

**A Rhizomatic Analysis of Stage Management in Modern Alberta Theatre Practice:
Keeping the Breath Alive**

by

Irina Tuzlukova

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ABSTRACT

This is a study of the role of technology in the stage management profession, with a specific focus on professional and social practices, in Alberta theatres. Through the interviews I conducted with five professional stage managers in the summer and fall of 2018, I investigate how stage managers interact with technology, and how professional and social practices are changed. There is no unilateral outcome when participants report on the impact of technological developments on the profession. This is where Deleuze and Guattari construct of rhizomes is used to interrogate the role of technology in bringing breath of fresh air into stage management and its impact. Rhizomes exist where there is a need to make connections between different practices, experiences and scholarly conversations related to how technology is changing stage management practices in Alberta. Further, I trace outcomes and possibilities for new technology driven perspectives and practices in stage management, and argue for the importance of technology to enhance the perceived quality of the stage management profession and keep its breath alive.

PREFACE

The University of Alberta Research Ethics Office - Human Ethics has approved this research under Project ID number: 00081921 It is an original, unpublished, intellectual product of the author, Irina Tuzlukova.

DEDICATION

To my parents for their support and encouragement.

ACKNOWLEDGMENTS

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INTRODUCTION: Starting where I am (nomadic)

To start this thesis, I want to acknowledge that although this research is embedded in a Canadian and Albertan point of view, my connection to this land is neither deep or long. Originally born in Russia, I was fortunate enough to be able to not only watch but also be part of a theatre community from a young age. An opportunity to attend an international school in Oman and be surrounded by people from all over the world, was another advantageous episode of my life, followed by my decision to move to Edmonton, pursue higher education and learn different approaches and techniques in stage managing. With such a varied background I want to acknowledge that I will see this research from my perspective as a newcomer, and the little distance might provide a unique offering to the practice.

I can credit my fascination with theatre production to a lucky chance I had one day to visit the artistic director's main office, as well as a props and costume storage of a Russian dancing company I was part of. Despite the fact that I was not a good dancer, I was captivated with everything in that room. Colorful costumes that hung on the walls, masks that extraordinarily varied in appearance and many other different miscellaneous objects welcomed me and made me want to know their stories. This emotion that I had for all of these objects, the questions and passion that rose in my chest was exactly what led me to technical theatre. Stage management was not something that captured my interest in the beginning. A happy accident or just a need for an additional couple of eyes in the rehearsal hall had me follow that stream into doing a BFA in Technical Theatre/Stage Management in the university, and then inspired this research. Through the

time and flow of the research I was able to learn different approaches to stage management and better understand that every production, be it an opera or a ballet, or a play, has its own distinct approaches and challenges.

While getting my specific degree I had to take multiple classes on what stage management is. Presented with multiple scenarios and problem solving solutions of how to approach it, I immersed myself deeply in theatre history classes, studied the basics of design, model making and basic sewing, and even hanging lights. To truly understand stage management, you need to feel it in the body. You are required to connect and communicate with everybody in the production both face-to-face and electronically, be present in the rehearsals and then every night during the performance. Throughout my four years at the University of Alberta, I stage managed and assistant stage managed multiple performances, worked in different positions in street festivals in and around Edmonton, watched theatrical performances as an audience member, and along the way learned a lot about theatre and theatrical productions. These projects have taught me how to supervise the props, manage backstage functions, prepare and run the shows, design costumes, differentiate between a set construction and a real house building, and become aware of current theatre technologies. Since my first involvement in these projects, I have wondered about the ways of communicating the attributes of stage management as a profession in the contemporary theatrical arts for it to be better understood and appreciated, and its perceived quality to be enhanced. As I undertook graduate research, the exploration of the role of technology in stage management and the response of the profession to the continuous penetration of technology into the theatre in general seemed an opportunity to me. I noticed that the magic of technological innovations in theatre

context was represented by a variety of tools, appliances and platforms; however, I was specifically attracted by digital and mobile technologies used in stage management practice.

Theatre is a well-oiled and well-run machine that through trials and errors collectively works towards the end result of a final product presented before the audience. It has always been and will be a collective creation featured by the excitement and energizing effect produced by imagination, thoughts and creative impulses of everyone involved (Christinson and Gerecke 28). For example, in Alberta, collective creation as practice that draws on collaborative energies has acquired an important position in the theatre tradition. As a collective creation, theatre provides all the participants involved with opportunities to listen to each other, to let go of individual glory for the benefit of the group, and to experience the thrill of creating art as an ensemble. And, after the curtain falls and the audience has departed, that is really what theatre is all about. Jimmy Bickerstaff in his publication, *Collaborative theatre/Creative process*, argues that “if we were to think of the collaborative theatrical process as a kind of ‘writing’, resulting in a performative text, then in any act of theatre, ... the ‘text’ that we see and hear is also attributable to the work and influence of numerous others, even to others beyond the immediate collaboration of that production and its audience” (48-49). No production can happen without hard work and collaboration of actors, designers, technicians, builders and managerial staff throughout the whole theatre, and only due to excellent communication can all of the cogs in the machine work and support one another.

I was once told that stage managers do not win Tonys; they are seldom talked about, and audience members quite often do not even know who stage managers are and what

they do. The biggest praise and celebration that any stage manager would receive is the acknowledgement by their peers and the cast. Stage managers have been always ‘hidden’ behind the audience or on side stage, and only quite recently the profession has become part of the academic discourse on theatre which traditionally was “primarily concerned with the more ‘glamorous’, or at least the more visible aspects and occupations of theatre, namely plays, playwrights, and actors” (Carmody iv). During the production process, stage managers breathe with the cast and all the production elements, and express themselves through each breath they take. Each time stage managers draw in the breath, they create, and each time they breathe out, they share their creations and bring a change with each breath.

There are multiple definitions of stage management professions, and understandings of the role are changing. As a rule, there is no reference to any specific theatre practice in them. To unpack this a little bit, first, I need to acknowledge that no show is the same. Though in practice, there are a lot of shows that are remounted and redone in the same or different cities with the same or similar cast but every time the show is done, it is presented with different challenges and people. A stage manager’s approach to a project is also different every time, and there is always something different and new brought to the table, for example, in a method of documentation: use of a different template or electronic prompt book. However, I need to note that though I’m arguing for new approaches towards the practice with each production this does not mean that each project is a new and distinct way of approaching the practice. Within the English speaking Canada, all professional stage managers are members of the Canadian Actors Equity Association (CAEA) or commonly referred as Equity. This organization is

responsible for representation of performers, directors, choreographers and stage managers. That being said, Equity does not govern or establish line by line ruling and expectation towards the practice itself. Each theatre and each production has its own challenges and requires different approaches towards it. With that the position and the work of stage managers and their teams change as well. To illustrate, Larry Fazio in his book, *Stage Manager: The Professional Experiences*, describes stage management as a practice of organization and coordination of a theatrical production. This theatre profession ensures that “all elements of the production are consistently in the right place at the right time” (Maccoy 14) in order to “make a show run smoothly throughout the process from preproduction to closing night” (Allison 9). In addition to the organizational aspects, the job of stage management involves communicating to people while managing them, their ideas and their creative process (Cambell, Janssen & Robichaud 20-23). In, *The Back Stage Guide to Stage Management*, Thomas Kelly details the production process for stage managers and explains their roles as communicators and individuals responsible for establishing “a creative environment.” As communicators, stage managers should be “responsible” and “adaptable,” and “have the ability to handle and coordinate diverse groups of artistic personalities with tactful discipline and a sense of humor” (Kelly 20). Stage managers establish the creative environment “by combining the ability to prioritize and anticipate and solve problems with calm sensitivity and grace under pressure” (Kelly 20). In the classroom, University of Alberta professor John Raymond describes this as antennas that stage managers need to grow through their learning and the practice. By growing these antennas, stage managers establish feelers and create some input/output connections within the rehearsal hall and with the whole production. In his

personal communication, Raymond emphasizes the importance of both the communication and creative elements in any form of production. This understanding is rooted in his almost a half century long experience as stage manager and production manager. However, he notes some losses that the profession has experienced because of technology or “systems” development like email, voice mail, iPods, cell phones. These losses are obvious in less actual face-to-face communication in production process, little or no spirit of creative collaboration, reduction of human input and interaction, more mechanical creative acts, all caused by the ‘systems’ (Raymond).

