CHORISTER PLACEMENT; THE CRITERIA, PROCEDURES, AND METHODS USED IN PLACING THE CHORISTER WITHIN THE MIXED CHORAL ENSEMBLE

by

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A Document Submitted to the Faculty of the
SCHOOL OF MUSIC AND DANCE
In Partial Fulfillment of the Requirements For the Degree of
DOCTOR OF MUSICAL ARTS WITH A MAJOR IN MUSIC
In the Graduate College
THE UNIVERSITY OF ARIZONA

2003
As members of the Final Examination Committee, we certify that we have read the
document prepared by Bradley T. Barrett
entitled Chorister Placement: The Criteria, Procedures, and Methods Used
In Placing The Chorister Within The Mixed Choral Ensemble

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Signed: Bradley T. Barrett
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ABSTRACT

Choral conductors are continually working to create an overall choral sound or sonority that possesses pristine balance, tone quality, and intonation. My intent was and remains to study the various practices and methods used by collegiate and professional choral conductors in determining placement of individual singers within the choral ensemble. By the term placement, I refer to the actual vocal positioning of the choral musician within the ensemble.

In an effort to formulate a body of knowledge on this topic, a selected sampling of collegiate and professional choral conductors throughout the United States was polled. Each conductor was selected to represent the founding American choral schools of singing. Gathering the information by using a written questionnaire, each conductor responded either by written or verbal response, with the option to remain anonymous. Each respondent presented his methodology for placement of the individual chorister and section performing specific types of choral repertoire.

This study was two-fold in design: 1) it created a method for placing the individual singers within their section, and 2) it established a criterion for placing
each section in a mixed choral ensemble according to the type of repertoire being performed. My intent was to experiment with various methods supplied by the polled conductors for placement, and to illuminate the advantages and disadvantages of each method. By using the collected information, I worked to formulate my own methodology of placement which either reinforced or refuted those previously established placement procedures.

A lecture recital was held to further address the criteria, practices, and methodology of the study. In this demonstration, a representative selection from the various types of choral literature revealed those formations.

To display the marked difference in the sounds a choir emits using various formations, the most appealing, as well as the least desirable formations, were demonstrated. The goal and objective of this study was to formulate the conclusive findings in a descriptive, informed, and useful manner--providing today's choral conductor with the necessary tools to place the choristers according to their specific repertoire choices.
CHAPTER 1

Introduction

The advancement of culture, economy, and technology depends on the human ability to design, reconstruct, and improve what had previously been the norm. We move a cab forward in an automobile and it becomes more spacious and more aerodynamic; we deepen and lengthen the wing of a jet and it carries a hundred more passengers; we conceptualize and personalize computers, and now we need modems and palm pilot organizers. Although these are examples of tangible innovations, the same spirit of advancement and refinement prevails in the realm of music. Throughout the history of music, composers and musicians have sought to improve what music is and how music is conceived.

Regardless of their ability to blend inspiration and technical change, contributors to our musical heritage have been, and are, it is fair to say, those men and women who seek consonance or beauty. This perception is formed by their ideals, experiences, and education. In an effort to create this beauty, choral conductors are often frustrated and perplexed when the ensemble they conduct lacks the desired balance, tone
quality, and intonation that is required to serve their repertoire selections. One aspect is the process a choral conductor faces when deciding how to place both the individual chorister and each specific section of the ensemble.

My study deals with the various aspects of placement: criteria, procedures, and methodology. The study is two-fold: First, to create a method for placing individual singers within their sections; and second, to establish criteria for placing each section within the mixed ensemble. As a choral conductor who regularly attends national, divisional, and statewide conferences of the American Choral Directors Association, and serves as an adjudicator for state and district music festivals, it is my observation that choral ensembles utilize the same standing formation throughout an entire program. It has been my experience that when individual voices dominate the choral texture, it is often due to the lack of proper placement within the ensemble.

During the course of this study, when determining the method for chorister placement, it became apparent that conductors devote minimal time and thought to appropriate chorister placement. Choral conductors
often admit that they call upon the basic premises of the founding schools of choral singing in America, or simply propagate the formations their mentors preferred. These choral schools include: the St. Olaf College Choir founded by F. Melius Christiansen, the Westminster Choir College founded by John Finley Williamson, the techniques and ideas of Father William J. Finn, systems or positions of Fred Waring and his Pennsylvanians, the composite techniques of Joseph K. Klein, Douglas Stanley, and John C. Wilcox, and the technique of Robert Shaw.¹ In studying the various schools of singing, the primary premise and objective was to promote a choral sound based on proper intonation, balance, and tone quality. Through their diligent efforts, conductors of the aforementioned schools continually worked to establish and pioneer their own techniques or methods in dealing with chorister placement.

The process in placing both individual singers and specific sections is an ongoing phenomenon. Placement choices, for individual voices, range from positioning strong voices together, alternating a strong voice with

a weak voice, or surrounding a group a weak voices with a group of strong voices. However, conductors follow either a mixed formation, a formation which is made characteristic by the mixing of voice parts across the entire ensemble, or by section, placing singers in homogeneous sections, when dealing with the entire ensemble.

Other contributions on this subject deal with the following: the use of voices that possess acoustically sound qualities to achieve a proper choral sound, the use of placement and its role on the sociological aspect of group dynamics and the singer's individual musical growth, the role of proper spacing and its relationship to the "self to other" in achieving overall choral sound. Additional studies also include: the use of acoustical placement vs. random placement to


determine the preferred choral formation, and the role of individual height and spatial considerations in achieving choral blend.


Statement of the Problem

The problem presented in this study is to examine the criteria, procedures, and methods used in placing the chorister within the mixed choral ensemble. The term placement, refers to the actual vocal positioning of the choral musician within their respective section as well as each section within the ensemble. This study is two-fold in design: first, to create a method for placing individual singers within their section, and second, to establish a criteria for placing each section within a mixed choral ensemble that best serves the needs and demands of the various types of standard choral repertoire.

Individually, is it worthwhile to spend the time to place each singer within each section? The panel of selected conductors offer their rationale for individual placement.

Specifically:

1. Within each section should singers be placed in a spectrum ranging from the blending or flutelike to the non-blending or soloistic voice?
2. Within each section should singers be placed in a design alternating weak voices with strong voices?

3. Within each section should singers be placed according to their orchestral counterparts (reed-like voices vs. flute-like voices)?

4. Within each section should a model voice, that voice that the conductor views as voice which possesses the most desirable tone quality, be placed in the center of the section?

5. Within each section, should singers be placed on variously sized boxes so that mouths and ears are near the same or approximate levels?

Sectionally, which standing formation best serves each type of standard choral repertoire? The panel of selected choral conductors offered their rationale for sectional placement of the choral ensemble. Specifically:

1. Using specific sectionalized and mixed formations, which configuration best serves standard polyphonic choral
repertoire (four-part and six-part textures)?

2. Using specific sectionalized and mixed formations, which configuration best serves standard homophonic repertoire (four-part and eight-part textures)?

3. Using specific sectionalized and mixed formations, which configuration best serves standard sectionalized choral repertoire which contain predominantly homophonic textures?

4. Using specific sectionalized and mixed formations, which configuration best serves standard choral repertoire which employs a double choir design?

I used the collected information to formulate my claim that each specific piece of choral literature will possess proper intonation, balance, and tone quality, once each voice and section are properly and strategically placed.

Delimitations

The participating choral ensemble was prepared and conducted by the investigator of this study. The
ensemble consisted of fifty-four, music and non-
music majors from each grade level of undergraduate
classification at the University of Arizona.

Significance of Study

This study used various aspects of conducted
studies and incorporated them with my personal
contributions. Former studies have centered on the role
individual and sectional placement plays on group
dynamics, musical growth, overall
discipline/management, variances in personal height,
and acoustical qualities. This study, however, offered
original research and focused its approach on choosing
the appropriate placement methodology which best serves
each type of choral literature performed by a
collegiate mixed choral ensemble of forty to sixty
choristers.
CHAPTER 2

Review of Related Literature

Several studies have been conducted and are available that deal with various aspects of singer placement within a choral ensemble. It has been discovered that conductors devote a minimal amount of time and thought in addressing the placement issue. Choral conductors often admit that they call upon the basic premises of the founding schools of choral singing or simply propagate those formations their mentors preferred. These choral schools include: the St. Olaf College Choir founded by F. Melius Christiansen, the Westminster Choir College founded by John Finley Williamson, the composite technique or practices of Joseph K. Klein, Douglas Stanley and John C. Wilcox, and lastly the Robert Shaw methodologies.

