THE ART OF RECORDING THE AMERICAN WIND BAND

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Dissertation Prepared for the Degree of

DOCTOR OF MUSICAL ARTS

UNIVERSITY OF NORTH TEXAS

May 2006

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Wind bands have been recording for over one hundred years. Through advancements in both technology and process, recordings have made a monumental impact on the wind band and its repertoire. These advancements have created clarity regarding the performance practice of pieces and helped to preserve the wind band repertoire. Many early works have gained masterwork status due, in large part, to the fact that recordings have preserved them.

The increase in popularity of recording and, in particular, the wind band, warrants an investigation into the various aspects of the process. Additionally, gaining insight from wind band professionals who record will help to evaluate the contributions that recording has made to the education of performers and listeners, the preservation of repertoire and the artistic enhancement of the wind band.

Each chapter explores aspects of the recording process and how those aspects have shaped the wind band, its repertoire and performance practice. Information from conductors, composers and engineers provide valuable insight pertaining to the educational, historical and artistic components of the recording process. The goal of all involved in the recording process should be the pursuit of technical perfection, which does not eclipse the ultimate musical goals of the project and the integrity of the composer's intentions.
ACKNOWLEDGEMENTS

I would like to thank the following individuals who made the completion of this degree possible:

- Kathryn and A.J. Genevro, for their understanding, support, and love throughout this process. Without that, this would not have been possible.
- Mario and Marla Genevro, for their continuous love and encouragement.
- Eugene Corporon, for his artistry, musicianship and friendship.
- Jack Stamp, for opening up my world to music and being a loyal friend.
- Dennis Fisher, for your friendship and support.
- John Scott, for all of your support throughout this process.
- William Stowman, for his life long friendship and expert editing skills.
- Donald Routch, for you patience and nurturing in the beginning of my musical life.
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CHAPTER 1

A CONCISE HISTORY OF WIND BAND RECORDING IN THE UNITED STATES

Wind Bands have been recording for over 100 years. Through advancements in both technology and process, recordings have made a monumental impact on the wind band and its repertoire. These advancements have created clarity regarding the performance practice of pieces and helped to preserve the wind band repertoire. Many early works have gained masterwork status due, in large part, to the fact that they have been preserved by recordings.

A brief history of recording wind bands reveals how the process itself has affected the profession. This paper will provide information which will illuminate important contributions that have been generated as a result of recording. In addition to a brief look at recording, this paper will focus on the entire recording process including; programming, planning and post production. With little previous research, this project is intended to begin the development of a broader body of work pertaining to this topic.

The increase in popularity of recording and in particular, the wind band, warrants an investigation into the various aspects of the process. Additionally, gaining insight from wind band professionals who record will help to evaluate the contributions that recording has made to the education of performers and listeners, the preservation of repertoire and the artistic enhancement of the wind band.
The year 1877 marks the beginning of the recording era when Edison’s own voice was recorded onto a wax cylinder using a hand-made device that he developed.\textsuperscript{1} Twelve years later commercial recordings became available across the country.\textsuperscript{2} Early recording endeavors were very inefficient. Each individual recording required a separate performance by the ensemble because there was no means of duplicating the wax cylinders.\textsuperscript{3} In order to reduce the number of times a full performance was necessary, multiple recording devices were used simultaneously.\textsuperscript{4} Performance errors would require shaving wax from the cylinder to create a clear surface and then starting the performance over, from the beginning, because editing could not be done.\textsuperscript{5}

One of the first wind bands to participate in recording was the United States Marine Band under the direction of John Philip Sousa.\textsuperscript{6} Although to Sousa’s recollection, he did not conduct the bands on the recordings.\textsuperscript{7} The United States Marine Band recorded cylinders for the Columbia Phonograph Company from 1890 through 1892.\textsuperscript{8} There are numerous wax cylinders currently held in the Library of Congress Recorded Sound Division.\textsuperscript{9} Other significant wind bands that participated in these early endeavors included, Victor Herbert’s 22\textsuperscript{nd} Regimental Band, the “Sousa Band” under the

\begin{itemize}
\item \textsuperscript{1} Schoener, Steve, “Recording Technology History”; available from http://history.acusd.edu/gen/recording/notes.html; Internet accessed 12 November 2004.
\item \textsuperscript{2} Staff Writer, “Sound Recording – The First 100 Years”, The Instrumentalist, January 1985, 578.
\item \textsuperscript{3} Ibid.
\item \textsuperscript{4} Ibid.
\item \textsuperscript{5} Ibid.
\item \textsuperscript{7} Ibid.
\item \textsuperscript{8} Ibid.
\item \textsuperscript{9} Ibid.
\end{itemize}
direction of John Philip Sousa and the “Gilmore Band” under the direction of Patrick Gilmore.\textsuperscript{10}

In addition to the wax cylinders, another form of recording apparatus was invented in Germany in 1875, a few years before Edison’s. Emile Berliner created the phonograph which recorded onto a hard rubber shellac disc.\textsuperscript{11} The wax cylinder and shellac disc were the 2 mediums used to collect recorded sound. Due to the problematic nature of replicating the wax cylinders, the shellac discs eventually replaced the wax cylinder as the industry’s standard.\textsuperscript{12} By the year 1900, there were over 1000 single sided discs available of professional bands.\textsuperscript{13} Repertoire recorded during this period in history primarily included polkas, marches, mazurkas, serenades, waltzes and operatic selections which were transcriptions.\textsuperscript{14}

In 1912, the Gilmore Band, Sousa Band and the 22\textsuperscript{nd} Regimental Band were involved in a project to produce educational recordings.\textsuperscript{15} From 1912 through 1930, several of these bands provided recorded music that focused on creating aids for teaching music in the elementary classroom.\textsuperscript{16} These recordings were meant to assist the music teachers by providing models of the selections discussed in the classroom. They commonly displayed labels such as “instrumental rhythms and combinations”,