Interestingly, the “inherent creativity of the stage managers' input” (Pallin and Judd 1) has not commonly been acknowledged historically. Stage managers were expected to act in response to predetermined sets of tasks or situations rather than creating or controlling them; and their role was mainly perceived as supportive and reactive (Pallin and Judd 1). Coordinating schedules for the artistic and technical operation of the production during rehearsals, including movements of the actors, lines, props, scenery movements, lighting and sound effects, running the show once into performance space illustrate just some of the responsibilities that underpin the occupation profile of the stage manager. However, a paradigm shift is currently noticeable within a theatre industry and within organizations providing stage management training. Gail Pallin and Pauline Judd in their publication, *Stage Management and Creativity*, explain that “stage management has always been inherently creative, in that a stage manager is constantly engaged in problem solving and seeking new ways to achieve the goals of the production team, designers, directors and performers constrained by time and monetary demands” (3). According to them, “the potential for creative thinking within the role however is becoming increasingly

recognized as the industry comes to accept that communication, management skills and creativity are intrinsically linked” (Palin and Judd 3). As Joceline Wynn spells it out, select things that stage managers do or say are “indeed artistic in nature” (16). Similar to Palin and Judd, when talking about the artistic integrity of theatrical productions, Wynn emphasizes the creative aspect of stage managing that requires “an artistic eye” (20). Likewise, Franklin in response to an argument that stage managers do not artistically contribute to the production, claims that “stage managers use the knowledge and understanding of a director’s vision to develop a strong sense of the show and how it flows from scene to scene.” He emphasizes that “directors and designers who collaborate with the stage manager to develop the best show possible are the ones who benefit the most” (ibid). Franklin believes that “the stage manager must have, more than any other member of the team, a full understanding of the show, each actor, each set piece, each lighting and sound cue and how each component individually and collectively moves through its individual moment” (ibid). Therefore, the artistic ability and integrity of stage managers are “what, ultimately, transform the show from its pieces into that magical whole” (ibid).

Although stage managers are extremely important theatre professionals and described as collaborative theatre artists (Franklyn), their practices are still among the least documented and insufficiently explored in academic writing (Carmody 4). However, such research is necessary in order to account for the role of stage management in successful delivery of a theatre performance, including organizational, creative and communicative aspects of the profession. There is also limited research and inadequate evidence of the changes in stage management profession brought about by advancements in technology.

Carmody argues that advances in technology have had an impact on the stage management profession leading to its “perhaps the most drastic changes” (iv). However, the knowledge of the indispensable role of the stage management in collaborative theatrical art still remains limited. For example, enormous progress has been achieved in research of Canadian theatre as collective creation. Ginny Ratsoy in an essay which explores the process and product of a collaboration between Toronto’s Theatrefront and Cape Town’s Baxter Theatre, argues that “the spirit of Canadian collective creation is evident in Theatrefront’s work, with its rejection of hierarchy, reflection on process, and emphasis on inclusion” (37). While examining collective creations in Canada, similar to Alan Filewod, she mostly focuses on it as part of democratizing the performing process that is based, according to Filewod, on “the actors’ personal responses to the source material” (24) - but doesn’t consider the production crew as members of the collective. Such limited approach creates limited understanding of contemporary theatre practices and the role of stage managers in it.

Recent research, such as, Steve Dixon and Barry Smith’s *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*, has documented evidence of a strong relationship between technology and contemporary theatrical art. It emphasizes the implicit connection of the theatre to technology, while drawing attention to almost constant interplay of the modern theatre industry with the creative usages of new technological advances and encouraging using them for enhancing the creative potential of the theatrical art (Dixon). Hasan Bakhshi and David Throsby discuss the role of technology in creating unique and more exciting ways of producing theatre that expands and deepens its relations with spectators (2). Their discussion

resonates with Johnson's comment on theatres' constant search for new technology to wow audiences (49). Peter Huyer explores technology impact on theatre with particular focus on how it has reconfigured the design of sound in contemporary theatre to make the audience capture it in some very special ways through, for example, digital sound effects, voice editing and instrumenting, and vocal processing. Emmanouela Vogiatzaki and Manthos Santorineos in their publication *Illusionistic Environments - Digital Spaces* emphasize the assisting role of technology in creating new performance structures in terms of directing and acting on the stage (27). They are of the opinion that contemporary theatre has moved far from physical props and furniture in order to create the environment that absorbs the performers and their audience. Such illusionistic environment is created by new theatrical ideas and practice that involve, for example, soft sets, virtual spaces, and digital pictures (27). Indeed, technology has brought about countless opportunities to theatre practice alongside with a variety of ability levels in use and implementation (Johnson 2). However, in spite of wide spectrum of practical evidence, accumulated knowledge, and scholarly conversation that is going on, as new technologies are being integrated into theatre, there is still insufficient concentration on stage management, and its reliance on technology in the theatre world.

On the one hand, technology has contributed a lot in professionally reconnecting stage managers to the community in terms of the organizational, documentation and, especially, communicative and creative aspects of the practice. For example, theatres are gradually changing to cloud-based digital filing systems rather than up keeping physical archives of all the productions. Also, my own experience of stage managing has taught me that in any production the processes of decision making, changes, amendments and

additions happen all the time. This is when stage managers acquire the roles of communicators and begin to be the central hubs that connect and distribute information, ideas and notes by extensively using email messaging. On the other hand, technology has led to “mechanical communication” that “may reduce wasted time in some cases of pure information transference” but because of errors, may result in “mass confusion and bad feelings” (Kelly 9). There is also mistrust and unwillingness to use technology by some stage managers because of the belief that “no technology can work and process faster than human mind and your hand” (Raymond). Besides, these perceptions are caused by the fact that “the carriages” of the production “train” (Gadowsky) do not always move in line, and there are always changes and developments in place. Over and above that, there are always “the pressures of time and the desire to have one task of communication finished” (Kelly 9).

In order to understand how much stage management has changed since incorporation of technology, we need to look back on what the profession was like before. A little while ago, I read a blog post by Dallas Morris, a stage manager who shared some thoughts on what life was like for the stage management professionals before email and cellphones (Morris). While immersing myself into some reflections about the time when “no one had a cell phone or a lap top”, and “if there was a computer it was probably a desktop”, “slow-as-molasses,” and “a landline phone” and a “a slow ink printer with paper on serrated rolls,” and “there was no internet”, I wondered how interesting it was to read about all this from a screen of a cellphone. Also, in the post, he describes the process of developing production notes and the daily for the next day after a rehearsal while observing the tedious documentation of writing notes on the computer, double checking

them for spelling mistakes and other errors, and other edits as needed. This was followed by printing physical copies and distributing them in the mail boxes within the theatre. If there were production team members out of town, the stage management team would have to deliver the notes to their hotel and make sure they would receive a physical report in the morning. With the daily schedule, it would have to be posted in specific places throughout the theatre building and rehearsal space. There was also a “rehearsal hotline” in place that can be described as a specific dedicated phone extension where a voice recording of the stage manager would slowly read the schedule for the next day. The voicemail would have both general and any additional information about the next rehearsal date, such as, for example, fitting, who is called, what time they are called, and any other. It is important to note that sometimes there would be more than one production happening at the theatre at the same time and these voice messages would last more than five minutes. While praising email and its “gift-like” nature, the author of the blog post notes that “even the idea of communicating via email address took a while to catch on because not everyone could afford their own computer and/or the internet.” The blog post ends with Morris celebrating the technological advancement and how accessible it has become to distribute information since then.

In this study I examine how the advancements in technology have affected stage management practices and how the profession has responded in the context of theatres in Alberta. Theatre practice in Alberta, similar to all contemporary Canadian theatre practice, is rich and diverse being grounded in longstanding history of multicultural and multiethnic theatrical art and craft. It includes dynamic developments in the fields of arts innovation brought about by modern approaches to theatre production, digital revolution,

as well as dedication, talent and enthusiasm of people involved. It is also changing profoundly due to continuous technological advances. This study, then, investigates the impact of technology on stage management in Alberta theatre practice and what has traditionally made up the job of the stage manager in terms of responsibilities and workstyle. It looks at available technology and the ways the technology is incorporated into the work of the stage managers. It also attempts to identify any milestones in the history of the theatre practice in Alberta in relation to stage management and technology, and inquires if technology has affected the stage management profession in Alberta theatres in terms of introduction of any new responsibilities and work styles or any other resulting impacts of technology on the development of the stage management profession and its future.

In the conversation about Alberta and theatre production, I should recognize the pivotal role of the University of Alberta and the Drama department, specifically stage management program. The University of Alberta is the only university in Canada that provides a Bachelor of Fine Art degree in stage management. The graduates of the program are professionals who are acknowledged in the industry because of their exceptional work ethics and distinctive approaches to each project (Raymond). It is worth mentioning here, that majority of the participants in my study are closely linked to the program in some way or the other. Two of them are graduates of the program and most of them have been either invited guest speakers or taught classes within the program itself.

To properly frame this study, I use the figuration of the rhizome developed by Gilles Deleuze and Félix Guattari in their book *A Thousand Plateaus* to explore open-ended and non-hierarchical structures and emphasize interconnectedness. Scholarly texts that use

rhizomatic structures in research are able to both analyze such structures as well as reflect them in their reporting of research outcomes. This is done through the rhizomatic form's "capacity to include the voices of the previously unheard, and to open analyses in messy, incomplete ways that are both more authentic and more satisfying than traditional closed structures" (Grellier 83). As described in research by Molly Smith Dugan, the rhizome is a robust analytical tool that offers "a way to look at the multiplicity of things that can happen in spaces" (23). The emphasis on looking at multiplicities can also be traced in research by Michael Dillon who argues that "a rhizomatic perspective is one such alternative that embraces the multiplicity" (90).