The singing technique advocated by the St. Olaf College Choir promotes ensemble tonal cohesion, in other words, working to make certain that the individual voice remains subordinate to the overall comprehensive sound.\(^8\) Individually, voices are considered to possess either dark or bright tone

\(^8\) Decker, 43-51.
qualities. F. Melius Christiansen worked to create a mix of dark and bright voices to achieve an ideal choral blend. The choir consists usually of fifty-eight voices, with the delineation being eighteen sopranos, fifteen altos, eleven tenors, and fourteen basses. However, to achieve a proper balance, the number of singers in each section may fluctuate. For example, additional singers might have to be added in the female sections to balance a section of fifteen basses with extremely strong voices. The choral formation used by the St. Olaf College Choir consisted of the following (Illustration 2.1):

![Illustration 2.1](attachment:Illustration2_1.png)

The Westminster Choir College School of Singing works to develop the individual. Through individual growth and education the desirable overall choral sound is vital and responsive. The choir consists of approximately forty singers with the bass section functioning as the ultimate foundation—the strongest section. Founder, John Finley Williamson felt that the mixed choir should resemble a New England church. For example, the ensemble should follow the structure by specifically placing the soprano section as the spire of the design (Illustration 2.2.).

The technique made characteristic by Father William J. Finn seeks to associate a specific orchestral color with each section of the choir, while the Fred Waring School of Singing is based on the premise that proper diction combined with proper vowel shape creates the optimal choral blend or sound.\textsuperscript{11} Father Finn states that all singers should possess the capabilities to captivate the dramatic qualities of both the musical and textual content. His primary goal

\textsuperscript{11} Decker, 43-51.
is to create an ensemble balanced and blended according to color or timbre. Finn adheres to the following four premises: first, to blend each section within itself; second, to blend the extremes (sopranos and basses); third, to target the altos and tenors as the choral axis; and fourth, to place the baritones as the maintainers or keepers of blending modifications.¹²

The Wilcox, Stanley, and Klein School of Singing cites physical involvement as the driving force for proper choral ensemble sound, while the Robert Shaw Singers incorporates the use of vocal energy, rhythmic accuracy, and vocal shaping of the phrase as the catalyst for proper choral ensemble sound.¹³ Shaw's ensemble consisted of approximately thirty singers (eight sopranos, seven altos, seven tenors, and eight basses), placement decisions varied from season to season, depending on personnel change. In the audition, Shaw selected those voices that possessed appropriate tone qualities for the music being programmed. His formation of choice consisted of

¹² William J. Finn, The Art of the Choral Conductor (Boston: C. C. Birchard and Company, 1939), 166-167

¹³ Decker, 43-51.
approximately seven SATB quartets plus two extra singers, with the quartets placed in a mirror design (Illustration 2.3).\footnote{14. Robinson and Winold, 180.}

\begin{center}
\begin{tikzpicture}
\node at (0,0) {BAST (BAB) TSAB};
\node at (1.5,0) {TASB (TT) TSAB};
\node at (3,0) {ATSB (S) BSTA};
\draw[->] (0,-1) -- (1.5,-1);
\draw[->] (1.5,-1) -- (3,-1);
\end{tikzpicture}
\end{center}

Illustration 2.3

In other well-known choral organizations such as the Roger Wagner Chorale (presently known as the Los Angeles Master Chorale), the conductor preferred two-row formations. However, when a concert venue’s performance area was too narrow, he would alter the formation to include a three-row design. In the performing of homophonic literature, this twenty-four member ensemble (six sopranos, six altos, six tenors, and six basses), used a mixed formation, placing the basses on each end (Illustration 2.4), while sectional placement, singers of the same voice part positioned together, was used in the performance of polyphonic
literature. In the sectional design, the St. Olaf formation was used, he placed the bass section behind the soprano section and the tenor section behind the alto section (Illustration 2.5)\textsuperscript{15}

\begin{center}
\begin{tikzpicture}
\begin{scope}
\clip[rounded corners] (1.5,4) rectangle (6.5,0);
\node at (4,2) {Conductor};
\end{scope}
\node at (3,4) {BSATBATSASB};
\node at (3,3) {BSTATSABSTAB};
\end{tikzpicture}
\end{center}

Illustration 2.4

\begin{center}
\begin{tikzpicture}
\begin{scope}
\clip[rounded corners] (1.5,4) rectangle (6.5,0);
\node at (4,2) {Conductor};
\end{scope}
\node at (3,4) {BBBBBBTTTTTT};
\node at (3,3) {SSSSSSSSAAAAAA};
\end{tikzpicture}
\end{center}

Illustration 2.5

\textsuperscript{15} Robinson and Winold, 181-183.
The Norman Luboff Choir, another well-known choral organization performed in both sectional and mixed SATB quartet designs, incorporating three or four rows of singers. However, to achieve proper intonation, sectional designs were the most commonly used (Illustration 2.6).  

<table>
<thead>
<tr>
<th>Bass</th>
<th>Tenor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soprano</td>
<td>Alto</td>
</tr>
</tbody>
</table>

Illustration 2.6

The William Hall Chorale used a variety of formations throughout a single performance. The conductor chose the formations for the following reasons: first, musical style; and second, visual variety. According to Hall, polyphonic repertoire is best served in sectional fashion, while random SATB quartets are the design of choice for music of the Romantic era. In his dealing with "heavy" and "light" voices, Hall incorporated either a "VW" or "V" design (Illustration 2.7). In addition, to provide the

audience with an aural perception, he separated "light" and "heavy" voices in a gender-specific design (Illustration 2.8).\textsuperscript{17}

In reviewing the studies that have been conducted concerning individual placement, a minimal amount of information is made available to substantiate a pattern or trend in dealing with this issue. However in

\textsuperscript{17} Robinson and Winold, 183-185.
Richard Tocheff's study entitled, "Acoustical Placement of Voices in Choral Formations," singers were placed according to their blending vs. non-blending abilities, and each voice's ability, to establish overtones or acoustical qualities.\(^{18}\)

In Guy Webb's book, *Up Front*, he states his placement methodology as a careful process involving the subjective evaluation of each singer within his or her specific section. In this process he considers instrument size and ability to blend as primary factors for placement.\(^{19}\) Other practices used for vocal placement include: arranging singers with opposing blending qualities in a "side-by-side" fashion, and positioning singers as they relate to orchestral instruments. For instance, a voice with blending abilities could correlate with the flute section or strings; while a non-blending voice could be referred

\(^{18}\) Tocheff, 4055A-4056A.

\(^{19}\) Webb, 258-260.
to as a "reed-like" voice. In the "side-by-side" method, a blending voice would be placed adjacent to a non-blending voice of the same section. Proponents of this method or technique hold that when singers are placed in this alternating design, the positive qualities of each opposing voice combine to create the optimal vocal unit.

Wilhelm Ehmann holds that tone quality of each chorister is the primary aspect in determining individual and sectional placement. Ehmann suggests that those voices which possess brilliant or soloistic qualities should "support the total sound" by being positioned in the center of ensemble." 

Researchers indicate that decisions concerning individual placement are often made for non-musical reasons. For instance, a singer's height, whether

20. René Clausen, Choral technique session at the René Clausen Choir School (July, 2000), Concordia College, Moorhead, Minnesota.

21. Weston Noble, Director of Choral Activities, Luther College, Decorah, Iowa, interview by author, 7 February 2002.

short or tall, often determines their placement within a respective section.  

Guy Webb’s text, *Up Front*, holds that height is an important factor, not in a non-musical sense, but in a musical/vocal aspect. He further states that “height differences can affect the sound,” and by using boxes to equalize the height, the overall sound is improved. According to Webb, not only is the sound enhanced, but in addition, the visual picture of the choir is made more attractive and uniform.  

However, William Grega, in his 1996 master’s thesis at Southeast Missouri State University, found that height differences among choristers do not make a significant change in the overall sound of a high school mixed choral ensemble.  

Instead, his study claims that sectional or block and mixed formations tend to determine overall choral sound.

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Researchers who have considered choral educational methodologies and techniques hold that individual singer placement considerations should be made for disciplinary reasons. For instance, a chorister who has proven to be a fine singer but has poor behavior might be placed next to a model student whose behavior is considered exemplary. Therefore, a rehearsal management issue was deemed more important than the musical aspect of the ensemble. Another non-musical consideration is placing singers for visual gain. For example, during the selection process, conductors will choose to have the same number of male and female voices in the ensemble, therefore creating a stage picture which would allow an alternating design made up of male vs. female.