\textsuperscript{11} Ibid.
\textsuperscript{12} Ibid.
\textsuperscript{13} Ibid.
\textsuperscript{15} Ibid.
\textsuperscript{16} Williams, 24.
“marching”, and “trotting”.\textsuperscript{17} Other types of music recorded for the project included; marches, folk dances, patriotic songs, and singing games.\textsuperscript{18}

Prior to 1920, recording devises used a large bell shaped cone that collected sound and cut it onto a cylinder.\textsuperscript{19} By the 1920s wind bands were using microphones to make recordings.\textsuperscript{20} The introduction of microphones enabled the ensemble to spread out during a recording session, freeing them from having to sit close to the sound collection device.\textsuperscript{21} Additionally, the development of the amplifier, gave the recording engineers more control over clarity and contrast.\textsuperscript{22}

It was in the 1920s that electrical disc recordings replaced the acoustically recorded cylinder discs of the early 1900s.\textsuperscript{23} As technology continued to develop through sound collection and recording, so did the technology of replicating previously recorded shellac discs. Although records had been in the developmental stage for years, it was not until after the Great Depression and World War II that the industry really enjoyed the benefits of wide spread distribution.\textsuperscript{24} The affordability of shellac discs made this possible.

Prior to 1925, several colleges including Harvard University and Yale University recorded and released albums.\textsuperscript{25} However it was the 1925 release of the University of

\textsuperscript{17} Ibid.
\textsuperscript{18} Ibid.
\textsuperscript{19} Leek, Bruce, Interview by author, Tape recording, Miami, Florida, 8 August 2005.
\textsuperscript{20} Staff Writer, “Sound Recording – The First 100 Years,” \textit{The Instrumentalist}, January1985, 578.
\textsuperscript{21} Ibid.
\textsuperscript{22} Ibid.
\textsuperscript{23} Ibid.
\textsuperscript{24} Ibid.
Illinois double-sided record that propelled many additional colleges and universities into the recording era.\textsuperscript{26}

In the early 1940s, the industry began developing new and better ways to record and reproduce sounds. In 1948, Columbia Records introduced the 33 1/3-rpm long-play vinyl record.\textsuperscript{27} The 33 1/3-rpm format was created out of a need for radio stations who wanted half-hour long recordings to fill their schedules.\textsuperscript{28} With 33 1/3-rpm, each side of the album was fifteen minutes, providing the radio stations what they where looking for. Less than a year later, RCA Records introduced their own version which was the 45-rpm or short play recording.\textsuperscript{29} RCA was attempting to fill a notable void in the industry, the ability to reproduce single tracks from an album. The 45-rpm format was ideal for this purpose.\textsuperscript{30}

The 1950 College Band Directors National Association Conference of Proceedings created a “Bibliography of Recorded Band Music”, compiled by Bryce Jordan.\textsuperscript{31} Jordan reported that 61% of the wind band music recorded prior to 1950 was quick-step marches, 16% was serious music (which included overtures and other transcriptions), 6% patriotic music, 5% represented concert marches, 4%t was folk music, 3% novelties and 5% waltzes.\textsuperscript{32}

\begin{flushleft}
\textsuperscript{26} Ibid.
\textsuperscript{27} Staff Writer, “Sound Recording – The First 100 Years,” \textit{The Instrumentalist}, January 1985, 578.
\textsuperscript{28} Leek, Bruce, interview by the author, Tape recording, Miami, Florida, 8 August 2005.
\textsuperscript{29} Ibid.
\textsuperscript{30} Ibid.
\textsuperscript{31} Battisti, Frank L. \textit{The Winds of Change}. (Galesville, Maryland: Meredith Music, 2002): 50.
\textsuperscript{32} Ibid.
\end{flushleft}
The mid 1950s witnessed another monumental development in technology, stereo recording.\textsuperscript{33} Since all recording done prior to this time was in “mono” format, this development was viewed by many in the industry as a gimmick. Stereo recording did prevail and eventually became the industry standard.\textsuperscript{34}

Arguably, one of the most significant wind recording projects is associated with the Eastman School of Music in Rochester, New York. During the 1950s, Mercury Records, an established leader in the business, began developing new techniques for recording that drew worldwide attention.\textsuperscript{35} These new techniques pertained to the microphone and placement of the microphone during the sessions.\textsuperscript{36} The approach yielded a new and clearer sound. This sound eventually was embraced by the recording world.\textsuperscript{37}

The Eastman-Mercury Project marks collaboration between Mercury Records and Frederick Fennell with the purpose of recording the newly formed wind band known as the Eastman Wind Ensemble.\textsuperscript{38} This project was the idea of Howard Hanson, director of the Eastman School, Frederick Fennell, director of the wind ensemble and Mercury Records.\textsuperscript{39} The collaboration lasted though the mid 1960s until Mercury Records was purchased by Phillips Records; the label dissolved shortly following acquisition.\textsuperscript{40} Although Phillips Records did not continue the project, several other recording

\textsuperscript{33} Staff Writer, “Sound Recording – The First 100 Years,” The Instrumentalist, January 1985, 578.
\textsuperscript{34} Ibid.
\textsuperscript{36} Ibid.
\textsuperscript{37} Ibid.
\textsuperscript{38} Ibid.
\textsuperscript{39} Ibid.
\textsuperscript{40} Ibid.
companies continued the work Mercury and Eastman had started. These companies included, Deutsche Gramaphone, CBS, Masterworks (now Sony Classical), Toshiba EMI and Vox.41

The first recording made for the Eastman-Mercury Project focused on what Frederick Fennell considered to be the best of the new compositions for winds.42 All of the compositions were written prior to 1953. The audience for this project was public school, collegiate and professional wind band conductors in addition to audiophiles. Representative works from this collection include the *Symphony in Bb*, by Paul Hindemith, *Theme and Variations, Op. 43a*, by Arnold Schoenberg and *Symphonies of Wind Instruments*, by Igor Stravinsky, all pieces that Fennell considered to be masterworks in wind band repertoire.43

The Eastman-Mercury Project recording was among the most influential to date due to the recording techniques and the unique and progressive repertoire. This project quickly enabled the wind band profession to have immediate access to new and exciting repertoire.