Rhizomatic analysis involves creating "lines of flight" (Deleuze & Guattari) to designate an "elusive moment when change happens, as it was bound to, when a threshold between two paradigms is crossed" (Fournier 121). Applied to various aspects of stage management profession in relation to the use of technology, this perspective allows having multiple entry points that "can be opened up for additional connections in all its dimensions" (De Freitas 563), navigating the profession's past and present, and figuring out its future. It also supports generating ways for thinking differently about complex interrelationships of stage management profession with technology by working with philosophical imaginaries of Deleuze and Guattari, including rhizome, plateaus, nomads, lines of flight and notions of becoming, mapping and tracing, all of which, in complex ways assemble as disruptions to conventionally linear thought about the profession.

Bryan Clarke and Jim Parsons, who have come to think of research as rhizomatic, explicate some new perspectives that emerge from thinking as a rhizome researcher. The

first perspective is that rhizome researchers start where they are (nomadic). According to Clarke and Parsons, "when deciding to research as a rhizome, researchers begin to see their current situatedness as an opportunity to be ... nomadic – to live outside the current state of affairs" (39). They explain that "nomad intentionally lives without roots; willingly moves from place to place, idea to idea, and concept to concept. Nomads are open to interrelationships of what is before them, even if these interrelationships present places and concepts not traditionally linked" (39). The second perspective involves listening to the voices/things connected to them (assemblages) while shifting away from binary oppositions and hierarchies and "deliberately seeing things and people around you with intentional equality, respect, and presence" (39). The third perspective considers the researchers as rhizomatically embedded to the lives of the research (plane of immanence). Clarke and Parsons explain that "not looking outside ourselves or those involved in our research to compare against and living in view of the plane of immanence gives research a freedom to follow lines of flight and seeks to break free from objectifying people as we consider ourselves as rhizomatically embedded to the 'other'" (40). As described by Clarke and Parsons, the fourth perspective refers to the development of sensitivities to elements/people that are not part of the status quo (deterritorialization), while the fifth perspective involves searching for research aspects that are sometimes ignored (different affects). According to the sixth perspective, "rhizome researchers desire a life of becoming rather than copying what is seen (haecceity and multiplicity)" (41).

In this study, acknowledging the dynamic nature of the object of my examination, I follow the emergence of different influences of technology on stage management

profession by mapping its organizational, creative and communication aspects. Having rhizomatic tools at my disposal allows me to make connections between different ideas, thoughts, moments of discussions and portions of data in order to provide accounts that live and breathe stage management in Alberta theatre practice today. It also makes it possible to explore how stage managers interacting with technology in different aspects of their profession will change and develop the future of stage management practices.

The nomad, according to Deleuze and Guattari, “has a territory”, “goes from one point to another” and “follows customary path” which “is always between two points, but the in-between has taken on all the consistency and enjoys both an autonomy and a direction of its own” (380). I am starting this thesis as a nomad who roams around from plateau to plateau discovering and learning new things in the new territories. In Chapter One I embed myself in the research, elaborate in the significance of technology in the profession and the methodology I followed to set up interviews and introduce each of my interviewees in order to note connections, instances of breaches and movement, and identify the trajectories of lines of flight. Chapter Two discusses thematically arranged content of the interviews. I investigate technological impacts in the present work lives of the interviewees, and how technology is embraced by stage management community and how it may cause the “shortness” of a stage managers’ breath. Here, challenges, specific technological tools and appliances, including those in rehearsal hall, impediments of technology, communication and miscommunication issues are explored. Chapter Three looks to the future of stage management. It addresses ecological concerns and the possibilities and challenges created by technology. It also outlines an argument for technology as a tool to support creativity of stage managers but not replace them in the

future. In conclusion, I argue for technologically driven changes in Albertan stage management practice that support and expand stage managers' creativity and keep them breathing.

Clarke and Parsons articulate that “perhaps the joy of research can be ignited when the responsibility to make things happen is let go” (42). My research will help to fill a critical gap in the modern history of the theatre in Alberta, documenting the advancement of the essential, and up to now little discussed, stage management profession. It can also add to the understanding of the theatre development in Alberta. Recording and analysis of the attributes of stage management in the contemporary theatrical arts in Alberta, as well as the interpretation of the impact of technological developments on the profession will lead to a better understanding, appreciation, and the enhancement of its perceived quality in both theatrical and academic worlds.

CHAPTER ONE: Embedding Myself in the Life of My Research and in Technology

A few years ago I was fortunate to be able to work on a University of Alberta production of a new play by Colleen Murphy called *Bright Burning*. The play was large on a production level with a lot of props and technological mastery as well as a fairly large cast. One of my biggest challenges as a stage manager was compiling and creating ever changing daily schedule for the next day. One night after completing the rehearsal daily schedule as well as the production notes I clicked “Send” and happily left for home. When at home, I realized that no emails had been sent due to an error within the university email system. Such realization was a result of multiple messages coming from the performers asking why the daily schedule has not been sent out, and I had to problem solve. I began making a screen shot of the PDF on my phone and then sending it out as a text message to all of the cast as well as the crew members. After spending long hours on emailing and messaging the whole production I started to question the situation that I was in more thoroughly. Mainly, I felt curious about how the technology has affected the profession of stage managers and whether it has changed with the technology and, if so, how.

The stage management profession has always been associated with the keeping of the book. However, it is now more like a hybrid profession that involves traditional roles and responsibilities of the stage management profession and the early twentieth century stage director position, including keeping a master prompt book and being in charge of keeping the production’s artistic integrity (Cate 6). The stage manager, as a theatre professional is responsible for everything that happens throughout the rehearsal process and during the

performance: actors' movements and lines, props, scenery movements, lighting effects and sound effects.

Nathaniel Chase, in his master's thesis "Leadership versus Management and Needing Both to be a Successful Stage Manager," discusses the term "stage management" pointing to its misleading nature that does not allow to fully understand how someone functions in this role. Chase argues on the leading role of stage managers throughout the production process that should not be limited to managing the stage and those involved as the term itself presupposes. The stage manager co-ordinates schedules for the artistic operation of the production during rehearsals ("Stage Manager"), and it is the stage manager's responsibility to uphold the artistic vision of the director as the run continues and issues that might come through the process arise. In the words of Ron Davis, Nora Polley and Jean Yoon, "each production poses fresh and unpredictable challenges" (2) to the job of the stage manager. These challenges necessitate using some tools to cope with them, and here, technology might be an asset.

Research indicates that responsibilities of a stage manager vary depending on many factors, including, for example, theatre size and type ("Theatre stage manager"), the theatre's way of doing things, a director's working method, the actors' individual and specific needs (Davies, Polley & Yoon), and advances in technology (Carmody). For example, Lawrence Stern and Jill Gold in *Stage Management*, contend that "there are no definitive list of duties of a stage manager that can apply to all theatres and staging environments" (1). However, they argue that in spite of possible differences of stage manager's duties, the function of this professional does not change, and involves "making the entire production run smoothly" (ibid.). The current discussion of stage management

also references the importance of communication and the establishing of respectful relationships with all of the theatre professionals in a production. To illustrate, using an example of community theatre, Michael W. Kramer explores how leadership is shared in a naturally occurring group situation when the primary director assumes a passive or ineffective role. In his study, stage managers are considered as participants of shared leadership structures or secondary leaders who communicate, provide effective responses and share the leadership with other theatre professionals to produce successful theatrical performances (Kramer).

According to the theory of technological determinism, “technology is an agent of social change” (Murphie & Potts 11). Douglas McLeod, David Wise and Mallory Perryman confidently state their belief that “the assertion that mass media plays an important role in the everyday life of most people is beyond question” (38). They maintain:

The growth of new forms of mass media (e.g., websites, blogs, news aggregators, social media), as well as new forms of message delivery (e.g., smartphones, laptops, tablets) amplify the presence of media in daily life. It is clear that not only do researchers recognize the potential effects of mass media, but members of the public do as well. In fact, references to the power of mass media are plentiful in both media and public discourse. Researchers and the public alike are interested in, and concerned about, the mass media as a potentially influential force in social and political life. (ibid)

To quote Kelly Ann Johnson, who examines theatrical productions and digital technology, “advances in digital technology are changing the way we function in society

which, in turn, adjusts our expectations and experiences” (13). And the modern theatre industry is in “an almost constant interplay with the creative usages of new technological advances, striving to bring something new and exciting to the stage to captivate their audiences” (Boyce). The internationally renowned Canadian theatre artist, Robert Lepage focuses on encouraging use of technology for enhancing the creative potential of the theatrical art making it clear that “the theatre is implicitly linked to technology” (as cited in Dixon 360).