In Lori Keyne’s 1992 document, entitled “Choral seating arrangements and their effects on musical and social elements,” individual placement should be determined for sociological reasons. She found that a singer’s vocal production is improved when they are

---

physically placed next to singers they trust. In essence, Keyne concludes that individual musical growth is increased as the sociological dynamic is based on group trust and cohesion.\textsuperscript{27}

When addressing sectional placement of the entire ensemble, a considerable amount of information is available. For years, conductors have been intrigued with this issue and have concerned themselves with finding the optimal seating arrangement for both the rehearsal and performance; therefore a plethora of information is in circulation.

Beginning with the most basic of choral designs, John Mueller stated in his book, \textit{The American Symphony Orchestra: A Social History of Musical Taste}, that ensembles should adhere to the format used by composer/conductor, Hector Berlioz. In his 1856 treatise, Berlioz held that instrumental ensembles should be organized in a semi-circular fashion. He continued by stressing the importance for choral organizations to follow the same design, placing voices

\footnotesize{27. Keyne, 19.}
of the same gender together. In other words, the women’s voices should be placed in front of their male counterparts.29

Wilhelm Ehmann states in his book, Choral Directing that the placement should not disturb the feeling of a corporate feeling or “total body-soul organism.” He feels that once the group dynamics is set, through social interaction, choral singing can reach yet a higher level of artistry. He further holds that singers should follow the design used by Medieval and Renaissance musicians and rehearse/perform in a closed circle formation. This unbroken circle coincided with the continuous polyphonic lines found in the repertoire of the time. Ehmann continues by stating that “…the ideal circular formation is preferred whenever a music society sings for itself, i.e. singing without an audience.”30


30. Ehmann, 7.
The aural aspect is considered important to determine choral formation. In Paul Roe's book, he mentions that singers should be placed to allow them to hear themselves and the other members of the ensemble.\(^{31}\) Robinson and Winold further state that ensemble cohesion is unachievable if the individual chorister's aural aspect is not addressed.\(^{32}\)

In *The Modern Conductor*, Elizabeth Green stresses the necessity for strength, by maintaining sectional designs in her choral configurations. The common denominator present in her designs places the sopranos to the left of the conductor, thus comparing them to the violin section of a symphony orchestra.\(^{33}\) Spatial considerations are also important in the placement process. For instance, conductors have found that when singers are placed in rows, each singer should stand to


\(^{32}\) Robinson and Winhold, 153.

create "windows." This "window" design is achieved when singers stand between the shoulders of the two singers placed in front of them. Experts agree that not only does this design enhance the visual aspect, but also singer's projection capabilities are increased.\textsuperscript{34} Roe holds that careful attention should be used to insure that each singer can see the director, and that the director can see each member of the ensemble also.\textsuperscript{35} Another spatial aspect is actual distance between each singer, conductors have found that when singers are placed shoulder to shoulder, the overall ensemble sound is hampered.\textsuperscript{36} According to Lewis Gordon's 1977 text, \textit{Choral Director's Complete Handbook}, he states, "a cramped ensemble produces a smaller sound."\textsuperscript{37} Joyce Eilers-Bacak recommends singers place their arms on their hips, allowing enough space

\begin{itemize}
  \item[34.] Webb, 256.
  \item[35.] Roe, 35.
  \item[36.] Webb, 256.
\end{itemize}
to make certain their elbows do not touch the singer on each side.\textsuperscript{38}

The formal design of each specific repertoire selection has often played an important role in formation decisions. Ehmann states:

"A well planned and meaningful formation is always the prerequisite for choral music. Architecture as the 'mother of fine arts' is also the 'mother of music'."\textsuperscript{39}

He further feels that "disorder" in the seating arrangement can lead to music disaster and bland choral singing.\textsuperscript{40} Robert Garretson feels that formation selection should always evolve around each singer's individual ability and the number of singers in the ensemble.\textsuperscript{41}

Choral formations fall into two primary categories, sectional or block and mixed arrangements. Proponents of sectional formations claim that these designs promote musical and emotional stability,

\textsuperscript{38} Joyce Eilers-Bacak, choral session, Southwest Missouri Fall Conference (October, 1981), Southwest Missouri State University, Springfield, Missouri.

\textsuperscript{39} Ehmann, 13.

\textsuperscript{40} Ehmann, 13.

\textsuperscript{41} Garretson, 286.
especially in young, developing choral ensembles. David Stocker continues by claiming that intonation and overall blend is readily achieved.\(^{42}\) From a conducting aspect, sectional formations allow for clear, more decisive use of cueing and dynamic control.\(^{43}\) Webb cites that when a specific piece calls for opposing male and female sections, sectional designs can provide "a dramatic impetus."\(^{44}\)

According to Gordon, formations should serve an educational purpose. In essence, he infers that the more conventional sectional arrangements, better suit the learning process. Sectional arrangements not only provide stability for the unsure singer, but also, when used in performance, afford the opportunity to hear the individual lines found in repertoire selections. In addition, Gordon believes that individual lines are easily melded to create a cohesive choral sonority.\(^{45}\)


\(^{43}\) Lambson, 47-54.

\(^{44}\) Webb, p. 260.

\(^{45}\) Gordon, 180-183.
Opponents to sectional choral formations cite intonation as the primary reason to consider using a choral formation other than the traditional sectional or block design. Louis Diercks claims that an individual singer can alter the tuning ability of a specific section, which can ultimately destroy the intonation of an entire ensemble. In addition, in a sectional or block formation, the singers with lesser vocal prowess often rely too heavily upon those voices in their section which possess greater, more developed vocal skills and abilities.

Choral experts consider mixed formations, both in rehearsal and performance, to develop the overall choral sound. They claim that when singers of the same voice part are not placed adjacent to each other, choral blend and proper balance are greatly enhanced. In addition, Webb feels that the choral sound becomes


47. Garretson, 289.


49. Roe, 41.

50. Lamb, 11-16.
“rich and homogeneous”. He further states that mixed or quartet formations promote increased singer independence, total musicianship, and the ability to hear chordal structures.  

Diercks claims that a mixed choral design enhances the singer’s ability to evaluate musical accuracy and progress by being able to hear their own instrument. In addition, Stocker states in his 1975 article that a chorister’s level of performance is increased in a mixed formation. Stocker believes that, as singers become aware of other vocal lines, choral artistry improves.

Disadvantages of mixed choral formations include the following: choral tone may become bland, due to the reduction in sound output by the less mature voices; contrapuntal literature loses lucidity and/or clarity, the individual or soloistic voices,

52. Diercks, 6-10.
53. Stocker, 9-11.
54. Webb, 260.
55. Stocker, 9-11.
especially in forte passages, can offset balance of overall sound.\textsuperscript{56}

Conversations concerning the importance of mixed vs. sectional formations are ongoing. Stocker claims that when using various choral formation designs, little or no difference exists in the overall sound of the ensemble.\textsuperscript{57} However, Diercks speaks of the noticeable difference in warmth of tone when the ensemble was placed in quartets. He claims that only certain acoustical overtones can occur when using this type of design is used.\textsuperscript{58} Lewis Gordon combines the two choral designs and uses both methods during phases of the music preparation process. Phase one involves the "note learning and technical mastery" portion; it calls upon the sectional designs to achieve this objective. In addition to note-learning and technical mastery, Gordon feels this promotes the singer's confidence to approach new repertoire. Phase two is the "polishing"

\begin{thebibliography}{9}
\bibitem{W6} Webb, 260.
\bibitem{S6} Stocker, 9-11.
\bibitem{D6} Diercks, 6-10.
\end{thebibliography}
phase. Choristers are switched to a mixed formation to "develop musical interplay between singers."

Finally, Phase three is a recapitulation of the Phase one formation to "refine sectional contributions."\textsuperscript{59}

Regardless of the methodology, both individually and as a section, the concluding statement in Stocker's article offers a possible resolution. He states:

"Whichever system we might feel is most advantageous for our groups with their distinctive strengths and weaknesses, we are obliged to experiment and to analyze, but above all, to create within the aesthetic demands of our choral art"\textsuperscript{60}

\begin{flushleft}
\textsuperscript{59} Gordon, 180-181.

\textsuperscript{60} Stocker, 11.
\end{flushleft}
CHAPTER 3

Methodology

The study involved four primary stages: the survey process, the pre-experiment preparation, a slate of graduate choral conductors, and a collegiate choral mixed ensemble.