In addition to the Eastman Mercury Project Frederick Fennell recorded many projects with several other wind symphonies. He recorded 5 discs with the Dallas Wind Symphony, 2 discs with the Cleveland Winds and 34 discs with the Tokyo Kosei Wind Orchestra.

In the 1950s another project was established at the University of Illinois under the direction of Mark Hindsley. His vision was the University of Illinois, “Live – In

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41 Ibid.
42 Ibid.
43 Ibid.
Concert” Series. This series, established by Hindsley, was then continued by Harry Begian at Illinois and is still active under the leadership of James Keene. The project began with LP phonograph recordings in the 1950s, changed over to cassette tapes in the 1980s and eventually changed over to compact disc. Several of the earlier recorded concerts have been re-mastered and released on compact disc. These concerts were all recorded live and have in them typical live concert sounds.

In addition to these projects, another project called the Educational Record Reference Library was established in 1968. It was comprised of recordings featuring many different composers music as performed and recorded by many groups across the country. The repertoire included was some of the most recent and progressive in existence at the time.

Other projects based on the Eastman-Mercury model are actively upholding the ideals of that very significant project. Through the Klavier Wind Project, Eugene Migliaro Corporon has released 34 recordings with the Cincinnati College Conservatory of Music and the University of North Texas Wind Symphony. Some have suggested that these recordings, which are comprised of mostly new repertoire, are the 21st Century equivalent of the early Eastman-Mercury project.

In addition to the professional series produced by Klavier, the University of North Texas Wind Symphony, Eugene Migliaro Corporon conductor, has also created an educational series produced by GIA Publications. The project consists of a wide range of repertoire including grade 2 through grade 6 compositions. The series is entitled “Teaching Music through Performance in Band.” It offers 12, 3 and 1, 4 CD sets
including the entire grade two, three and four compositions in the series. In addition, GIA has also produced a series entitled “The Composers Collection.” This series consists of entire compact discs of an individual composer’s work. The series currently stands at five. The composers represented are Vincent Persichetti, Paul Hindemith, Joseph Schwantner, Gustav Holst and Percy Grainger.

Under the leadership of Jack Stamp, the Keystone Wind Ensemble has produced twelve recordings. One of the most innovative is the “The Composer’s Voice Series” produced by Klavier records. The recordings focus on a single composer which includes an interview of the composer regarding their wind music. Norman Dello Joio, William Schumann and H. Owen Reed are the three composers represented in this series. In addition, the Keystone Wind Ensemble has nine releases which have focused on the wind music of the 1950s and 1960s.44

Since its inception in 1985, the Dallas Wind Symphony has released 12 recordings featuring conductors Howard Dunn, the founder of the group, Frederick Fennel and Jerry Junkin.45 These recordings, which contain a combination of standard and new repertoire, are considered among the most influential of the last 25 years. This group actively performs a regular season of concerts in the Meyerson Concert Hall in Dallas, Texas.46 In addition to its typical performance season, the Dallas Wind Symphony also tours throughout the country.47

45 “Dallas Wind Symphony”; available from http://dws.org/about/htm; Internet accessed 26 August, 2005
46 Ibid.
47 Ibid.
Comparing the recording projects discussed is difficult to do. The quality and artistry apparent in each of these projects is exemplary. Each project is highly regarded by the wind band profession and its members. A point of comparison that brings to light the impact each has had on the profession is the amount of recorded music available in each of the aforementioned projects. The Eastman-Mercury Project, under Frederick Fennell, has approximately 15 hours and 30 minutes of recorded material available. The Keystone Wind Ensemble, with conductor Jack Stamp provides approximately 15 hours of recorded music contained within its recordings. The Dallas Wind Symphony recordings are made up of approximately 11 hours and 45 minutes. Last, Eugene Corporon and the Klavier and GIA Publications recordings. The Klavier Wind Project offers over 40 hours of recorded repertoire. Teaching Music Though Performance in Band series contains over 33 hours of recorded music and the Composer’s Series contains over 8 hours of music making the grand total of those projects over 81 hours of recorded music.

In addition, literally hundreds of colleges, universities and school groups have taken advantage of technology in order to preserve and promote the wind band repertoire. The ongoing evolution of recording is marked by both technical and musical growth. Over the past 100 years, advancements have created a process that encourages composition, elevates performance and preserves the medium’s masterworks while documenting the musical interpretations and decisions of the field’s greatest composers and conductors.
CHAPTER 2

IMPORTANCE OF RECORDING

Modern recordings are utilized to meet educational objectives, promote programs and institutions, attract students, and preserve the artistic endeavors of many noteworthy musicians. Arguably, the most significant outcome of the process is that it offers an accurate view into the minds of composers, conductors and performers. This is valuable on many different technical, musical, personal and spiritual levels. The reasons ensembles record are as diverse as the products they create.

In large part, the process of recording serves as an educational tool for assisting groups in reaching heightened musical standards. These standards, are defined by intonation, balance, articulation, dynamics and note lengths, and are apparent at both the individual and ensemble levels.\(^{48}\) The production staff, through their monitoring and evaluation of the performance, helps to make the performers become aware that the highest level of concentration and focus is essential. Likewise, ensemble achievement can be greatly enhanced through the process. This is accomplished through a heightened sense of pitch, dynamics, balance and style that becomes obvious at the individual level. Many consider the process of recording to be integral to a meaningful educational process.