Johnson states that “as new technologies are being integrated into theatre, the different divisions of technical theatre are changing” (33). And stage management profession is obviously not an exception. John Raymond, a professor in the Department of Drama at the University of Alberta, emphasizes that as a stage manager you have to run the show both artistically and technically. Fiona Carmody in her study of stage management and the digital age in the context modern American theatrical production argues that advances in technology have had an impact on the stage management profession leading to its “perhaps the most drastic changes” (7). Carmody examines the interrelations of technology and profession in such aspects as stage managers and production, stage managers and communication, and stage managers and training. While acknowledging the role of technology in enriching “individual career trajectories” and assisting “stage managers in the execution of their jobs,” Carmody emphasizes that it “cannot replace the skills and artistry that previous generations of stage managers have cultivated” (96). Another study on technology and stage management, by Jessica Morrison, identifies the effects of the surge of technology, e.g. internet (email, Dropbox, Google Drive, etc.), Microsoft Office (Microsoft Word, Excel, etc.) on stage

management, including its organizational and communication aspects. Similar to Carmody, Morrison questions the role of technology in aiding stage managers in performing their functions, and whether the profession must become more reliant on technology to be successful in theatre world. She maintains that “technologies, while great assets to a stage manager, have not actually changed what it means to be a stage manager, but instead have changed the way a stage manager carries out his or her tasks” (2). The research by Sokol focuses on developing existing technologies into a software system which that gathers, stores, and organizes theatrical production data to address such weaknesses, as, for example, existence of handwritten notations, wasted resources and de-centralized communication, by “using interactive blocking and staging features,” “managing information for administrative tasks (with databases),” and “providing a central, easily accessible source of information for all stakeholders (by remote access per authority codes)” (5). Among others, it examines use of a variety applications and tools, e.g. Virtual Stage Manager, Virtual Callboard, The Show Hub, to facilitate communicative and organizational aspects of stage manager’s work while “while improving the quality of the participant experience in general” (5).

Geoff Walsham, Heinz Klein and Michael Myers in their studies discuss a position that our knowledge of reality is obtained through social constructions, such as shared meaning, language and documents, that are built together by human actors, and this, as emphasized by Walsham, “applies equally to researchers” (5). This understanding led me to focus on the interactive and generative tool of interviews to obtain and explore personal encounters of stage managers that could reflect on and discuss the details of

stage management professional practice involving the dynamics of the relationships between technology and stage management.

I developed the questions for the interviews by adapting topics covered in Fazio's book *Stage Manager: The Professional Experiences*. The questions were elaborated to follow the emergence of different influences of technology on stage management profession by mapping a variety of topics related to stage management and production. These topics include, for example, professional experiences, running auditions, production week, rehearsals, opening performance, run of the show, closing the show, working relationship, organizational tools, and communication.

Ken Plummer points out that in life histories, obtaining relevant information can be accomplished by chance, luck and being pragmatic. The key moment during the initial steps in my study design was about making more detailed choices regarding my study participants, their style of involvement; gaining and maintaining access; collecting field data (Walsham). In cases when it is important to identify and select especially knowledgeable and experienced participants and it's important to use limited resources in the most effective way, Robert Bogdan and Sari Biklen suggest applying purposeful sampling technique. I used this technique taking into account the principles discussed in Lawrence Palinkas et al. when working on the participants' criteria, and then later, when identifying and getting access to them. I determined that firstly, the participants should have history of professional work experience as stage managers in the theatrical arts in Alberta. Sharan Merriam emphasizes that "purposeful sampling is based on the assumption that the researcher wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (61). Merriam adds

that “the logic and power of purposeful sampling lies in selecting information-rich cases for in-depth study” (61).

In the definitions of the stage management profession, as a rule, there is no reference to any specific theatre practice. Fazio describes stage management as a practice of organization and coordination of a theatrical production. Initially, I was thinking about looking at the changes of the stage management profession due to the technology using the examples of Edmonton Opera and Citadel Theatre only. This came with understanding that these theatres are in a very specific situation; both are well-funded professional organizations in a city with a very active theatre community. Later, I revised this criterion to include stage managers with diverse professional experiences in a variety of Alberta theatre community projects to explore a wider territory of interrelationships of stage management and technology.

The second principle that guided me was to identify participants who have inclination to participate and are available. Also, the participants in this study should be information-rich and have the ability to expressively and reflectively communicate their experiences and opinions. Because of my involvement with Alberta theatre projects and the opportunity this provided to glimpse into the Alberta stage management professional community, I was able to access to many experienced, and knowledgeable individuals. These professionals could provide data that addressed my research questions, and generate data and ideas to advance my understandings (Mason 121) of the impact of technological developments on the profession. Ritchie and Lewis (83) point out that qualitative samples are usually small. I approached five professional stage managers who have all features and characteristics to make detailed contributions to my research

project. All of these individuals gave their consent to participate in my research. They are also acquaintances whom I have had a chance to meet from either my studies at the Drama department at the University of Alberta or from my participation in some theatre projects. They are all members of the Canadian Actors Equity Association with many years of experience in the field. John Raymond has worked as a professional stage manager and coordinated productions in many theatre projects in Alberta. He has been an Associate Professor in stage management at the University of Alberta Department of Drama for the last fourteen years while continuing working professionally in the field. He was also my mentor during all four years of my BFA program in stage management at the university. Al Gadowsky graduated from University of Alberta with a Bachelor of Fine Arts degree in Technical Theatre and Stage Management. His experience encompasses working in Edmonton and Calgary theatre projects, such as Edmonton Opera, Catalyst Theatre, Theatre Calgary. He is very passionate about arts. He is a strong believer that art is part of individuals' lives and culture. Michelle Chan has been an Equity Stage Manager since 1995. Her stage managing career extends over twenty years of experience. This includes working in shows and theatres of different size and scale, while slowly rising through the ranks. She is currently the resident stage manager at the Citadel theatre in Edmonton. Ha Neul Kim is a Director of Artistic Operations and the resident stage manager at Edmonton Opera. Similar to Al Gadowsky, she is a graduate of the stage management program from the University of Alberta. While attending the university, she was able to apprentice for Edmonton Opera and has been working there since then. She has been in the industry for the last twenty years and has been working in non-profit organization for the past seventeen years with many different roles, including strategic

planning, budget preparing/managing, artistic programming, project managing and managing special events. Oliver Armstrong is currently, as of 2018-2019 academic year, an instructor and practicum advisor in stage management at Department of Drama of University of Alberta. He is a multi-skilled stage manager and event professional based with over fifteen years of experience of stage management in a wide variety of environments in Alberta, from large festivals to intimate productions. He holds a Bachelor of Fine Arts from Ryerson University (Theatre Production). He has experience working in many disciplines including Ballet, Opera and New Plays. He has also worked as a Director of Staging and Producer for various large-scale events.

Familiar experiences, settings and practices allowed for interesting face-to-face in-depth interviews to take place with all participants. Each interview I conducted was audio-recorded and lasted for approximately 45 minutes to an hour in length, with possible follow up email and/or phone questions for verification after the interview. The in-depth interview, as described by James McMillan and Sally Schumacher, is “a conversation with a goal” (42). All the interviews that I had with the participants were enjoyable experiences that involved intense interaction, collaboration, construction and reconstruction of knowledge (Mason 63), and in-depth meaningful exploration (Ritchie & Lewis 142) of stage management and technology.

The structure of each interview was flexible in terms of the order of the questions from the written interview guide. The process began with fourteen questions aimed at generating information about the participants’ experience, building up knowledge and constructing connections about whether advancements in technology can bring a breath of fresh air into the profession. I asked questions about contemporary stage management,

Alberta stage management practices and the ways that technology may have influenced them. I then asked some follow up questions to accurately capture the perspective, clarify or supplement the answers of the interviewees as needed. The interviews took place in neutral contexts that were conducive to open interaction, and the conversations flew at times towards sharing some perspectives and views beyond the interview questions. In the time following the interviews, I transcribed and edited them for consistency, unity and linkages. I then sent each transcript by email to the interviewees for possible additions or changes, and final approval.

I conclude this chapter with Clarke and Parsons' insight that research is an opening that enables access to seeing interconnections rather than separations (37). The interviews that I had with these five Alberta professional stage managers revealed distinct voices about stage management and technology. The following chapters are the 'lines of flight' from my analysis of the interviews: listening to stage managers' voices and stories while creating an understanding in their land.

CHAPTER TWO: Listening to the Voices and Mapping Technology in Stage Management

As discussed in introduction, I started to think about the role of technology in the stage management profession when I was doing my undergraduate studies at University of Alberta. Since then, I have always been fascinated with the developments of the theatre practice and the advancements of technology within the production side of theatre. But what attracted my strongest interest was the fact that though there had always been interest in development and innovation within the practice, it mostly depended on the technological advancements and ingenuity. Sometimes, I noticed the nature and dynamics of stage management work had been positively changed due to use of technology. In my study of stage management practice at the university, I was introduced to both the “traditional” approach to practice and to some approaches that utilize new technologies. However, there were moments in my own and my classmates’ learning when trying to incorporate new technologies failed. For example, at one point we were tasked with a taping exercise in the Timms Centre for a *Three Penny Opera* production. The outcome of the exercise was to learn how to read a ground plan and use a scale ruler and then transfer the identified point onto a rehearsal floor. The exercise was set up to both to introduce us to technology in rehearsal hall and expose to different methods of communication. Half of the class received coordinates and plotting points from the physical ground plan, while others gathered points from the AutoCad drawings on the computer received from the set designer. After four hours of establishing these coordinates instead of a perfectly taped representation of a three-layer set, we ended up

with a mishmash of plotting points that would not match the physical ground plan. It turned out that the points established on the digital drafting were not similar to the ones on the physical, printed copy, and, obviously the new technology appeared to have many challenges and learning curves that stage managers had to pass in order to use efficiently and effectively. The point of the exercise was to teach novice stage managers to tape or mark the rehearsal hall floor by using a scale ruler on a physical copy of the ground plan. It made it possible for them to be exposed to different methods of work and communication especially when the digital plotter points and the “physical” measuring points done by students would not coexist in one playing space. It also ended up demonstrating how a mode of communication can influence an outcome.