Stage One:

The Survey Process

I designed and distributed a survey instrument to poll selected choral conductors and their various forms of placement methodology. The criteria established for the sampling were as follows: 1) the conductor must have conducted the same mixed ensemble for at least three consecutive years; 2) the conductor must have conducted a mixed ensemble at either a regional or national convention of the American Choral Directors Association Convention, or a national meeting of the Music Educators National Conference. The subjects were polled anonymously, to allow freedom to elaborate their preferred procedures. In an effort to maintain a stratified sampling, choral conductors from all regions of the United States were included. Surveys were sent to twenty choral conductors; nine responded to the survey. Each of the responding choral conductors were
products of the founding American schools of choral singing and represent all regions of the continental United States (Illustration 3.1).

Regional Location of Highest Earned Degrees:

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Regional Location</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Western Region;</td>
<td>Private College</td>
</tr>
<tr>
<td>B</td>
<td>Midwestern Region;</td>
<td>State University</td>
</tr>
<tr>
<td>C</td>
<td>Upper Midwestern Region;</td>
<td>Private College</td>
</tr>
<tr>
<td>D</td>
<td>Western Region;</td>
<td>State University</td>
</tr>
<tr>
<td>E</td>
<td>Midwestern Region;</td>
<td>Private College</td>
</tr>
<tr>
<td>F</td>
<td>Western Region;</td>
<td>State University</td>
</tr>
<tr>
<td>G</td>
<td>Upper Midwestern Region;</td>
<td>Private College</td>
</tr>
<tr>
<td>H</td>
<td>Midwestern Region;</td>
<td>State University</td>
</tr>
<tr>
<td>I</td>
<td>Eastern Region;</td>
<td>Private College</td>
</tr>
</tbody>
</table>

Illustration 3.1

Regional Location of Present or Last Held Collegiate Position:

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Regional Location</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Western Region;</td>
<td>State University</td>
</tr>
<tr>
<td>B</td>
<td>Southwestern Region;</td>
<td>State University</td>
</tr>
<tr>
<td>C</td>
<td>Upper Midwestern Region;</td>
<td>Private College</td>
</tr>
<tr>
<td>D</td>
<td>Western Region;</td>
<td>State University</td>
</tr>
<tr>
<td>E</td>
<td>Upper Midwestern Region;</td>
<td>Private College</td>
</tr>
<tr>
<td>F</td>
<td>Southeastern Region;</td>
<td>State University</td>
</tr>
<tr>
<td>G</td>
<td>Southwestern Region;</td>
<td>State University</td>
</tr>
<tr>
<td>H</td>
<td>Midwestern Region;</td>
<td>State University</td>
</tr>
<tr>
<td>I</td>
<td>Lower Midwestern Region;</td>
<td>State University</td>
</tr>
</tbody>
</table>

Illustration 3.2

I collated the collected information, examined the various techniques, and experimented with them in the daily choral rehearsal. Members of the Symphonic Choir, The University of Arizona's premiere undergraduate mixed ensemble consisting of fifty to sixty voices, were the subjects.
Stage Two:
Pre-Experiment Preparation

Prior to the three-day experimentation period, the choir was given the following preparation instructions and procedures:

1. Each singer was provided a sheet that included their name and a corresponding number for each participant.
2. Singers were provided visual charts of each formation to be tested. The charts were designated by letter and corresponding number (i.e., formation 1A, 2A, 3A, etc). In addition, each singer was instructed to locate their number and work to familiarize their position in each provided diagram.
3. Prior to the experimentation period, a non-singing rehearsal was devoted to make the transitions occur in a quick, uninterrupted fashion.

Stage Three:
The Evaluative Panel

As a means to provide objective feedback, the various formations were evaluated by six University of Arizona graduate choral conductors whose choral
backgrounds stem from one or more of the founding American choral schools of singing. These evaluators were: Korre Foster, Eric Holtan, Christopher Larsen, Jamie Spillane, Emilie Sweet, and Bryan Van Gelder. Each was asked to listen for overall balance, intonation, and tone quality and select the formation, both individually and sectionally, they deemed most desirable. I collected and evaluated their responses and used them to formulate the optimum form of chorister placement.

Stage Four:
The Performing Ensemble

The study utilized the vocal talents of the Symphonic Choir, The University of Arizona’s premiere undergraduate choral ensemble. This elite group of fifty-four vocalists, chosen by audition, consists of music majors and non-music majors and represents the top undergraduate singers across the university. The ensemble rehearses fifty minutes, Monday through Friday. Symphonic Choir performs a fall concert, holiday concert, concert tour, spring concert, and collaborates with other university choral organizations in a performance of a major choral work.
The Symphonic Choir began rehearsing the repertoire for this study at the beginning of the second semester. To insure objectivity, the mixed choral ensemble was not allowed to rehearse in the various formations being surveyed.

In an attempt to further address the criteria, practices, and methodology of the study, I demonstrated the surveyed results by performing selections taken from the survey's listing of standard repertoire in a lecture recital on March 19, 2002. The demonstration-performance worked to illuminate the advantages and disadvantages of each individual or sectional method or design. The findings were presented in a descriptive, yet useful manner, to provide today's choral conductor with the necessary tools to make the appropriate placement decisions which best serve their repertoire choices.

The analysis of the collected data occurred in two phases; the techniques used by collegiate choral conductors to establish both individual and sectional choral placement and the preferred choral formations for various types of choral repertoire as chosen by the slate of graduate choral conductors.
CHAPTER 4
Results of the Study

The data collected from the survey included a variety of techniques and procedures in individual and sectional chorister placement. Conductor A deemed chorister placement as the most important facet of the choral singing process. In the chorister selection process, Conductor A placed tone quality and blending and non-blending ability as the most important area of consideration. In addressing the singer, conductor A used the terms “light voice” and “strong voice” to describe a singer’s ability. He worked to place the larger, more soloistic voices at or toward the rear of the ensemble, regardless of height. Conductor A considers tonal matching or identifying similar voices as the most important area of the placement process. Sectional placement, according to Conductor A, is finding a formation which promotes uniformity of sound. When asked to indicate the preferred formation, he stated that placing the male sections behind the female sections enhanced tuning and the chorister’s ability to hear outer and inner voices. Conductor A continued by stating that the formation changes with each piece of
performed repertoire. When given specific types of choral repertoire, he offered the following formation designs (Illustration 4.1)

| Four part polyphonic repertoire:          | Sectional Design               |
| Divisi polyphonic repertoire:             | Sectional Design               |
| Four part homophonic repertoire:          | Mixed or scrambled Design      |
| Divisi homophonic repertoire:             | Mixed or scrambled Design      |
| Sectionalized homophonic repertoire:      | Sectional Design               |
| Double Choir repertoire:                  | Sectional Design               |
|                                          | for each choir with considerable distance between each choir. |

Conductor B described his prescribed method for placing the individual chorister from an instrumental perspective. Within each section he identified each singer according to his or her flute-like or reed-like tone quality. Once the tone quality is categorized, the flutelike voices are placed on the outer perimeters of the respective sections, with the "color" voice, that voice within the section who possesses the ideal choral tone quality, is placed in the center of their section. Height is not a factor during the placement process.
Conductor B stated that his preferred formation is a two row design that places the bass section behind the alto section and the tenor section behind the soprano section. This is also the preferred formation used in rehearsals. Given the specific types of repertoire for the mixed ensemble, his formation preferences were as follows (Illustration 4.2):

<table>
<thead>
<tr>
<th>Repertoire Type</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four part polyphonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Divisi polyphonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Four part homophonic repertoire:</td>
<td>Mixed Design</td>
</tr>
<tr>
<td>Divisi homophonic repertoire:</td>
<td>Mixed Design</td>
</tr>
<tr>
<td>Sectionalized homophonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>Double Choir repertoire:</td>
<td>Sectional Design for each choir</td>
</tr>
</tbody>
</table>

Illustration 4.2

Conductor C identified his method as one that places each chorister within a section according to a corresponding instrumental tone quality. "Blending voices" are referred to as flutes; heavier, "non-blending voices" are referred to as reeds. Voices possessing both qualities are termed "mixers."

In a choral setting, conductor C chooses to maintain a sectional design with the flute-like voices placed toward the outer perimeter, the reed-like voices
located toward the center, and the "mixer" voices placed in the center of each respective section. In dealing with double choir repertoire, Conductor C moves from a standard sectional design and uses a four-row design placing each section on one row (Soprano, row one; Alto, row two; Tenor, row three; Bass, row four).