\(^{48}\) Graham, Lowell, Interview by author, Tape recording, Miami, Florida, 8 August 2005.
Bruce Leek, one of the foremost wind band recording engineers states, "In my experience, an ensemble that records with frequency proves to be a better ensemble." In addition to the commercial and extra-musical reasons to record, the sheer educational value of this activity justifies its place in the profession. Jack Stamp, conductor of the Keystone Wind Ensemble states, "Groups that record are able to refine quality performances in a way that allows for significant growth from an educational and artistic aspect."

Due to the scrutiny of the production team which includes conductor, producer, slater, assistant producer and engineer, musicians are held to a different standard because they are able to go back and repeat a section if someone makes a mistake. In a live performance, this is not an option. A primary goal of recording sessions is to preserve the work as the composer intended while achieving as close to perfection as possible. This endeavor requires that players are extremely accurate in their performance of the composer’s notation, especially in regard to the dynamics, articulation and style of the composition. The level of readiness required in the preparation and performance associated with the making of a professional recording will test even the best players. Performers, throughout a recording session, are able to focus their listening which creates a more heightened sense of interaction. Players on recording sessions consistently identify problems with their own performance and will notify the conductor and producer. Due to the nature of live performance this

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49 Leek, Bruce, Interview by the author, Tape recording, Miami, Florida, 8 August 2005.
51 Ibid.
52 Ibid.
53 Leek, Bruce, Interview by the author, Tape recording, Miami, Florida, 8 August, 2005.
process cannot be duplicated. The players have the ability to repeat sections or measures until they are pleased with the outcome or they run out of time. Because of the recording process, these performances are now preserved and become a historical record, making this even more crucial.

As recording progresses, ensembles grow musically and technically. The sounds created by an ensemble are consistently more focused and of a higher quality at the completion of the process. This is due, in part, to the listening and evaluating the performers are doing. Wind band recording engineers Bruce Leek and Mark Morrette both agree that the sound of an ensemble changes throughout the course of a recording. Bruce Leek states, “due to the highly focused environment, each group has a more refined sound at the end of a recording session than they did at the beginning”. He continues, “The more a group records, the better they become at being able to focus on development of that sound.” As the session continues, the performers take on more responsibility for ensemble outcomes. The more the performers record and are involved in the process the more the sound of the group is affected.

Recording will elevate the performance level of any ensemble as well as the individuals within the group. Individual and group expectations are raised and the performance level of each player is increased dramatically. The educational value of recording is significant. While commercial interests often drive the popularity of

54 Fisher, Dennis, Phone interview by the author, Tape recording, Denton, Texas, 10 August 2005.
55 Leek, Bruce, Interview by the author, Tape recording, Miami, Florida, 8 August 2005.
56 Ibid.
57 Ibid.
recording, its true value lies in its potential to elevate individual musicianship while raising ensemble performance standards.

Although recordings should never replace score study, many conductors can use these “reference recordings” as a means to aid in repertoire selection or even provide a model performance. Recordings can help to raise an ensemble’s standards when it comes to sound, intonation, style and performance practice. As geography may make it difficult for some wind band conductors to attend concerts; recordings can work as a concert substitute for conductors and students alike. Caution should also be used when playing pieces for the ensemble. Each conductor should use the recording as a resource and not work to replicate it. The conductor should avoid replacing his own interpretation with someone else’s.

It is especially important in secondary school settings for conductors to provide a sound model for their groups. The presence of an excellent model (recorded or live) allows both the conductor and the ensemble to develop an aural concept of tone quality, intonation, balance and style. Having a quality model is essential to ensemble growth and development and helps the students to gain a personal perception of their role in the ensemble.\(^{59}\)

Recording also provides a certain degree of notoriety for ensembles, conductors and their institutions. In fact, a recently released recording by the United States Marine Band in Washington, D.C. contains a letter for the consumer, which states, “[This] recording is intended to increase public awareness of the Marine Corps and to foster an

\(^{59}\) Ibid.
appreciation for concert band music.” Many will contend the resultant notoriety itself is what provides the opportunity to accomplish several other important goals. Any group that is involved in recording can attain recognition not unlike that of the United States Marine Band.

At the college and university level, recruitment is crucial to the success of the music program and is an important objective. Effective recruitment has a significant impact on the future success of the program and can enhance the quality of students attracted to the institution. Compact disc recordings, featuring the school’s ensembles, provide a cost-effective way to promote the program, faculty and performing groups. These recordings can help aid the accessibility of the ensembles to students from around the country and world, who cannot attend live concerts. In addition to that, it also serves as a means of providing a chronicle of the program’s development. These recordings give prospective students an accurate assessment of the characteristic level of music making in a given program.

The issue of graduate student recruitment also deserves attention. Unlike their undergraduate counterparts, graduate students are typically seeking a more specific degree program. As students prepare to enter graduate school, they can spend time reviewing recordings produced by institutions as a means of identifying which schools are best-suited to their needs. Students realize the importance of professional publications and scholarly activity. Participation in recording also offers a wide variety of opportunities for future conductors and performers to associate themselves with

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successful and meaningful music-making that can be viewed as significant professional development. Being involved in recording can provide great resume strength.

Repertoire enhancement is another exceptional by-product of the recording process. The Eastman-Mercury Project, conducted by Frederick Fennell, was the first notable project because of its focus on the new repertoire of the 1940s and 1950s. Paul Hindemith’s Symphony in Bb and Arnold Schoenberg’s Theme and Variations, op. 43a are both considered masterworks. If not for the Eastman-Mercury project, neither of these works may have become part of the repertoire or, at the very least, their exposure and acceptance could have been delayed by decades. The Fennell recordings introduced the works, assisted conductors with preparation and study of each work and provided performers with outstanding models of the composers’ intentions. Occurring at a time when the wind band repertoire was increasing at a dramatic rate, the Eastman-Mercury Project brought to the fore several new pieces that are now considered staples in programming and study. A few other examples of these compositions include William Schuman’s George Washington Bridge, H. Owen Reed’s La Fiesta Mexicana and Vincent Persichetti’s Psalm.

