically and electronically a choral sound capable of generating a realistic performance of any choral literature, whether composed or even improvised, affords enormous insight into the complexities of choir singing. By the same token, eventual ability to manipulate in a controlled fashion the multiple variables of choral sound will be a boon to choir acousticians and other researchers, because it is difficult with live choirs to coordinate and control such research.

There are issues of preference and prejudice as well. Some choral musicians will undoubtedly rail against “machine music” or rally ‘round cries about the demise of the choral art as a distinctly special characteristic of humanity. To some extent, of course, they will have a point. One of the notable characteristics of choir singing, particularly amateur choir singing, is that just about anyone can participate in it and participate well with a moderate amount of time and dedication. The enjoyment and satisfaction therefrom derived are no small matters.

Because of that factor, however, and given previous history with respect to music and technological innovations, it is plausible to conjecture that some accommodation between live and synthesized choir singing will eventually become commonplace. As Braun (1999) points out, music-making and technology have always enjoyed a bi-directional relationship. Each has influenced the other. Choral musicians have long accepted as commonplace, even integral to their craft, such inventions as the piano, portable risers, accompaniment tapes for either learning or performance, microphones, and not least, the choral music score, itself made possible by the inventions of graphing, mapping, and printing.

The late Fred Waring admitted to enhancing the bass section of the Fred Waring Singers with a string bass for many of their radio broadcasts. In so doing, he was merely following a centuries old tradition of using whatever worked to the larger end of a desirable choral sound. Ancient Greek choruses wore acoustic masks. Renaissance performance practice allowed, even encouraged, the doubling of any or all vocal lines by instruments or, if there were not sufficient voices, letting instruments alone take the unpopulated choir parts. Recordings of choral performances today take advantage of the ready availability of editing, mixing, and other enhancement procedures. It is not that large of a stretch to imagine that someday synthesized choir voices, for use in real-time and capable of being manipulated to fit the blending requirements of particular choirs, will be commonly available. These sounds might be used to augment weaker voice sections, permit any size ensemble to study and perform multi-voiced literature that would otherwise require additional troops, or to provide occasional special effects.

Readers of this book who may now be in college or university preparing for a career in choral teaching, take note. Acquiring skills to use synthesized voice technologies and to participate in
decisions about defining best practices with respect to their employment will likely be expected of you at some point during your careers.

DEFINITION OF CHORAL SINGING

A Matter of Relationships

Choral singing, at heart, is all about relationships. These relationships, moreover, are interactive and context dependent. Two broad sets of such relationships are especially important. The first set includes acoustic relationships among the sounds made by a choir as a whole and between the individual voices and voice sections that comprise its ensemble. Both of these phenomena, of course, exist in necessary partnership with particular venues. The second set encompasses the interpersonal relationships among people who participate, whether immediately or more indirectly, in the propagation and celebration of choral sounds.

Only a few very general characteristics describe choral singing in a universal way. Choral singing involves some kind of aggregation of voices, either literally or perceptually. It continues to involve large numbers of people as participants, audience members, and support personnel, whether in formal or more informal contexts. And choral singing, by and large, entails the unique and direct use of human bodyminds as instruments in music-making, doing so in ways that distinguish it from solo singing, some forms of consort and barbershop singing, and ensembles of orchestral, band, or folk instruments, whether real or synthesized.

It has been convenient heretofore for methods and conducting manuals to treat choral singing as a monolithic, unitary construct. The fact of the matter is that things become rather complex once we peek beyond generalities. Choral ensembles are composed of varying and often uneven numbers of singers of different age levels, different voicings, and unlike prior experiences, who sing in a surprising variety of acoustic environments. They also sing in a vast array of styles and function in diverse ways within particular social contexts.

Given these situated, relational characteristics and the eight lenses previously discussed, this book proceeds from the following working definition of choral singing. Choral singing encompasses an enduring, interactive set of associated phenomena in human societies that engages multiple voices in simultaneously acoustical and interpersonal relationships in both formal and informal contexts, for such purposes as edification, enjoyment, human development, and human ritual.

Names commonly applied to choral groups reflect some of the rich history of chorusing. Chorus and choir are two of the most common appellations applied to a company or aggregation of ensemble singers. The shared etymology of both words points to the roots of choral singing in ritual, religion, and music theatre. The Greek word χορος, for instance, refers to the place or enclosure (“dancing ground”) where the Greek dramatic chorus spoke, sang, and danced. Its Latin cousin chorus denotes a choral dance. In Western Christendom, that place in the chancel of a cathedral occupied originally by a group of lesser clerics who were seated in proximity and sang together is called the choir.
The word choir, partly because of this sacred association, can be reserved for exclusively religious contexts, while the term chorus can describe singing by an aggregation of voices in more secular places and contexts. However, even though they may possibly retain some utility in distinguishing types of literature sung, once meaningful distinctions between sacred and secular have become increasingly blurred as discrete descriptors of a company of singers. The appellation *concert choir*, for instance, reflects this transition and melding. It literally fuses together the overtly religious construct “choir,” an ensemble whose purpose was to participate in divine worship, with the decidedly more secular construct of “concert.” Use of the latter term to describe a public performance where one simply listens to music for its own sake was not common until the latter eighteenth century. This book uses the terms chorus and choir interchangeably.

Other terms, such as glee club, choral society, choral union, and symphonic choir originated in comparatively more recent times. *Glee club* emerged in the eighteenth century as a description of popular gatherings of male singers to perform usually unaccompanied and relatively short part songs, or glees. *Choral society* and *choral union* originally refer to civic or working people’s choruses, which gained popularity in the late eighteenth and the nineteenth centuries.

**DEFINITION OF CHORAL PEDAGOGY**

As used in this book, choral pedagogy is the “deliberate, sustained, and systematic effort to transmit or evoke attitudes, skills, and sensibilities” with respect to choral singing, in both formal and informal contexts. This definition incorporates Cremin’s (1970, p. xiii) fine definition of education. Indeed, other terms for choral pedagogy are “choral music education,” or simply “choral methods.”

The use of “pedagogy,” in some ways a more quaint term, instead of “education” or “methods” is deliberate. There are two major reasons for this decision. Primary among them, as ably underscored by Durrant (2003) and others, is an apparent reluctance by some choral conductors to think of themselves as educators. As will be seen in Chapter Two, there may be some historied reasons, largely associated with the early nineteenth century emergence of the choral conductor as an essential interpreter of musical works who stands apart from the chorus and in authority over it, that inform such reluctance. Perhaps egged on by the specialization now rampant in academe, an artificial division between choral conductors and choral music educators today approaches in some quarters the status of a turf war replete with separate credentialing, and, if left unchecked, I fear separate knowledge bases. It is my hope that by using the word pedagogy, perhaps a more neutral term than education, such silliness can, at least for the duration of this book, be put aside. One of the acknowledged biases of this book is that all choral conductors should be knowledgeable choral singing pedagogues and that all choral music educators should be well skilled choral conductors. Moreover, teaching is a sine qua non whether one thinks of herself primarily as a conductor or an educator. Accordingly, the words conductor and teacher will be consistently linked by hyphenation throughout this volume.

A second, related reason for use of the term pedagogy is its etymology. The Greek word *pedagogicos* (pedagogue) refers to a servant. In this sense, choral pedagogues are persons whose working lives are given to the service of nurturing and caring for those temporarily entrusted to
them. While engaged in their essential roles as choral pedagogues, choir conductor-teachers are foremost and primarily servant leaders, whatever the particular contexts in which they serve.