Conductor D cited the careful placement of dramatic voices, those voices possessing strong vocal and reading skills, as the fundamental goal in achieving choral uniformity. In dealing with the strong or soloistic voice, he places the more advanced voice adjacent to the lighter, blending voice. In the area of height consideration, Conductor D places no importance to individual height during the placement process. In the selection of singer membership, he ranks sight-reading ability has the most important area of consideration; tone quality and blending ability are least important. Conductor D described the vocal instrument as it related to orchestral instruments. For example, the blending voice was termed as the flute, while the more dramatic voices was associated with the trombone.

In addressing his formation techniques, Conductor D preferred sectional formations, placing the bass
section behind the soprano section and positioning the alto section behind the tenor section. He cited hearing and singer independence as the reasons for his sectional formation choices. His specific formations choices included (Illustration 4.3):

<table>
<thead>
<tr>
<th>Repertoire</th>
<th>Formations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four part polyphonic repertoire</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Divisi polyphonic repertoire</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Four part homophonic repertoire</td>
<td>Modified Mixed Formation</td>
</tr>
<tr>
<td>Divisi homophonic repertoire</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Sectionalized homophonic repertoire</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Double Choir repertoire</td>
<td>Sectional Design</td>
</tr>
</tbody>
</table>

Illustration 4.3

Conductor E described his method for determining individual placement as one based on the classification of each voice in terms of "bright" and "dark" tone qualities. In selecting members for an individual section, he worked to identify the singer perceived by the conductor as "ideal" and selected singers who came the nearest to matching the qualities of that model voice. Once a section was selected, the conductor would work to place singers in an opposite fashion. In other words, a voice possessing a dark quality would be placed adjacent to a voice with a bright quality. By using this procedure the conductor found that the
positive qualities of the two opposing singers complimented each other and created a vocal unit which possessed a desirable vocal product.

In dealing with choral formations, Conductor E chose a variety of formations according to the ensemble’s stage of musical development. For instance, a four part homophonic choral piece studied at the beginning of a semester might use a sectional design, while the end of the semester might find the same piece being performed in a mixed or scrambled formation. During the survey process, Conductor E cited his latest formation discovery or design—a four row design, placing the alto section in row one, soprano section in row two, the tenor section in row three, and the bass section in the final fourth row. He found, by experience, that most choirs never have an ample amount of alto vocal sound present in the overall ensemble. Using this new formation, he found that better tuning, balance, and ensemble awareness were enhanced. Using this innovative design, it was also discovered that in the performance of double choir repertoire, the choir
could be easily divided into multiple choirs while maintaining sectional unity.

Conductor F cited subjective singer evaluation as the primary premise for establishing individual and sectional singer placement. He stated aural acuity, pitch accuracy, intonation, rhythmic accuracy, timbre, and vibrato rate as the areas of consideration. Using the aforementioned aspects, conductor F worked to find the most comfortable spacing for each singer that allowed the individual singer to be vocally free to sing and at the same time, maintain a unified choral sound. In placing the dramatic voice, he stated that placing the larger voice in the back was the most used technique. In addition, height considerations never played a role in singer placement.

Conductor F worked to maintain the same formation in rehearsal and performance and changed formations according to the nature of the composition. His formation choices included (Illustration 4.4):
Four part polyphonic repertoire: Sectional design
Divisi polyphonic repertoire: Sectional design
Four part homophonic repertoire: Sectional design
Divisi homophonic repertoire: Sectional design
Sectionalized homophonic repertoire: Sectional design
Double Choir repertoire: Sectional design

Illustration 4.4

Conductor G based his methodology for singer placement on one basic premise, positioning strong voices toward the middle of each section. By using this method, the conductor provides the ensemble with an aural and vocal point of reference. Once the point of reference is established, the entire ensemble is then placed in a two-row design, placing the male sections in the second row with the female counterparts in front, alternating one bass voice with one tenor voice and one soprano voice with one alto voice. By doing this, the conductor creates a sectional feel while achieving a two-row quartet design. Once again, the anchor voices of each section are placed together and located in the center of the ensemble. By using this method, the conductor is able to maintain the same formation with every piece of performed choral literature.
Conductor H cited vocal size, color, and blending ability as the primary areas of consideration for placement. He continued by stating that he incorporates a variety of placement techniques: dramatic voices are placed next to lighter voices, dramatic voices are placed in the middle of the section, and dramatic voices are placed toward the rear of each section. Regardless of the technique the size and color of the individual instrument was the determining factor, with no consideration for height. When asked how important individual chorister placement was to the total choral experience, Conductor H’s reply was one of utmost importance. He continued by describing his choice of terminology used to classify each chorister—a blending voice was called a mixer voice, while a heavier more dramatic voice was referred to as dramatic. Conductor H felt that in order for choral sectional placement to be successful, individual placement has to be initiated. For the choral rehearsal and performance, he chose a very basic sectional design, one that places the bass section behind the soprano section and the tenor section behind
the alto section. His primary reason for maintaining the same formation throughout a program was to save time. However, should time allow, he would use a quartet formation for the homophonic repertoire. A summary of the choral formations is included in Illustration 4.5:

<table>
<thead>
<tr>
<th>Repertoire Type</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four part polyphonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Divisi polyphonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Four part homophonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Divisi homophonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Sectionalized homophonic repertoire:</td>
<td>Sectional Design</td>
</tr>
<tr>
<td>Double Choir repertoire:</td>
<td>Sectional Design</td>
</tr>
</tbody>
</table>

Conductor I offered a detailed listing of his approach to singer placement. His placement methodology consisted of the following procedures:

1. At the beginning of each semester, each singer sings a well-known melody (i.e., "My country 'tis of Thee") and is evaluated according to blending vs. non-blending ability. Within each section, a spectrum is created, ranging from blending to non-blending abilities.

2. Individual singer's height is considered.
Personal boxes are used to insure all singer's ear canals and mouths are relatively level. Conductor I ascertains that "leveling" each singer can improve each singer's aural skills and blending ability.

3. Varied choral formations are utilized according to each type of choral repertoire being performed or studied. Staggering the singers has become the desired formation of choice (Illustration 4.6).

Illustration 4.6
Chapter 5.

Presentation and Analysis of Data

In this section, the two-fold statement of the problem is discussed and addressed according to the gathered data and information. The various individual techniques are addressed and the optimal design provided. In addition, a detailed written description and statistical analysis of the panel's choices is provided and discussed.

In choosing the optimal individual placement, a common denominator was found. Each conductor, when positioning singers, established a spectrum ranging from the blending or flutelike voice to the non-blending or reed like voice.

The experimentation phase of individual chorister placement used the following techniques:

1. Hearing singers within each respective section and placing them in a spectrum, according to their blending vs. non-blending ability. In the choral ensemble, the non-blending voices would be placed toward the center of the ensemble.
2. Hearing singers within each respective section and placing them in a spectrum according to their flutelike or reed like tone qualities. Identification of those voices which possess both qualities and placing them in the center of the sectional design. In the choral ensemble, the reed like voices would be found in the center of the ensemble.

3. Hearing singers within each respective section and placing singers in a spectrum ranging from those voices described as possessing a bright and dark quality. After each voice is identified, opposing timbres are placed together in an alternating fashion. In other words, a bright voice is paired with a voice identified as a dark quality. The users of this technique hold that when two opposing timbres are placed in an adjacent design, the positive qualities of the pair are joined to create one optimal instrument.
4. Hearing singers within each respective section and working to identify the one voice, which possesses the most desirable tone quality. After the one "color" voice is selected and placed in the center of the section, voices are placed according to their tonal relationship with the chosen "color" voice. The conductor listens to each singer and places those problematic voices in close proximity to the optimal singer. For instance, a voice with a metallic or strident tone quality would be placed near the optimal, or "color" voice.

In studying each individual technique, I experimented with each method and devised my own personal approach or technique, and incorporated aspects of each method. I listened to the singers within each respective section and established the singer possessing the strongest blending ability. I then worked to find the next voice which could
successfully blend with the first selected voice, followed by the next voice which could blend with the second chosen singer, and so on. When the task of determining the blending ability of each singer was completed, formulating optimal seating arrangements began. In the survey, responding conductors provided two options of using a prescribed system to classify each singer by blending ability—one by number, the other by lettering. For instance, a soprano with blending ability would be labeled a “Sb” while a non-blending soprano would be classified a “Sn.” I chose, however, the more sophisticated and thorough approach, using a numbering system to classify and identify each singer. In creating a numbering system for the ensemble, the lowest number of each section is assigned to the singer with the greatest blending ability. For instance, a soprano I with the greatest blending ability would be number ten, while the voice with the least ability to blend would be assigned the number seventeen. Please refer to the chart below (Illustration 5.1):
Upon the completion of this numbering process, I then placed the "color" or optimal voice in the center of the section, followed by the placing of voices in an opposing design--placing a blending voice with a non-blending voice.