Present-day recordings are also having a major impact on both standard repertoire and new compositions. Vintage repertoire that has, over the years, slipped into relative obscurity is now finding new life as it appears on recording projects; thereby bringing these pieces back to life for a whole new generation of conductors and

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63 Ibid.
64 Ibid.
65 Ibid.
performers. Some of these works, out of print for several years, are being revised and reprinted by publishers as a result of the renewed popularity generated by recent recordings.

Today's repertoire enjoys a much faster rate of acceptance and popularity due, in large part, to the recording process. In the years when recordings were not readily available, a new composition, after its premier, could take years to gain acceptance in the wind band profession. With the use of recording and the Internet, someone can access a recording of a new work within hours of its premier.

The recording process has a significant impact on the documentation of performance practice within the medium. Its immediacy is staggering. Controversies regarding interpretation will be more readily investigated in the future due to the availability of multiple recordings. Many of the discrepancies that surround late composers' music may become quickly resolved if a recording of their music was made with the composer being present. While a reliable recording of any composers' music may provide insight, it may also generate even more controversy. The value of such insight is undeniable.

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CHAPTER 3

PROGRAMMING A COMPACT DISC

Repertoire selection is crucial to the success of a compact disc. In addition to the Eastman-Mercury Project, Klavier Wind Project, Keystone Winds and the Dallas Wind Symphony, other projects are undertaken in order to accomplish specific educational or artistic goals. Typically, all are intended to support the mission of the ensemble involved.

Several parameters must be investigated in the process of repertoire selection. The success of any project is initially dependent upon the vision of the person charged with artistic control. The conductor’s vision enables the group to fulfill its musical objectives. Maintaining the integrity and musicianship of the ensemble is an integral part of good decision making. The objectives are as varied as the groups themselves. Consequently, programming of a compact disc is as diverse as the interpretations contained within.

While programming is typically quite varied, the promotion, preservation and development of specific repertoire serve as common ground. Conductors within the wind band profession have different interests when creating a body of recorded work. As each conductor programs his compact disc, his personal preferences play a part in the final decision of what will be represented on the recording. This personal approach is what makes each recording so unique and valuable.
Several conductors have become champions of new repertoire. They have influenced their profession by generating recordings that display continued and consistent compositional output by present day composers.⁶⁷ These conductors are shaping the repertoire by persistent and diligent study of the newest works, and are having a significant impact on the future development and strength of the genre. One of these conductors is Eugene Migliaro Corporon with the North Texas Wind Symphony. Through the Klavier Wind Project, he has shaped the wind band profession by promoting new works and revisiting standard repertoire. The discs have encouraged composers to consider contributing to the repertoire.⁶⁸

Several other conductors are involved in the preservation of already existing repertoire including works that have been lost but once again brought to life through successful recordings. The contribution of these artists creates an interesting nexus between performance and publication. Compositions deemed worthy by a single conductor or music director can gain the necessary attention needed to once again justify their existence in the genre. Jack Stamp and the Keystone Wind Ensemble have made many contributions in this area.

Collegiate conductors can focus on the work of colleagues and alumni in order to create a theme for a specific project. While primarily intended to promote the program with which they are associated, recordings of this nature often make significant and surprisingly valuable contributions to the repertoire through the illumination of works that might never have been noticed. Examples include, Jack Stamp at the Indiana

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⁶⁸ Ibid.
University of Pennsylvania with his “Pennsylvania Composers” disc. Another such example is Tom Leslie and the University of Nevada Las Vegas Wind Ensemble with their recording “Beyond”. Several tracks on both compact discs where written by faculty, alumni and students of each respective institution. In addition to the projects above, Eugene Migliaro Corporon and the University of North Texas Wind Symphony has also recorded the music of resident composers Cindy McTee and Martin Mailman and alumnus Michael Daugherty and Steven Bryant.

Education has served as the focus for many recording projects. Many early professional bands, including the Sousa Band and Pryor Band, were involved in the recording of educational music intended for use in the public school classroom. Several, if not all, of these specific projects have had a significant impact on our educational system and more specifically the wind band. These recordings can serve as a significant resource for music educators.

Artistic goals for any project can be a culmination of repertoire development, educational advancement and ensemble growth. Conductors have the opportunity, through programming, to utilize the process to their educational advantage. Jack Stamp offers the following, “Choosing music that fits the technical facility of a group is vital to its success.” Appropriate selections will facilitate exceptional growth in

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69 Ibid.
numerous areas including individual responsibility, musicianship, sensitivity, technical facility, focus and directed listening.\textsuperscript{72}

Although there is no formula in place for programming a successful compact disc, many of the nations leading conductors are offering the profession several quality models from which to choose.

It is up to the conductor to decide on the scope and purpose of the program. As each piece is chosen, it is done so with a plan in place which takes into consideration the composer, style of piece, technical aspects as it pertains to the group recording and order of compositions on the compact disc. Conductors can choose a program that represents a mix of traditional, current and new repertoire. Success is the result of a thoughtful process that takes into account the above criteria.

\textsuperscript{72} Ibid.
CHAPTER 4

PLANNING A RECORDING SESSION

Initial work in the planning of a recording session is a monumental task. This planning needs to be completed as much as two years prior to the actual session due to a number of variables. The 2 main variables include the availability of the facility and the production team. Once a date is determined which will work within the structure of an academic year, there are many additional factors to consider.

Due to copyright restrictions, it is illegal to record a piece without obtaining permission. Doing so puts the conductor and institution at great risk.