Mario Pianta argues that “in this digital age the nature of work is changing, in particular in many information-based and platform-run activities, from the media to the arts” (2). A study by Theodore Lewis on the impact of technology on work and jobs suggests the introduction of technology has led to the changes in the very nature of work and job’s transformation. According to Lewis, “these changes have important human and societal consequences.” At the human level, as emphasized by Lewis, whereas some individuals “may find that technology makes their jobs more complex and satisfying, others may find themselves bewildered and suddenly incompetent. Still others may find that their work has become less challenging and that the expertise and artistry they had acquired over the years no longer matter” (ibid).

Impacts of Technology

Pianta contends that “the impact of technology is different across occupations and skills” (2). I started the interviews with the question about the impact of technology on

Alberta stage management practices in the context of contemporary stage management and the increasingly technologically driven world in which we live and work. The question about the impact of the advancements in technology on the profession led to many interesting personal and professional encounters on the interviewees' interaction with technology, though it was obvious from the interviews that individual's "identities and subjectivities both align and bump up" (Dugan 210) against technologies. Michelle Chan described the overall marked effect of technology on stage management profession as a "rapid change." A very experienced stage manager with a very impressive career record, she talks about herself as "a paper and pencil kind of girl." She shared her experience about "working with a lot of newer, younger stage managers who are bringing a lot more technology into the rehearsal hall." Chan does not seem to want to "be distracted by computers and other things like that" when working. Her preferable working style involves "focus on what is happening on the stage," doing "everything in pencil," and "then at the end of the day doing some transcription of whatever" she needs to do. However, according to Chan, "it's a constant technological moment" that she is "currently dealing with, all day long." The things that changed for Chan in the recent past in relation to technology effects seemed complicated to me, with both benefits and losses. They include, for example, where she "used to be in the rehearsal hall," how she "would check in with people on coffee breaks and lunch breaks and things like that." During the interview she also spoke about a certain transformation of her professional world into "more of an instant" one (e.g. "texts in the middle of the rehearsal," "use of the cellphone in the rehearsal and answer things right away"). This is what is described in literature as "always-on" work ethics and "always connected" life and work style proliferated by

technology (Widen). Chan's views about the effects of technology on stage management profession are shared by Oliver Armstrong. For Armstrong, it is very important to integrate technology into his work of stage manager. He believes that technology is becoming part of the theatre practice. Armstrong, for example, contends:

We are managers of different theatre practices ... When we may not be operating the technology personally, but we are responsible for the group of stage hands, technicians, operators, who are running technology in a different way. In which case, there is no way to not be affected by it.

Similar to Chan, Armstrong is not of the opinion that the profession of stage managers in Alberta has been totally taken by technology similar to "the global stage management sphere" referring to "Vegas residencies, cruise ships and things like that." Saying that, Armstrong means that technology, from his perspective, has marked the profession "by some degree" having brought "just minor adjustments." These include, in his view, for example, use of laptops by stage management professionals in the rehearsal hall, communication with different departments via cellphone as well as adding "a new department to the world of stage management, such as, for example, projection design." Armstrong emphasizes that "many of the shows that we do" involve "an extra set of tech requirements on stage" in addition to "liaising with an extra department." In whole, however, according to Armstrong, technology "has made the system simpler and us more efficient as stage managers."

Implementing new technology in stage management profession in the context of Alberta theatres is not straightforward. Likewise, the impact on the profession and changes to it are clearly not felt similarly by everybody. Obviously, the impact of

technology differs from one individual stage managers to another one, and as Al Gadowsky puts it in his interview, “there are people ... who don’t use technology and people who do use technology.” Gadowsky explains this by saying that some stage managers still prefer “paper prompt scripts,” and those who have embraced technology work with it a lot. These two approaches partially describe those who are “an old school,” on the one hand, and the younger generation of Alberta stage managers, on the other.

One of the key issues when implementing a new technology is identifying its place within the profession, and this appears to be a very complex matter. For example, not all interviewed stage managers showed admiration for the presence of technology in the rehearsal hall, consequently such presence is not asserted by everybody especially those who are “old school.” Talking about technology, John Raymond agrees that there is a fair amount of change in the way communication happens outside the rehearsal hall to the broader teams that are working on productions. However, he thinks that there haven’t been “a lot of changes inside the rehearsal hall.” For him, who found his “way in the profession with a traditional prompt script,” it does not seem easy to get “convinced now that anything will be better than our brains and what we have developed.” In our interview, Raymond shared his concern of having not been impressed by the use of technology with a prompt script; however, he is aware of “progression happening where you might be able to write on an electronic version of a prompt script.” Raymond is very supportive of the young generation of stage managers’ enthusiasm and interest in trying to figure out “what they could do to make a prompt script more technical or use technology with prompt script.” However, according to Raymond, something related to the magic of production and overall atmosphere has been lost because of technology.

Explaining this, he used the example of his work for Catalyst company where “music is very significant in their productions and the stage manager plays their laptop; they don’t create the music and they don’t program it but they play the show.” As maintained by Raymond, by doing so the stage manager literally gets “body memory,” and now “it’s basically just [click] “Enter”.

Embracing Technology

Al Gadowsky, who, similar to many newer stage managers has embraced the technology, believes that integration of technology is quite important for each aspect of work. As reported by him, “stage managers specifically are all driven to make the show happen, no matter what”; therefore, technology can aid stage managers in doing their work creatively, efficiently, and manage their work time. Proliferation of smartphones, in the opinion of Gadowsky, means that stage managers can use collaborative apps and create groups to communicate, which, in case of many stage managers, are quite often used as “a mix of personal communication” and “sort of main hub of communication at work.” This view is shared by Ha Neul Kim who agrees that technology made stage manager’s job “so much easier because communication got so much easier and got much faster and so efficient.” When speaking about stage managers’ work efficiency and productivity, Ha Neul gives special value to reduction of stage managers’ work time wise. She thinks that the usual amount of work “has reduced by at least a half”. To support her thoughts, using the example of emailing, she further explains that

you don't have to phone people, you don't have to go to hotel and do things like that. Or sometimes you'd have to leave a message on your cell phone or land line with the message. Like your greeting, "Your schedule for tomorrow is blah blah blah." And singers would call to check those schedules. But it would change you'd have to call everybody. Anyways so it is much easier in terms of that.

When talking about technology-driven aspects of stage-management profession in Alberta theatre practice, Ha Neul Kim lays stress on how technology changed recording in theatre practice. She supports her thoughts with an illustration from her most recent opera stage managing experience in a team with two assistant stage managers and two apprentice stage managers. According to Kim, that was a really busy show, and the team members would not be able to take down all of the blocking or the very minute details of it. So, she used recording for the work after she got consent from everybody on the show. Traditionally, opera productions have very large casts, extravagant costumes and large multiple settings. There are productions with sometimes more than eighty performers on stage at a time, not including the orchestra in the pit. With big set changes and so many people moving all the time, it is sometimes impossible even for a full stage management team to be able to record what each individual cast member is doing at every moment. With an ability to visually and digitally record those movements technology provides an ability for the stage manager to more accurately record and document the performance blocking. In her interview, Kim also pointed out that technology assists in creating a new work environment and allows everybody to be involved. Recalling some episodes from her previous experiences when they used to have a CD to time music, she indicated that

“now everybody has music on their cellphones”, and cellphones are “just used all the time as they “are going through the score and working on cues and things like that.”

The stage managers who have embraced technology believe in its power and positive effects on the profession. Chan, for example, thinks that technology is “quite important”. She explains:

But it’s not...how do I put it. I think the job can be done without it, but it’s the technology that is making it simpler. And more complicated. At the same time. Which is crazy. I know. I’m kind of split on this. This is because personally I think it’s important to have and stay updated and to stay current and stay relevant in our society you know what I mean? But I think it’s challenging and sometimes it is adding more time to our day, then we used to.

Gadowsky shares Chan’s views about technology in stage management by saying “if we can use technology to better ourselves, then let us use it better.” He believes that technology accounts for better work efficiency or as he puts it “fast nature of the project.” Gadowsky also emphasizes the enhanced communication afforded by using technology tools by giving the following example: “... if there are two people on the stage management team it is hard if one of them has to leave the room to go do paperwork. Now if it is three or four, that’s a lot easier. Hence, use of Dropbox or centralized sets of files.”