Through the three-day experimentation period, it was found that this composite method was deemed the most desirable. In addition, I experimented with the aspect of height considerations. Following the placement process of each section, I worked to level the height of each section by creating personalized boxes. With the total process complete, members of the ensemble offered the following responses:

1. By establishing or identifying the model or "color" voice and positioning that voice in the center of the section, each singer was provided a point of reference.
2. In the alternating, blending vs. non-blending design, each singer found they were able to compliment their "partner's" vocal production. In the opposing paired design, singers were made to listen and evaluate the composite product being produced.

3. Singers found the music learning process occurred expeditiously.

4. Singers felt an increase in the level of "team" or "group."

5. When the personalized boxes were used to level the overall singer heights, choristers discovered the following:
   a. a homogeneous blend became easier to achieve.
   b. individual aural capabilities were enhanced.
   c. singers who were short in physical stature felt an increase in confidence and feeling of self-worth.
   d. singers felt the overall appearance of the group was
improved. In essence, students appreciated the enhanced uniformity of the ensemble's appearance.

In the evaluation of the chart and numbering system, several advantages were found. This includes:

1. The chart provided each singer a visual picture of the choir's standing formation, not only the location of that specific singer, but the location of all members of the ensemble.

2. The chart provided each singer with a visual cue in locating the following:
   a. the location and number of the model representative within each section.
   b. the location and number of the opposing "partner" singer within the spectrum of evaluated voices.
3. Administratively, the system improved the following aspects of the choral program:
   
a. For instance, folder number forty-one, assigned to an alto II singer, could be reassigned to another alto II when used again.
   
b. Previously used scores, when used at a later time, can be reassigned to the same voice part. By using this method, time is saved for both the conductor and chorister.

Spatial considerations were found to influence the sound of the section and the singer's ability to hear themselves, their section, and across the entire ensemble. Experiments were conducted using the following singer positions:
1. Ensemble was placed shoulder-to-shoulder with each row positioned directly in front of each other.

2. Ensemble was placed shoulder-to-shoulder with "windows" created between each row. In essence, each row was staggered, allowing each singer the ability to see and be seen.

3. Members of the ensemble were instructed to place their arms on their hips, creating a tool or measure for individual spacing. Each row was then positioned directly in front each other.

4. Members of the ensemble were instructed to place their arms on their hips, creating a tool or measure for individual spacing. Each row was then positioned to create "windows"--staggering each row, allowing each singer to see and be seen.

When asked to select the preferred spatial design, the panel of graduate choral conductors unanimously chose the fourth design, which placed each singer farther apart, and creating "windows"--enhancing the
singer’s ability to see and be seen. According to both the panel and the members of the ensemble, it was apparent that as the choir created more space between each singer, the sound was fuller, richer, and the singer’s ability to hear was improved.

Part Two of the survey instrument dealt with the placement of each specific section of the mixed choral ensemble—soprano, alto, tenor, and bass. When asked the preferred rehearsal formation, the pervading response was a design placing the female voices in front, with the male voices in the rear of the ensemble. Reasons for this formation were to offer an opportunity for singers to tune, hearing both outer and inner voices. Placing the basses behind the sopranos increased their ability to tune with the tonic doublings often found in mixed choral repertoire.

In the survey instrument, each conductor was asked to provide his or her preferred standing formation for specific types of choral composition. These types included (Illustration 5.2):
1. **Type of Composition:** Homophonic (four-part)  
   **Representative Work:** "Alma Redemptoris Mater"  
   **Composer:** Giovanni Pierluigi Palestrina

2. **Type of Composition:** Homophonic (divisi)  
   **Representative Work:** "Lux Aeterna"  
   **Composer:** Edwin Fissinger

3. **Type of Composition:** Homophonic (sectionalized, SSA/TBB)  
   **Representative Work:** "Abendlied"  
   **Composer:** Josef Rheinberger

4. **Type of Composition:** Fugal or imitative (four-part)  
   **Representative Work:** "Jauchzet den Herrn" (middle section)  
   **Composer:** Johann Palchelbel

5. **Type of Composition:** Complex imitative (divisi)  
   **Representative Work:** "Ascendit Deus"  
   **Composer:** Orlando Gallus

6. **Type of Composition:** Double Choir  
   **Representative Work:** "Jauchzet den Herrn" (opening section)  
   **Composer:** Johann Palchelbel

Illustration 5.2

Upon the establishing of the preferred formations, I worked to create designs, both individually and sectionally, derived from the survey instrument’s results: four-row sectionalized and mixed formations, two-row sectionalized and mixed designs, and double choir forms.

The four-row, fully sectionalized choral formations were created in four varying designs (Appendix A):
Formation 1A

1. Bass section placed behind the soprano section.

2. Tenor section placed behind the alto section.

3. Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice. The non-blending voices of the spectrum were placed toward the center of the ensemble with the blending voices located on the outer perimeters of the choir.

Formation 1B

1. Bass section placed behind the soprano section.

2. Tenor section placed behind the alto section.

3. Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice
with the blending voices located at the outer perimeters of the ensemble.

4. Within each section of the ensemble, a model or "color" voice is selected and placed in the center of each section.

Formation 1C

1. Bass section placed behind the soprano section.

2. Tenor section placed behind the alto section.

3. Voices from each section placed in a tone quality spectrum ranging from those singers with bright voices to those singers with dark tone qualities.

4. Singers within each section are coupled in a bright quality vs. dark quality alternating design.

Formation 1D

1. Bass section placed behind the soprano section.
2. Tenor section placed behind the alto section.

3. Voices from each section placed in a tone quality spectrum ranging from blending to non-blending voices.

4. Voices within each section are coupled in the opposing, blending vs. non-blending design.

5. The model voice from each voice part is established and placed in the center of each respective section.

The results from the panel’s evaluation of Formations 1A through 1B varied with each specific choral piece. The results were as follows:

1. Homophonic, four-part composition (Illustration 5.3):
   a. Most favored: Formation 1D
      • Bass section placed behind the soprano section.
      • Tenor section placed behind the alto section.
• Voices from each section placed in a tone quality spectrum ranging from blending to non-blending voices.
• Voices within each section coupled in the opposing, blending vs. non-blending design.
• The model voice from each voice part is established and placed in the center of each respective section.

b. Least favored: Formation 1A

• Bass section placed behind the soprano section.
• Tenor section placed behind the alto section.
• Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice. The non-blending voices of the spectrum placed toward the center of the ensemble
with the blending voices located on the outer perimeters of the choir.

Homophonic, Four-Part Composition

Illustration 5.3

2. Homophonic, divisi composition (Illustration 5.4):
   a. Most favored: Formation 1D
      • Bass section placed behind the soprano section.
      • Tenor section placed behind the alto section.
      • Voices from each section placed in a tone quality spectrum ranging
from blending to non-blending voices.

Voices within each section coupled in the opposing, blending vs. non-blending design.

The model voice from each voice part is established and placed in the center of each respective section.

b. Least favored: Formation 1B

- Bass section placed behind the soprano section.
- Tenor section placed behind the alto section.
- Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice with the blending voices located at the outer perimeters of the ensemble.
- Within each section of the ensemble, a model or "color" voice
is selected and placed in the center of each section.

Illustration 5.4

3. Homophonic, sectionalized composition (Illustration 5.5)
   a. Most favored: Formation 1C
      • Bass section placed behind the soprano section.
      • Tenor section placed behind the alto section.
      • Voices from each section placed in a tone quality spectrum ranging from those singers with bright
voices to those singers with dark tone qualities.

- Singers within each section coupled in a bright quality vs. dark quality alternating design.

b. Least favored: Formation 1D

- Bass section placed behind the soprano section.
- Tenor section placed behind the alto section.
- Voices from each section placed in a tone quality spectrum ranging from blending to non-blending voices.
- Voices within each section coupled in the opposing, blending vs. non-blending design.
- The model voice from each voice part is established and placed in the center of each respective section.
4. Fugal or imitative, four-part composition (Illustration 5.6):

a. Most favored: Formation 1C

• Bass section was placed behind the soprano section.

• Tenor section was placed behind the alto section.

• Voices from each section were placed in a tone quality spectrum ranging from those singers with bright voices to those singers with dark tone qualities.
b. Least favored: Formation 1A

- Bass section placed behind the soprano section.
- Tenor section placed behind the alto section.
- Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice. The non-blending voices of the spectrum placed toward the center of the ensemble with the blending voices located on the outer perimeters of the choir.