Recording in a quality facility is essential. It is most beneficial if the recording engineer can visit the hall prior to the session in order to determine whether the hall is suitable. Engineers make decisions based on the size, shape of the hall as well as reverberation and resonance of the room. It is also important to have a space for the production room. This room should be off stage and somewhere that the natural sound from the stage can be removed or reduced significantly. This room needs to be large enough to house the recording equipment and the production staff.

A quality production team is essential to the success of the recording. Frank Ticheli, one of the countries most recorded wind band composers offers the following advise when it comes to recording,
Take everything really seriously. That does not mean only rehearsing well; it means you have to hire the best people to do the job on every front. The people I am speaking of, are those running the equipment, producing and distributing the final product. You just have to ask yourself, how important do I want this to be?\(^7\)

The production team consists of the conductor, producer, producer’s assistant, slater and recording engineer. Each of these people perform an important role in the recording process. Each person on the production team has their own responsibilities within the session and is directly answerable to the conductor and producer.

The recording engineer is a vital part of the team. Every engineer has their own unique sound they are able to capture while recording. Engineers differ in the quality of recording equipment, the techniques they use and even placement of the microphones. The recording engineer’s placement of microphones creates the perspective for the producer throughout the session. As a conductor researches engineers, it is important that the conductor chooses an engineer that is able to capture the desired sound of the conductor. This can be accomplished by spending time comparing recordings of different engineers and their body of recorded work. Eventually the conductor must choose one that most closely recreates his ideal sound image.

The recording producer is the composers and conductors advocate in the production room. The sounds that are captured on tape can be different than what the conductor is able to hear on stage. That discrepancy occurs because of the type of microphones and placement of those microphones. The microphones become the ears

\(^7\) Ticheli, Frank, Phone interview by the author, Tape recording, Los Angeles, California, 28 August 2005.
of the future listener. The producer’s role in the process is to know what the conductor wants and work towards those ends. The producer keeps track of both technical and musical standards by marking the score and notating what did and did not work on a particular pass through the piece. This notation allows the producer to assist the conductor and relay information to the ensemble following a given take that assists them in giving a more meaningful and correct performance.

Having a production assistant can be an invaluable resource for the producer. As the session progresses at a rapid pace, it is important to have an extra set of ears available. Several extra production assistants in the production room allows the producer to think more globally while the assistants can each focus on specific parts of the score. For instance, 3 assistants could be used to focus on woodwinds, brass and percussion separately. The end result is a more thorough recording process.

The conductor has the job of assembling a production staff that he is comfortable with, so he can focus on the artistry needed to create a successful recording. With the technical parameters being taken care of by the production team, the conductor is able to focus on the artistry of the group and the pace of the session. The recording session is as much a study in psychology as it is in artistry and music making. A savvy conductor and producer coordinate their efforts to ensure the group is able to perform at the highest efficiency possible throughout the entire session while staying positive. Dennis Fisher, Associate Director of Wind Studies at the University of North Texas and one of the most active recording producers in the country offers,
The conductor needs to keep the musicians engaged in the artistic process and in the artistic development from a standpoint of putting it all together. Being able to attain the highest standards of musical integrity is the challenge of any recording session. One that keeps the process a fresh and exciting one.\(^\text{74}\)

Once the hall is secured and the production team is in place, the conductor must organize the time frame for the session. He needs to take into consideration the amount of time necessary to record each piece and how to best structure the session in order to provide the ensemble the rest needed between pieces. Most conductors do no more than two sessions per day. These sessions are usually 3 to 3 1/2 hours in length. Endurance is a factor so two sessions a day allow the ensemble to have a 2 hour lunch break and an evening without playing, which provides recovery time before the next session begins. This is especially important for brass players. Depending on ranges, the brass section needs time to recover after an intense session. The maturation level of the group also needs to be taken into consideration when constructing a recording timetable. An undergraduate group might not have the concentration ability and stamina that a group of older graduate students might possess. Sometimes throughout the recording process, it is not physical fatigue but mental fatigue that causes the producer and conductor to take a break. The conductor must know his group and make appropriate decisions in order to be successful. An ensemble that has never been through the recording process will need more time to complete their first session.

The conductor needs to prepare the ensemble in the same way they do for any live concert. This makes the process a familiar one and not one that creates anxiety.

\(^{74}\) Fisher, Dennis, Phone interview by the author, Tape recording, Denton, Texas, 10 August 2005.
within the ensemble. Lowell Graham, conductor of many Air Force Bands including The Air Force Band in Washington D.C. states,

> When the philosophy comes into play that the recording session is an extension of the same kind of work you do in rehearsal, then everybody wins. Because now the responsibility is not only on you the conductor it is certainly on the performer because they are the ones pushing the valves and playing the notes. So it raises the level of awareness of everyone involved.\(^{75}\)

Keeping the environment comfortable and tension free allows the performers to spend their energy creating a musically sensitive and technically proficient performance.

\(^{75}\) Graham, Lowell, Interview by the author, Tape recording, Miami, Florida, 8 August 2005.
CHAPTER 5

THE PROCESS OF RECORDING

The recording session is an all-encompassing process that requires detailed planning that includes, but is not limited to, facility preparation and set-up, equipment preparation and set-up and production meetings discussing the structure of the session. Each of these components is vital to the eventual success of the recording session.

Facility preparation and set-up requires creating a workspace for both performers and the production team that lends itself to efficiency. Before the recording engineer moves equipment into place, the ensemble should be set up. The recording engineer must then determine placement of microphones and other necessary equipment to best capture the sound of the group. He must also consider the acoustical properties of the hall and the overall sonic tendencies.