Challenges

The dynamics of the interactions with technology, in spite of certain benefits, sometimes produces opposite effects. Challenges, for example, may include but are not

limited to issues with Wi-Fi. Some theatres and rehearsal halls do not have a good or any Wi-Fi connection due to the rehearsal spaces being built of concrete. Gadowsky addressed the frustration he personally experienced when working in rehearsal spaces without Wi-Fi as “useless”. He said: “I have these files in a cloud I just can’t get to them”. He also pointed to lack of trust in reliability of technology: “what if the power goes off? What if my battery dies or if there is issue how can... the train of the show is still going where I’m able to see the next page on my iPad or not?” (Gadowsky) For Gadowsky, ethical issues are also very important. Referring to inappropriate use of technology, he commented on one encounter:

The director was quite influenced about us constantly typing on our computers the whole time. And would get quite distracted and that was I think we needed to be quite conscious of that. The ‘click’, ‘click’, ‘click’ sound of the keyboard, but also that you didn’t get too directed. Your focus was directed at the computer and wasn’t in a room anymore.” (Gadowsky)

According to study participants’ view, technology can interfere in other ways as well. They talked about trust: “but the trust of what people were doing on their phones and with the technology was lost because this one person was abusing it” (Gadowsky); participation issues: “It is very easy to focus on your computer in a file or project to complete it but ultimately what is happening in the room is what’s the most important thing is”; issues with presence and communicating presence: “it’s an ongoing balance we are still trying to find” (Armstrong). Technology can be used for short term solutions, and yet “much is still better done face-to-face” (Gadowsky). Also, surprisingly enough, technology introduced new responsibilities to stage managers. John Raymond explains:

certainly recording rehearsals has changed. Before we used to ... it used to be a responsibility of theatres because it had to be an expensive video camera that had to be used and whether stage management was trained on how to use it or somebody else came in and then we would... Professionally we would restrict what we could record. So with cellphones and the ability of cellphones to visually and audio recording inside rehearsal. So, those things have changed, namely, the recording and who is doing the recording (and often it is stage management), and how that recording is going to be distributed. So that has changed.

Michelle Chan is of the opinion that technology “enhanced and made things easier in some cases.” However, according to her, the technology “has not replaced the functions” of stage managers, and everything that happens throughout the rehearsal process and during the performance are “just done in a different way.” This corroborates with the findings of the research by Davic Autor, Frank Levy and Richard Murnane that “computer technology substitutes for workers in performing routine tasks that can be readily described with programmed rules, while complementing workers in executing non-routine tasks demanding flexibility, creativity, generalized problem-solving capabilities, and complex communications” (1322).

Specific Technological Tools and Appliances

Mária Tajtáková describes the impact of evolution of new technologies and media in the knowledge era on the field of the arts and culture as huge. She connects considerable developments within the practice of theatre and performance production as well as audience experience to “the electronic, networked and interactive nature” of

technology (Tajtáková 1). When talking about the change in stage management profession which is recognizable by him, Oliver Armstrong shared his personal experience and perspective that led him to some specific technologies used in stage management practice:

Definitely, I think cellphone devices are particularly helpful for staying in constant communication. I would say that everybody's proliferation with having an internet access and carrying devices allowed for schedule and note information to be communicated more efficiently and more quickly. Yes, I think stage managers have to spend more time on their computers than they used to. In fact, I was reading a thread on the Canadian Stage Managers Facebook page... Somebody was asking laptops in the rehearsal hall? Yes, or No? And I was like Yes! Obviously yes. If I could have it open all the time I will. And I do understand the need sometimes to focus on more traditional task or part of the rehearsal but absolutely. If you can get your paperwork done at that table, and be able to send it five minutes after the end of rehearsal there is no reason for us to always have to do two hours of overtime just to write notes. If you can be efficient with your time due to the technology that fits on your table, then absolutely, I would say that needs to be allowed.

In one episode of his interview when articulating his view about fast technology enhancements in terms of audience experience, Oliver Armstrong spoke about recent developments in tools used for projections and sound design. However, he commented that "when it comes to the show caller's tools, it's always a few years behind."

In the interview process one of the questions I asked was if the participants used any technology in their day to day rehearsal and performance practice and, if so, what technological tool. According to the interviewees, stage managers utilize a lot of tools that are very contemporary to theatre practice though some of them might seem very common to the outside perspective. These tools include, for example, PC-based and mobile/smart phone-based applications, that are used by stage managers to cater to the ever-changing technological needs of a production and individuals involved, and to keep up with the different stages of the production process, including the first day and day to day rehearsals, design presentations, run for tech, tech week,¹ quick change rehearsals and others.

There are multiple resources, programs and interfaces that can be used by stage managers. To exemplify, according to Stage management basics, there is a variety of free applications and tools that are accessible to the stage managers. For example, for coordinating and scheduling meetings, stage managers can use different programs like Doodle.com, Google Calendars or Meeting Wizard. Cloud storage services, such as Dropbox or iCloud or Google drive, are among many used for sharing and communication. This point of interactions of stage management and technology allows mapping technology in the production process and illuminating tools and apps that are used in stage management in Alberta theatres to enable the process. Use of technology, according to the study participants, brings change to the production process from the first day of production onwards making it interesting for all the participants, not to say about assistant stage managers whose time is saved a lot. For example, according to Chan:

¹ Clarification of terminology – in theatre “tech runs” and “tech week” mean the technical aspects of theatre (lighting, sound, etc) are added into the physical blocking of the performers on the staging area. This generally happens in the final week before opening night.

First day of rehearsal we will use, well, a large screen TV that we will bring in. And then we will do a PowerPoint or a keynote presentation and that kind of stuff. To show designs now. Often we don't have all of the papers come in. We will just do a program where we can run it off a computer and just show all of the images. So that makes it interesting and people tend to look at screens very well. Because people tend to gravitate to them. So I know our designers have brought in the set rendering and they would put different scenes on it and then we will show them. So it's a good integration for the first day. Once we get into tech often I find I have my computer or my iPad with me, in tech so we can update the Dropbox for cues and things like that and I can access those and make changes right there in tech rehearsal. In rehearsal itself we have a computer itself with us. So we can start doing notes midday. Half way through the rehearsal if the ASM is not too busy, she could start writing the notes for the tech departments. So we are not there till 8:30-9 o'clock every night.

Another significant episode, as I observed during the interviews, was related to using technology while adjusting to the technological needs of the production. Armstrong, for example, said:

the availability of QLab² has changed, both during the rehearsal and tech week, but I think because it's such a portable format it is much easier for either of the stage management team member or another operator or technician to be in parts of rehearsal and run sound. And build sound cues, soundtracks, soundscapes. I

² Clarification of terminology- QLab is a type of software designed for theatre and other live entertainment that is used mainly for sound and other multimedia to be played on.

have to say in the world of dance rehearsals, we have actually yet to find the right playback system. Or a new advanced playback system. That is not for prohibitively expensive or hard to use. We do not use QLab. They use CD's and CD players because they are comfortable with the interface, how they can fast forward, skip track, so they can skip from scene to scene. But there's no networking for choosing files, no digital playback that they are comfortable with. Some choreographers/artistic staff have started have started running music off of their laptops. Out of iTunes. But, that was always something that we knew we needed to make a technological leap.

This episode from the interview with Oliver Armstrong seemed like a space to me that offered some unpredictable relationships and required some explanations. Armstrong went on explaining how his view was contrived:

To run music in studios, and to this day still haven't found the cost effective solution for it. I mean, those are different kind of rehearsals. You can't rehearse any part of ballet without music playback. You can rehearse a lot of the play before you need to use sound effects and sound track information. The rehearsal process is very different in that regard. Again the thing that I go back to in my world, the world of dance is that video recording and editing in the last five to six years made a world of difference to the quality of the archival recording I can make. And the efficiency in producing it. Basically, I have a little clip on the windowsill, that a Go Pro fits into, even that technology has been troublesome. Go Pros are designed to be used continuously while plugged in into AC power. And a little camera would overheat and turn itself off. That was very frustrating.

So we had to work on that. But basically what we had to do was to get a wide angle shot of the entire show. That was a fixed position which I could theoretically remotely control. So the theory of the technology was excellent but the practice was good. But prior to that there was a mini wide angle camera, and you would have to be in that corner shooting crossways. The image wasn't that clean or wasn't that clear. Besides the dancers, the artistic director and the lighting designer relied heavily on that video. That was because they were often not in the building or even not in the city for the runs. So being able to work remotely and send them that same afternoon a nice clean wide angle shot of the entire show has made the lighting designers' process more efficient. Those are the main technologies that certainly exist in the rehearsal hall.

Digital Technology Tools in the Rehearsal Hall

In the interview process, some connections were made to other tools, apps and devices which the participants were very excited to share. Though conventional now, personal mobile phones and laptops were among the top tools used by stage management professionals. It is interesting to note here that both devices on stage manager's desk in some rehearsal halls are still treated as something rude and disrespectful to the rehearsal process. Though very important technological tools that are mainly used for writing down notes, communication purposes, as stopwatches or options for a running list for backstage, mobile phones, iPads and laptops can be regarded as distractions. This was evident from the interviews. To illustrate, Ha Neul Kim talked about her using an iPad as an addition to her prompt book and using it for running sheets. She observed: "I just have my promptbook and I have my iPad in front of me with the running sheet on; so I just

follow that. Just flip the pages just for things and make changes right away”. She also mentioned that she used this device for cuing sessions. Ha Neul explained: “I upload it to the iPad and then I just make changes as I go. And then print it at the end of the day. And if I have time I will retype things and if not, then I’m good to go and I just use those”. She also talked about using her Apple Watch for timing the performances and using it as a stopwatch.