- Singers within each section coupled in a bright quality vs. dark quality alternating design.
5. Complex fugal or imitative, divisi composition (Illustration 5.7)

a. Most favored: Formation 1C

- Bass section placed behind the soprano section.
- Tenor section placed behind the alto section.
- Voices from each section placed in a tone quality spectrum ranging from those singers with bright voices to those singers with dark tone qualities.
Subsection 1A

- Singers within each section coupled in a bright quality vs.
dark quality alternating design.

b. Least favored: Formation 1A

- Bass section placed behind the soprano section.
- Tenor section placed behind the alto section.
- Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice. The non-blending voices of the spectrum placed toward the center of the ensemble with the blending voices located on the outer perimeters of the choir.
5. Overall preferred four-row sectionalized choral formation (Illustration 5.8):

a. Most favored: Formation 1C

   • Bass section placed behind the soprano section.
   • Tenor section placed behind the alto section.
   • Voices from each section placed in a tone quality spectrum ranging from those singers with bright voices to those singers with dark tone qualities.
• Singers within each section coupled in a bright quality vs. dark quality alternating design.

b. Least favored: Formation 1A

• Bass section placed behind the soprano section.
• Tenor section placed behind the alto section.
• Voices from each section placed in a tone quality spectrum ranging from the blending voice to the non-blending voice. The non-blending voices of the spectrum placed toward the center of the ensemble with the blending voices located on the outer perimeters of the choir.
In the study of mixed and partially mixed choral formations, three varying designs were evaluated. Once again, should a conductor wish to maintain the same formation throughout an entire program, regardless of repertoire consideration, Formation 2A was the preferred overall formation choice (Appendix B).

The three mixed or partially mixed choral formations consisted of the following (Appendix B):

Formation 2A:

1. Bass and soprano sections placed in mixed design.

2. Tenor and alto sections placed in mixed design.
3. The model or "color" voice from each section is established and placed in the center of the ensemble.

Formation 2B:
1. Bass and soprano sections in mixed design.
2. Tenor and alto sections in mixed design.
3. The non-blending voices are placed in the center of the ensemble.

Formation 2C:
1. Ensemble is in a fully mixed design.
2. Voices are coupled in a blending, non-blending alternating fashion.

The evaluative panel's findings for Formations 2A, 2B, and 2C yielded consistent results, they included:
1. Homophonic, four-part composition
   (Illustration 5.9)
   a. Most favored: Formation 2C
      • Ensemble in a fully mixed design.
      • Voices coupled in a blending, non-blending alternating fashion.
b. Least favored: Formation 2A
   • Bass and soprano sections placed in mixed design.
   • Tenor and alto sections placed in mixed design.
   • The model or “color” voice from each section is established and placed in the center of the ensemble.

Illustration 5.9

2. Homophonic, divisi composition
   (Illustration 5.10):
   a. Most favored: Formation 2A
• Bass and soprano sections placed in mixed design.
• Tenor and alto sections placed in mixed design.
• The model or "color" voice from each section is established and placed in the center of the ensemble.

b. Least favored: Formation 2B
• Bass and soprano sections in mixed design.
• Tenor and alto sections in mixed design.
• The non-blending voices are placed in the center of the ensemble.
3. Homophonic, sectionalized composition (Illustration 5.11):
   a. Most favored: Formation 2A
      • Bass and soprano sections placed in mixed design.
      • Tenor and alto sections placed in mixed design.
      • The model or "color" voice from each section is established and placed in the center of the ensemble.
b. Least favored: Formation 2C
   • Ensemble in a fully mixed design.
   • Voices coupled in a blending, non-blending alternating fashion.

Illustration 5.11

4. Fugal or imitative, four-part composition (Illustration 5.12):
   a. Most favored: Formation 2A
      • Bass and soprano sections placed in mixed design.
      • Tenor and alto sections placed in mixed design.
• The model or "color" voice from each section is established and placed in the center of the ensemble.

b. Least favored: Formation 2C

• Ensemble in a fully mixed design.
• Voices coupled in a blending, non-blending alternating fashion.

Illustration 5.12

5. Complex fugal or imitative, divisi composition (Illustration 5.13):

a. Most favored: Formation 2A
• Bass and soprano sections placed in mixed design.
• Tenor and alto sections placed in mixed design.
• The model or "color" voice from each section is established and placed in the center of the ensemble.

b. Least favored: Formation 2C
• Ensemble in a fully mixed design.
• Voices coupled in a blending, non-blending alternating fashion.

Illustration 5.13
6. Overall preferred four-row mixed choral formation (Illustration 5.14):

a. Most favored: Formation 2A
   • Bass and soprano sections placed in mixed design.
   • Tenor and alto sections placed in mixed design.
   • The model or "color" voice from each section is established and placed in the center of the ensemble.

b. Least favored: Formation 2B (tie)
   • Bass and soprano sections in mixed design.
   • Tenor and alto sections in mixed design.
   • The non-blending voices are placed in the center of the ensemble.

Least favored: Formation 2C (tie)
   • Ensemble in a fully mixed design.
   • Voices coupled in a blending, non-blending alternating fashion.
The two-row formations consisted of the following designs (Appendix C):

Formation 3A:

1. Bass section placed behind the soprano section.
2. Tenor section placed behind the alto section.
3. Non-blending soprano voices placed in the center of the ensemble's back row.

Formation 3B:

1. Bass section placed behind the soprano
2. Tenor section placed behind the alto section.

3. Individual sections placed in an alternating, blending vs. non-blending design.

Formation 3C:

1. All sections of the ensemble positioned in a fully mixed formation with singers placed in an alternating, blending vs. non-blending design.

Formation 3D:

1. Soprano and bass sections placed in mixed formation.

2. Alto and tenor sections placed in mixed formation.

3. Non-blending voices placed on the back row of the two-row ensemble.
Formation 3E:

1. All four vocal sections placed in a fully mixed formation.

2. Non-blending voices placed on the back row of the two-row ensemble.

The results of the two-row study indicated that Formation 3E was the overall formation of choice. The complete results were as follows:

1. Homophonic, four-part composition

   (Illustration 5.15):

   a. Most favored: Formation 3E

      • All four vocal sections placed in a fully mixed formation.
      • Non-blending voices placed on the back row of the two-row ensemble.

   b. Least favored: Formation 3A

      • Bass section placed behind the soprano section.
      • Tenor section placed behind the alto section.
Non-blending soprano voices placed in the center of the ensemble’s back row.

Illustration 5.15

2. Homophonic, divisi composition
   (Illustration 5.16):
   a. Most favored: Formation 3C
      • All sections of the ensemble placed in a fully mixed formation with singers placed in an alternating, blending vs. non-blending design.
b. Least favored: Formation 3E
   • All four vocal sections placed in a fully mixed formation.
   • Non-blending voices placed on the back row of the two-row ensemble.

Illustration 5.16

3. Homophonic, sectionalized composition
   (Illustration 5.17):
   a. Most favored: Formation 3E
      • All four vocal sections placed in a fully mixed formation.
      • Non-blending voices placed on the back row of the two-row ensemble.
b. Least favored: Formation 3B

- Bass section placed behind the soprano section.
- Tenor section placed behind the alto section.
- Individual sections placed in an alternating, blending vs. non-blending design.

Illustration 5.17

4. Fugal or imitative composition

(Illustration 5.18):

a. Most favored: Formation 3E
• All four vocal sections placed in a fully mixed formation.
• Non-blending voices placed on the back row of the two-row ensemble.

b. Least favored: Formation 3B
• Bass section placed behind the soprano section.
• Tenor section placed behind the alto section.
• Individual sections placed in an alternating, blending vs. non-blending design.

Illustration 5.18
5. Overall preferred two-row mixed choral formation (Illustration 5.19):
   a. Most favored: Formation 3E
      • All four vocal sections placed in a fully mixed formation.
      • Non-blending voices placed on the back row of the two-row ensemble.
   b. Least favored: Formation 3B
      • Bass section placed behind the soprano section.
      • Tenor section placed behind the alto section.
      • Individual sections placed in an alternating, blending vs. non-blending design.
Formations 4A, 4B, and 4C were devised to study the preferred designs for performing double choir repertoire. The three varying four-row formations consisted of the following (Appendix D):

Formation 4A:

1. Ensemble divided into choirs one and two, with voices placed in the blending vs. non-blending alternating design.

2. Each section extended across an entire row of the ensemble. For instance, the alto section extended across the first row, soprano section on the second, tenor section on the third row, and the bass section located on the final fourth row.
Formation 4B:
1. Ensemble divided into choirs one and two.
2. Male voices in an alternating blending vs. non-blending design.
3. Female voices in an alternating blending vs. non-blending design

Formation 4C:
1. Ensemble divided into two fully mixed choirs.