In addition to the performance space, the production room (the remote location that houses the recording equipment and production team) must provide an appropriate environment to oversee the technical aspects of the recording. The location of the production room must provide enough distance to provide sound isolation but close enough to accommodate equipment access. It is important for the production team to hear only the recorded sound and not be distracted by the acoustic sound of the performance. These spaces should be carefully planned and ready in advance of the session.
The ensemble needs to have ample warm-up time in the hall to afford them a sense of comfort. During the ensemble’s warm-up, the production team can begin to decipher sound and manipulate microphone placement to achieve the desired sonic dimensions. It is not, however, until the group is performing that the production team can ascertain the quality and appropriateness of the sound they are capturing on tape. At this point the recording engineer sets levels for the session by listening to the loudest portion of the recorded work and identifying peak levels. This will allow the engineer to accommodate the wide range of dynamics often associated with the wind band repertoire and provide the most natural acoustic sound.

Microphone type, number and placement will vary depending on the preferences of the recording engineer and the desired sound of the conductor. Some engineers record with a 2 microphone system, others with 4 or more. The recording process varies significantly based on the collective philosophy of the engineer, producer and conductor. For this reason, it is imperative that each conductor carefully investigate the recording engineer’s previous work. Each engineer has their own unique sound and conductors must consider that the engineer’s concept of ensemble tone must interface with their own in order to achieve the desired final product.

The proximity of the microphones to the group will dictate the sound that is captured on tape. If the microphones are placed close to the group, a very clear and detailed presence will be captured. When microphones are placed at a greater distance there will be more ambient sound from the hall. This results in a less detailed image. A
balance must be struck between clarity and resonance that makes the engineer, conductor and production team satisfied.

Most wind band recording engineers record “direct to 2 track.” In this process, the balance of the ensemble caught on tape directly reflects the final product. Consequently, recording “direct to 2 track” allows for no adjustment of individual parts in the editing session.

In contrast to this system, it is possible to record multi track with microphones placed throughout the ensemble like studio recording. This allows the recording engineer to control balances in the production room during the session and also provides the opportunity to change balances, as necessary, in the editing session. This multiple microphone technique does not capture the same ensemble sonority that is gained by the direct to 2 track recording. When the direct to 2 track system is not used, a lack of clarity often results from microphones absorbing sounds not specifically intended for them. Movement of players on stage, which might include something as simple as standing for certain passages, helps to solve balance problems in the direct to 2 track process.

Most balance issues are corrected during the initial stages of the session when the conductor, ensemble and production team listen specifically for balance and overall sound. Once the production team agrees, all other balance issues are dealt with acoustically on a case-by-case basis as the recording session dictates. This is accomplished by altering dynamics and the physical placement of musicians in relation

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76 Leek, Bruce, Interview by the author, Tape recording, Miami, Florida, 8 August 2005.
to the microphones, the ears of the production team and ultimately the audience. The microphones stay in place like the ears and the players are adjusted to change the sound.

The process or technique for recording is a simple one. First, a full performance of the work, referred to as a "bed take" is always recorded. The bed take guarantees that each measure of the work was recorded at least once and the musical flow of the piece is laid out. In addition to serving as a back-up during editing, the bed take gives the producer a sense of the piece as a whole. Once the bed take is completed, the producer assesses the group’s performance and spends time reviewing his thoughts with the ensemble regarding musical principles that need attention such as balance, intonation and precision.

The process following the bed take consists of reviewing sections within the piece until the producer and conductor are satisfied with the performance. Monitoring the formal structure of the music allows you to break the work down into smaller parts. As the group works through a session, the producer and conductor always need to be monitoring the response of the group. Mental fatigue and physical fatigue can undermine even the most seasoned ensemble and have a negative impact on the session. Providing breaks for the ensemble is important in order to keep them from getting tired and allow the ensemble to perform at their best for the entire duration of the session.

Once everyone is satisfied with completing the musical thoughts of a particular section, the process moves forward. This is a time sensitive process and one that does
not allow for errors from the production team. The producer must keep his eye on the clock. Using an experienced production team allows the conductor to focus his energy on the ensemble and concentrate on the artistic process. The production team focuses on the technical aspects of the performance while maintaining the highest levels of artistry and musicianship.

The primary role of the producer is to listen to the performance, formulate opinions and mark specific problems in the score. Typical problems with the performance often include phrasing, intonation, ensemble precision, note length discrepancies, balance, wrong notes and rhythms and dynamics. As the session progresses, the producer sees that everything that is caught on tape will represent the ensembles highest level of achievement and reflects the conductors musical image of the work.

The slater (the note taker of the session) is also an integral part of the process. As the session progresses, the producer addresses the positive and negative aspects of every take performed. The slater acts as a recording secretary notating everything the producer says during a given take. The slate sheet is designed to allow the slater to designate take number, timings, producer comments, description of specific sections and their potential role in the editing process. This working document provides detailed information about each take. This information becomes essential to a successful editing process. This information is crucial as it serves as the only written documentation of the session. The slate sheets are used during the session to guide decision making and are the primary tool for assembling the final product from all recorded material.
Educating the ensemble regarding the recording process will help them better prepare mentally for the session. Each player must understand his role and come prepared to fulfill that role. The basics elements of professionalism should serve as a guide for this process; early arrival, detailed preparation and a positive attitude. With appropriate and consistent encouragement from the conductor, students will be ready to take part in a process that will facilitate significant artistic and musical success.
CHAPTER 6

POST PRODUCTION

Once the recording session is completed, the planning begins for the editing session. The conductor must spend time mapping or assembling the best takes. Time invested in putting pieces together is time well spent as it allows the conductor to make musical decisions in advance of the editing session.