Both Michelle Chan and Al Gadowsky talked about the new sixteen channel headset just recently installed in the Citadel Theatre. As explained by Gadowsky:

One channel is dedicated to each page [or department, i.e., Assistant Stage Managers, riggers, tech crew on deck as well as sound, lights and projections operators in the booth] to provide everybody’s involvement in communication which I think is quite good that it is always there. That, I think, is very helpful in doing shows that get to be more and more complicated to be able to have more conversations happening on the side that don’t really need to be on the everybody channel.

A multiple channel communication system gives an opportunity to isolate certain persons with whom the stage manager needs to communicate; yet at the same time it seems to me that it might lead to communication problems and somebody missing vital information.

Many stage managers often use several technological tools at a time because of still having some mistrust in each individual tool. For example, Ha Neul explains:

Because Apple watch could die, because it is still battery operated. But I have an iPad running and my Apple watch. And the good chance that I can plug it in to a wall to charge it. For power. So the chances of those two dying are I think much

less than my stop watch failing. And I get texts from front of house so I don't have to carry my phone all of the time but I can use that too. But it just makes it more efficient. To do the job. I use messages and stop watch and people call me in emergencies and if I'm not by my phone and will sometimes will not hear it and or will not reply right away then I just see it right away (referring to her Apple watch). Even during the show. Because I don't look at my phone as much as my watch if I get notification.

Use of technology appears to be dependent on the culture of the theatres that stage managers work for. These are some of the thoughts shared by John Raymond:

When I work I will have a laptop close to me but it will be closed. But in breaks, when I have breaks I may start working on scheduling and may start on production notes. I could be checking email. The use of phone in the rehearsal hall has changed. But it also depends on the theatre. There are some theatres that don't want actors to have cellphones and so stage managers have cellphones but is very low key because it's part of...they need them to do their job and to check on things. So it depends on the culture of the theatre.

In his interview, Raymond connected technology with stage manager's professional portrait and broader circumstances related to theatre, culture and education. According to Raymond, it is essential for stage managers to be adaptable to the technology; they have to learn it as part of theatre and theatre culture. He spelled this idea out as follows:

You know there is a debate going at the university about what software or what technological tools we should be using or teaching. And it's like we can't have all

the tools and technology; they are changing all the time. We have to be able to teach people how to learn and how to learn quickly and focus on learning. So there are situations when you do have to learn new technology and use it you can do so quickly.

In our discussion regarding stage management and technology with John Raymond there was no clear beginning, or end. In the course of developing the ideas related to technology and education, Raymond unpredictably extended and expanded his ideas to market driven nature of using technology in profession, mentioning that it is also an expensive and “cost prohibitive thing.” Al Gadowsky describes this situation as follows:

I haven't run through a show with an iPad yet. One part of me just loves having a hard copy paper running sheet; another part would love to use an iPad. However, for me right now having an iPad is a cost prohibitive thing. The theatre that I have been working for used to talk about ordering iPads but it just hasn't happened yet. Under Equity agreements, stage managers are employees of the theatre and that means that we shouldn't be supplying our own tools. So, I wonder whether the theatre is renting the device from the stage manager and should pay for it if the stage manager uses his own iPad for the show.

Impediments to Use of Technology

When talking about certain limitations to the use of digital technologies within theatre, Tjtakova argues that one of the constraints is “economic since the effective use of digital technologies requires investments into a trained staff and appropriate hardware-

software equipment” (7). As explained by the participants in this study, there is need for extensive practice in using technology. For example, as maintained by John Raymond, who believes that “the human brain is the best thing and we can multitask very well and technology doesn’t multitask very well,” to get quick on the technology “you need a lot of practice.” Gadowsky is of the opinion that to work with up-to-date technology, “you need to invest so much time into building a base knowledge and experience and expediency in working” According to him, stage managers “haven’t yet taken time to do so.” In his view, this is because of rapid changes during the production process. He said:

Recently this summer I created a prompt script after we teched. I tried to do it during tech and it just became too much. The show was changing quite rapidly up to until tech so I wasn’t able to quickly get cue sheets from the designer to be able then put in cues in well in the show was in preview on a Mac. So you have a pdf and you can overlay on cues on that, but I can’t do it at speed fast enough in a level session, then we ran out of time in a level session, so we are now in cue to cue building cues over top of that to be able to do that. So it was just easier to write the cues in. But then later I went in and I created that document to archive the show completely. And even though I’ve never called the show off of it. I did have a couple of actors come in and shadow me, and they were able to follow along on the computer. So, it did work ... but I’m just a little too old.

All the participants voiced the need for a backup plan in place when integrating technology in stage managers’ work or a preventative or an alternative option for inevitable, in their point of view, possibility of technological failure. The main function of the stage manager is to make the production run smoothly. The technology (when it

works) can enable this but it is also in so many ways still very fragile, for example, if there is a problem with electricity or an internet connection or a server, and the list goes on and so on. Michelle Can said: “There are always pros and cons for all technology. It is so beneficial for us but because we become so reliant on it that it’s pretty scary when you lose it.” For any failure of the technology, the stage managers put in place different types of backup plans. Kim explained: “when you think about it [technology], it’s not really reliable. It’s not paper copy that is in front of you.... find it harder if I need to find something it’s hard to go through it [prompt book] digitally. It is much easier to do so if you have a paper copy.”

And even though there was obvious mistrust in relation to technology, the thoughts verbalized by study participants reflected the changeable nature of stage managers’ styles of work, self-expression, and communication. I would say that they utilize all the technology to the best of their ability in order to facilitate the process of documentation and organization during the production, and duly and smoothly perform their roles as communicators. And I also believe that it would be almost ridiculous for me to inquire if any stage manager currently does any of the processing tasks, including creating and filing their paperwork, singularly as a physical copy without a digital backup. Michelle Chan talked about this in her interview: “While I have templates and stuff that I’ve created for myself that just keep using over and over because it works for me. ... So there are little technological things that have made it very exciting. So that you can put those on and everything looks clean. And it looks a little handier.” Armstrong said: “I make documents on my computer all the time. I might even make cue lists. But when it comes to actually the document that I used to call the show it was always printed.

And I always got pencil and color and physical indicators on it. As opposed to anything digital.”

Computer programs, such as Microsoft Word and Excel, are vital tools in stage managers’ hands, and yet there are notable fluctuations between using digital and physical edits, as mentioned by the participants. In spite of having technology in place, some stage managers still organize their work old way. Kim said: “I mean I still rely on paper copy so I print out everything. Which I shouldn’t be doing. I mean just like everybody does I put them in the folder. So buy folders and we share that folder so that’s about it... But for organizing, for cross departments and props ASM will put props department stuff in there and I do the same thing so it organizes in that way”. Ha Neul Kim expanded this point establishing connections between individual stage managers and a bigger theatre context. She, for example, said:

I also use my computer and also Dropbox. Everything is on Dropbox now. That is our company’s thing this year. It was painful. It was a growing pain because it’s hard to. If you share one folder, its fine; but we had to move all of our entire server into Dropbox and then organize it. Because it organizes in a different way. But anyways it’s much better. It’s a great thing to use. And you can see who is actually doing what. Like if somebody is editing things you can see what has been edited and that a good thing.

And even with growing pains, Oliver Armstrong believes that “Dropbox for the last 10 years have been a major help”. In his opinion, that it is a good service that enables storing and sharing “different files, videos, audio recording and other documents.” He also identified Vimeo, a video sharing platform, as a useful platform in his practice that

“basically allows us [stage managers] upload HD videos,” and a really good way of “controlling distribution.” According to Armstrong Vimeo possesses a lot of positive features that can be effectively utilized in stage management. One of them, for example, is a set of options for privacy passwords. Another one is an “option to send links instead of giving access to the whole personalized library or video in order to direct and control the distribution” (Armstrong).

Communication

As for the communication aspect of stage management profession, the perspectives shared by the interviewees in addition to encapsulating its nature as an anthropological phenomenon opened my eyes to seeing it in many new ways. All study participants acknowledged the importance of technology as an effective tool for interactions within the professional community of stage managers and outside it. They also observed the role of technology as a powerful tool for recording communications.

The work of stage management is done well when it is invisible – and there is some similarity to certain kinds of technology in this. A lot technology, especially communication technology is meant to enable communication “seamlessly” - which means it doesn’t show where it’s been connected. It makes sense then that stage managers are very aware of this dynamic and wary about trusting the claims of technology. As mentioned by study participants, they rely on text messaging, emailing, Dropbox, Google lists, Google Docs as main tools of communication within the production. This is important since only just a few years ago the Canadian Actors Equity Association recognized email as an appropriate and acceptable way of communication and distribution of daily schedule for the rehearsal period. One of the interviewees, for

example, explained that prior to email as part of schedule distribution among the production in a big theatre, the stage management team would have to record a voicemail on the theatre phone every night and then the actors would have called in the evening to hear their call time for the next day. Another stage manager described this as follows:

Our schedules go out in emails every night. I don't have to phone people anymore which is really nice. We used to record the schedule on the phone so that people would get it. So they would call in and they would listen to the five-minute schedule because we would have four rooms going in at once. And they would have to listen for their name and then crap I think I missed it and then would have to call back. So email has made a huge difference.