The favored position chosen for the double choir portion of the study was Formation 4A with Formation 4B considered the least favored design (Illustration 5.20).
The preferred formation lends itself to those double choir works containing sections that combine the two choirs into one four-part ensemble. Consequently, the "Jauchzet den Herrn" by Johann Pachelbel, the fugal and double choir piece selected for the study, fits this description. In the preferred "row-by-row" design, the middle fugal section was made secure and cohesive by the joining of each respective section while maintaining a double choir design for the performing of the two outer sections of the piece.

At the completion of the evaluative process, each member of the graduate choral conductor panel was asked to select the preferred formation for this group of select collegiate singers. In an unanimous decision, their reply was a two-row choral design over the four-row design. However, the primary objective of the study did not center on deciding between a two-row design and a four-row design. Instead, the focus of the study was to determine the optimal individual and sectional placement techniques that serve specific types of choral repertoire. As a result of this study, decisions on whether to use a sectional or a mixed
formation should be based on sound as well as stylistic requirements, and decisions should happen as a result of experimentation and thorough listening.

During the study's experimental process, it was observed that placing a mixed choral ensemble in a mixed quartet formation created the following:

1. Singers are able to hear the complete chordal structures found in the selected repertoire.
2. Strong societal and musical bonds are created.
3. Singers gain a higher degree of musical independency.
4. A richer, more homogeneous sound is created.
5. Less mature voices tend to reduce their sound output, therefore creating tonal blandness.
6. Contrapuntal music suffers from homogeneity of parts.
7. Soloistic or dramatic voices often dominate the texture (especially in forte passages).

In studying sectional choral formations the following observations were made:

1. An intensified clarity of sectional strength (especially in contrapuntal repertoire).
2. Increase in blending quality.
3. Intonation problems are decreased.
4. A dramatic contrast present in repertoire, which contains opposing forces; male voices vs. female voices.

In essence, when considering a specific choral work, we as conductors should use all the tools in preparing and performing each piece in the style and fashion used by its composer. The more cognizant we become of the many facets of the choral art, our personal conducting skills and techniques become stronger, thus furthering the musical growth and experiences of our ensembles.
In the learning process, choral conductors continually strive to consider and use the information passed to by our mentors. However, the education process does not end at that point. One should never consider himself to possess all the answers, even after many years of study and experience as a choral educator. Dr. Bruce Chamberlain, director of choral activities at The University of Arizona, Tucson, Arizona eloquently stated the following:

“When performing and studying any piece of musical composition, every conductor should work to become the composers' advocate.”

Conclusions

This study revealed a plethora of conclusions concerning individual and group chorister placement. Individually, it was found that the careful screening or evaluation of each singer is essential in creating the optimal choral sound. In addition, it was found that establishing a tonal spectrum, within each section, provides a systematic approach for singer placement. Using a spectrum, the conductor can readily place singers—blending to non-blending tone qualities, flutelike to reed like tone qualities, bright to dark
tone qualities, establishing a "model" or "color" voice within each section, or placing the blending vs. non-blending voices in an alternating design.

My conclusion for individual placement was a combination of the techniques mentioned in the previous paragraph. I experienced the greatest success by carefully listening to the singers in each respective section, creating a tonal spectrum ranging from blending to non-blending voices. Upon completion of the spectrum, I then identified the section's model or "color" voice, placing the preferred singer in the center of the section. The final step was to place the remainder of the section in opposing, blending vs. non-blending, alternating designs.

In the area of height consideration, I found that equalizing the height of each singer, by the use of manmade boxes, enhanced the singer's ability to blend and hear other choristers.

By studying the various aspects of spatial considerations, I discovered that as singer's individual space increases, the sound becomes fuller,
richer, and more in tune. From a visual aspect, the ensemble appeared more uniform and organized.

In considering the optimal formation for each type of choral repertoire by a forty to sixty member collegiate ensemble, I concluded the following:

1. Homophonic, four-part repertoire is best served by incorporating a fully mixed design in a two-row formation.

2. Homophonic, divisi repertoire is best served by incorporating a fully mixed, two-row formation with voices placed in an alternating, blending vs. non-blending design.

3. Homophonic, sectionalized repertoire is best served by incorporating a fully mixed design in a two-row formation.

4. Fugal or imitative repertoire and double choral literature is best served by incorporating a sectional design in a four-row formation. The individual sections are arranged in the alternating, blending vs. non-blending
design. Each row is specifically designated for each of the four vocal parts. For instance, the alto section spans across the entire first row, soprano section on the second row, tenor section on the third row, with the bass section located on the fourth and final row.

Recommendations for Future Study

The study of chorister placement is a continual, never-ending process. What works for one choral conductor, may not always prove effective or successful for another. In addition, what technique, method, or criterion that proves successful during a specific rehearsal, may be futile in a subsequent rehearsal.

Further related studies in dealing with the issue of chorister placement might include the following topics:

1. Placement procedures for the children’s choir.

2. Placement procedures for the male chorus.
3. Placement procedures for the female chorus.
4. Choral formations that best serve the repertoire for the children's choral ensemble.
5. Choral formations that best serve the repertoire for the male choral ensemble.
6. Choral formations that best serve the repertoire for the female choral ensemble.
7. Optimal choral formations for the festival chorus.
8. A study on the impact spatial considerations play in the intonation of a choral ensemble.
9. A study on the role spatial considerations play in overtone singing.
10. A study on the role height equalization plays in achieving proper intonation in the choral ensemble.
Appendices

Appendix A

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**Appendix C**

**Formation 3A**

| 70 | 71 | 72 | 73 | 74 | 80 | 75 | 81 | 82 | 83 | 27 | 26 | 25 | 21 | 28 | 29 | 54 | 65 | 64 | 53 | 52 | 51 | 50 | 63 | 62 | 61 | 60 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 13 | 11 | 12 | 10 | 14 | 15 | 16 | 17 | 20 | 22 | 23 | 24 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 36 | 35 | 34 | 33 | 32 | 31 | 30 |

**Formation 3B**

| 70 | 71 | 72 | 73 | 74 | 80 | 75 | 81 | 82 | 83 | 13 | 12 | 26 | 11 | 47 | 40 | 54 | 65 | 64 | 53 | 52 | 51 | 50 | 63 | 62 | 61 | 60 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 20 | 17 | 21 | 16 | 22 | 15 | 23 | 14 | 24 | 29 | 10 | 28 | 25 | 27 | 30 | 36 | 41 | 46 | 31 | 35 | 42 | 45 | 32 | 44 | 43 | 34 | 33 |

**Formation 3C**

| 40 | 26 | 32 | 25 | 83 | 24 | 82 | 29 | 81 | 64 | 75 | 65 | 80 | 60 | 74 | 61 | 73 | 62 | 72 | 63 | 50 | 71 | 51 | 54 | 70 | 53 | 52 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 12 | 30 | 11 | 33 | 13 | 43 | 10 | 36 | 15 | 35 | 16 | 44 | 17 | 47 | 14 | 46 | 27 | 45 | 28 | 34 | 23 | 31 | 22 | 42 | 21 | 41 | 20 |

**Formation 3D**

| 12 | 17 | 83 | 15 | 82 | 16 | 81 | 10 | 75 | 26 | 73 | 27 | 70 | 29 | 64 | 47 | 65 | 35 | 51 | 44 | 60 | 42 | 61 | 31 | 43 | 33 | 30 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 11 | 14 | 13 | 80 | 25 | 74 | 24 | 72 | 23 | 71 | 22 | 21 | 28 | 20 | 63 | 36 | 62 | 46 | 52 | 45 | 50 | 34 | 53 | 32 | 54 | 41 | 40 |

**Formation 3E**

| 17 | 83 | 54 | 35 | 82 | 65 | 44 | 29 | 81 | 64 | 47 | 28 | 75 | 53 | 42 | 27 | 80 | 52 | 45 | 26 | 74 | 51 | 23 | 36 | 73 | 63 | 33 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 14 | 12 | 60 | 30 | 16 | 13 | 72 | 61 | 32 | 10 | 34 | 20 | 71 | 50 | 31 | 22 | 25 | 46 | 70 | 62 | 41 | 15 | 11 | 43 | 40 | 21 | 24 |
## Appendix D

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