Mapping involves reviewing the notes taken by the slater, listening to the full takes and making the best choices for the final presentation. Each conductor works to create an assembled piece that is technically precise and maintains the musical artistry of the piece. The mapping procedure consists of piecing the composition together from beginning to end using the different takes from throughout the recording session. A mapping sheet will consist of a take number and measures that are to be used from each take. The conductor has parameters that he needs to work within in order to construct the roadmap for each piece. It is beneficial for the conductor to also mark the roadmap in the score. The engineer will need very specific information to assemble the work. Eugene Corporon, Director of Wind Studies at the University of North Texas and one of the most recorded wind band conductors in the world stated,
Very often in the mapping procedure, you make a choice that might not be the most technically perfect but is the most musical. It depends on the attitude of the conductor. If they get locked into just making the recording correct, they are making a big mistake and loose the overall artistry of the work at hand.77

As the conductor strings takes together, he needs to make certain that the tempos match from take to take. Despite best intentions, the variety of energy levels in a session can cause the tempos to fluctuate. If they do not match, the recording engineer will have problems splicing the takes together. The recording engineer does have some latitude and is able to adjust the tempo slightly but the closer the tempos, the easier the splice.

The conductor needs to also be aware of avoiding cold starts in the construction of the final product. As the engineer splices together each take, a cold start will not have the ring of the hall available and cannot be spliced together with another take. Also, pitch that does not match can cause a take to be unusable. If the groups’ intonation is not remaining consistent, the engineer will have to overcome other problems in splicing dealing with pitch discrepancies.

Once the mapping is complete, editing can begin. This is a meticulous procedure but very gratifying in the end. The raw takes are loaded into the computer on the hard drive by the engineer and marked by time codes. These time codes allow the engineer to easily access the various takes loaded. A 20 minute composition could need to have as many as 60 different takes entered into the computer. The 60 takes may not even

77 Corporon, Eugene, Phone interview by the author, Tape recording, Denton, Texas, 8 September 2005.
be every take that was recorded during the session, just the ones that have potential in
the editing process.

After all the takes are entered, the engineer marks the beginning and ending
points of every take used in the construction of the piece. After all sections are
marked, the engineer shades (through clicking and dragging the mouse) the areas
being used and connects each together. Once connected, the engineer then spends his
time smoothing out the transitions between the takes making it all sound seamless.
The final product should sound like it is from one take. After all the edits are
completed, the engineer and conductor will listen from beginning to end of the piece
making sure that all transitions are smooth and that the musical integrity and intent is
preserved.

Each engineer uses different editing software. The editing software available
today allows the engineer many more options than the cutting of tape during the
editing process just twenty year ago. Having a clear knowledge of what your
expectations of the software are will allow you to choose a program that fits your needs
and budget.

Once the pieces are edited and the order for the compact disc has been created,
the engineer compiles the compact disc in the final sequence for the project. Once this
is accomplished, the engineer then masters the compact disc. Mastering includes
matching volume between each piece, adding reverberation, and setting appropriate
amounts of room noise between takes. Room noise is the ambient sound of the hall
when the group is not performing. The recording engineer connects room noise
between pieces to eliminate drop out between takes. Each of these steps is vital to the overall presentation of the final product.

Another facet of the recording process is the artwork and compact disc booklet which includes players information, conductor and institution information, play list and times, liner notes for each composition included on the compact disc and technical information. The booklet itself becomes the preserved written documentation of the compact disc. Assembling the booklet can begin when the project is scheduled by obtaining an artist for the compact disc cover and finding a department on campus or company to create the photo ready files necessary to have the compact disc pressed. As the project is recorded, the booklet can begin to be constructed. Valuable time will be saved if the booklet is created prior to the editing process. The only information not available until after the editing session is the total time of the compact disc and the individual times of each piece. Once the editing session and booklet are completed, the project needs to be sent to a pressing company.

2 companies that press many of the countries wind band compact discs are Mark Custom Records and CDS Graphics. Both companies produce quality work and deliver a product to your door that is wrapped and ready for distribution. Mark Custom Records offers an additional service for its clients. Each disc that Mark Custom presses appears in their catalogue and also on their sales’ tables at conventions making them a wise choice.

Mark Custom also secures mechanical licensing permission for the works on the compact disc. Each piece that appears on the compact disc requires a small fee to be
paid for its use on the compact disc. This fee equates to cents per compact disc created. This service provided by Mark Records is well worth the minimal charge per compact disc.

Once the disc is in hand, the conductor only needs to be concerned with distribution. Whether it is an advertisement on a website or mailing of brochures, each project will be marketed differently depending on available budget and targeted audience. From start to finish, recording a compact disc is a 2 year process. This is a process that if planned well, will positively represent the ensemble and institution for years to come.
The primary intention of this paper has been to fill a void in scholarship that
exists on wind band recording. Information from conductors, composers, engineers
and other professionals have provided valuable insight pertaining to the educational,
historical and artistic aspects of the recording process. Despite the large number of
musicians involved in these projects, very little information has been previously written
about the activity.

As a result of the recording process, individuals within the ensemble have the
opportunity to develop clarity in their playing that is difficult to duplicate in a live
performance or typical rehearsal setting. Through an intense level of accountability,
each performer becomes responsible for achieving a higher level of technical facility and
musical maturity. Through the individual success of the musician, the ensemble
reaches higher levels of performance.

Wind band repertoire has gone through a significant metamorphosis over the
past 100 years. Recordings can provide a resource for music educators that are on the
look out for new repertoire. Through these recordings, ensemble conductors can find
new and appropriate literature for their students. The myriad of wind band recordings
is having a significant impact on repertoire development. Wind band recordings have
the potential to simultaneously preserve the past and influence the future of wind music.

Motives for recording are as different as the ensembles themselves. Through recordings, groups are able to create a body of work that will continue to contribute to the advancement of the medium.

The goal of all involved should be the pursuit of technical perfection which does not eclipse the ultimate musical goals of the project and the integrity of the composer’s intentions. Ultimately, this document was initiated with the intent of serving as a point of departure for additional research and scholarship. The impact of the recording process on our profession is significant and deserving of further attention. Future scholarship will sustain the level of activity necessary to document the development and growth of the recording process, its educational value and its impact on the repertoire of the medium.
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