Across the interviews, the interviewees mentioned using cell phones more frequently than emails for communicating with other stage management team members and other members of the production. That was an interesting finding that contradicted to my previous assumption that emailing would be the main aspect of the discussion in the practice of communication. To exemplify, Al Gadowsky said:

text messaging is by far the number one thing... As I said earlier, the stage management group I have worked with this summer, and to this day we have made, we have been off of this project for three months but all the five months we were there, we were in a group chat. If you scroll up, you could find something if you need it... We would be releasing in different venues, though out the day and sometimes, the PSM [Production Stage Manager] would be able to call break by texting everybody and calling BREAK. And within 10 seconds the rest of us would be able to break all of our room so we would all be able to make it work.

And those would be multiples in to two buildings, so they were crossing back and forth.

The interview with Michelle Chan also told me a different story about the communication aspect of the stage management profession than the one I envisaged when I started my research. When talking about communication between her and the production staff, she gave the following example:

We sometimes get instant notes going out from a text. So I'd send something to the props department saying we need this right away. Or can you possibly or if you are still out at the store can you grab this before you come back so you don't have to come back and it doesn't have to be production note at the end of the day.

Oliver Armstrong said that his "position is very positive towards technological changes." He believes that technology "actually improved the relationship between the director and all the other departments," and this is "even if you do not see them face to face, we communicate way more because of email."

Stage managers believe that email is an important and versatile communication tool. According to one stage manager, "eighty percent of the communication out of the rehearsal hall comes via text message." On the note of email, Armstrong paid attention to using it for documenting the history of the conversations. An example brought by Oliver Armstrong explains this function of emails as follows: "I don't think I can call myself old school if I like email. I like email and I like how it has replaced letters. You know what I mean? It is both a saved document and a conversation of your agreement with other people." While discussing in depth the kinds of email communication that is going on

within the stage management team and with other production departments, he described it as “always good” and also important as “a record of communication, which we don’t get when we verbally talk to somebody” (Gadowsky).

All participants acknowledged the exponential growth of technology in the profession by mentioning their recent experiences of putting on the headset communication system that is used during tech and performance. This system “is absolutely mission critical” as described by Armstrong. However, in his view, it is also problematic. In Armstrong’s opinion, the problems with the system are constituted due to its fragility, incompatibility with the existing theatre infrastructure and conflicting interaction between old and new systems: “they would buy some new technology and they would patch it in into the old infrastructure and that was where a lot of conflicts happened.” There is also an influential factor of theatres themselves making decisions about obtaining technology. Though stage managers “have certain expectations of the tools”, they “are not personally responsible” and “everybody is trying to save money” (Armstrong). Armstrong illustrated his thoughts: “even the Calgary stampede, I can't get a good com channel. And it's one of the richest organization's in Alberta.”

Michelle Chan, on the other hand, was very enthusiastic about the com system they have at the Citadel Theatre. Her accurate delineation of the system and its use was pleasantly new and refreshing for me. She described it as “brand new,” “amazing,” and “awesome.” The system features a wired box that allows stage managers to call all involved backstage, individually listen to conversations going on between different departments if needed, or “talk directly just to stage management, just to lighting, just to stage carpentry” without having to “bug everybody on certain things” (Chan). The system

is very easy, according to Chan, with basically the buttons on the side of listening and the buttons on the side of talking. In addition to being easy to use, the system is powerful in communication: “I have voice of god, so I can do everything from my headset and paging to backstage. So I don’t have to go to the microphone all the time and can do everything straight from my headset with a press of a button.” (Chan)

Emphasizing the importance of face-to-face communication, stage managers acknowledge that it is easier to communicate through electronic tools, and such communication sometimes happens in the rehearsal hall. But would the digitization of these communication channels change the use of technology and the status in the stage management profession? Morrison argues that

over the years the overall job of a stage manager has remained the same, yet the way in which the job is carried out has changed greatly. With the creation of new technologies like the Internet, Microsoft Office, and other theatre technologies, stage managers have had to adapt and adjust. I believe that these technologies, while great assets to a stage manager, have not actually changed what it means to be a stage manager, but instead have changed the way a stage manager carries out his or her tasks (2).

Some study participants shared same view with me during the interviews. Al Gadowsky, for example, while emphasizing the role of stage managers which is to “serve the show,” noted that in order to perform the role successfully, technology can be used “to disseminate information quickly and efficiently.” However, here he made connections

between this role of stage managers and somebody in the production “who is more often making the decisions.” He further explained:

And it’s not ultimately that stage managers make decisions in the rehearsal hall. However, there are many instances when directors would lean on stage managers for their opinion. This is because they have been in the room the whole time. But I can see the correlation, and I see how efficiently technology is used in both of those.

Ha Neul Kim, on the contrary, believes that “it [the profession] is still the same,” and it [the profession] is “not different” for her. She explained: “We do still, you know, stand by with water, we still make coffee, that didn’t change. That is still part of my job that hasn’t changed even technology cannot really help with that. We are still the ones who communicate with everyone”. She further went on:

So, with the email and the internet I don’t think position or status has changed, it’s just the expectation I think is a bit different, in terms of, let’s say, there are no notes tonight and there is no email. Like back in the day I would still have to go to every hotel and say there are no notes. Or I’d call everybody there are no notes. Where is now for email, if I don’t email anybody by a certain time they just assume there are no notes, or I just sent one email out saying there are no notes tonight. You know. So that kind of expectation is different by I don’t think the status has changed or anything.

When asked about a possible change in the correlation between the use of technology and the status of the stage management profession, almost unanimously the

study participants talked about the technology as a part of their professional life while describing that “stage managers have to spend more time on their computers than they used to” (Gadowski). Gadowski noted that the presence of a laptop in the rehearsal hall, and its use, can be related not just to “disseminating information quickly and efficiently”, thus attributing it a role of a tool that is “particularly helpful for staying in constant communication.” When asked if anything was lost in the practice with incorporation of technology, it was interesting to hear responses about the two different paths that the participants identified: professional and personal. Ha Neul Kim, whose position towards the technology in stage management profession is “positive”, thinks that technology “actually improved the relationship between the director and all the other departments.” She believes that “even if you do not see them face to face, we communicate way more because of email.” She explained this as follows: “Like sometimes with one subject you go back and forth like having a conversation like having twenty emails going back and forth or something like that. And also there is way more chance where you can double check on things too. Where you can ask, “is this what you meant? Is this picture close to something you want?”

Miscommunication and Cultural Loss

Indeed, immediacy and instant nature of communication afforded by technology is a great and powerful thing, but it has its setbacks. In his interview, Raymond spoke about individual responsibility in the era of digitalization of information and ways it can be distributed. He believes that technologies do not give room for any errors or mistakes that might sometimes lead to miscommunication, and, consequently, to misreading or

misunderstandings of emotions involved. To illustrate, with auto correcting, editing and formatting systems in place, technology has taken away any option for a human error. However, with digital communication, technology has acquired the role of an intermediary between the two humans, and there is sometimes a disconnect because messages, for example, cannot take the tone of the sender and therefore can be interpreted in different ways. Oliver Armstrong believes that stage managers “have always taken pride in how their documents look and how clear their information is and sometimes digital versions of documents aren’t that clear.” Talking about the effects of miscommunication in email, he commented: “Sometimes when an email is sent with a lot of notes and people feel a little overwhelmed and sometimes there is this emotion between you and the computer when you read emails and you sometimes read them in the tone that the note is not meant to be read.” Stage managers’ accounts describe situations when technology literally suck team members in and make them lose their presence in the room. Also, there is always risk of losing face-to-face contact and established relationship because of technology. Armstrong, for example, recollected some episodes from his professional life when he noticed use of phones in rehearsal hall, and said that “some people may use technology to be a little bit lazy attending meetings.”

Evidently, with many stage managers, face to face meetings are better in many ways when possible. Armstrong provided the following example:

I think there is a risk of losing some team-based advantages let’s say. With the fact that everybody is like, oh it’s on, I uploaded it’s on the google drive. It’s like, well I’d like to have a conversation with you about it. As opposed to just reviewing a document that you’ve reviewed 2 hours ago. And now uploaded.

Yeah. There is a risk. And it depends on the organization and leadership. To know if it is really a problem. But it is a potential problem. I even see it in the Drama department. With schedules. Oh it's all on the google calendar. It's like I can't, that's not good enough. I want a printed calendar. You can print the calendar from google but it's still not good enough. There is something that maybe lost in the document creation world too.

In Deleuze and Guattari's figuration of the rhizome, it emerges as free from "points or positions," such as those "found in a structure, tree, or root" (9). However, the idea of a rhizome describes a living entity that is growing and responding to its environment. Some stage managers' comments on cultural losses within their daily practice and work suggest the impact of technology as evidenced by, for example, the "change of the atmosphere in the green room," and that "during breaks a lot of people now just sit and check their phones" (Raymond). Also, there is no time to actually socialize and communicate between each other, and breathe new life into work. For example, John Raymond said:

well I think that with technology culturally we have lost something. And that affects theatre like it affects everybody's everyday life. I think people are less connected with the people around them and more connected with other people. You know through social media. For instance, the example that I use, we used to talk during breaks in the green rooms in theatre. And there used to be an exchange of social, political you know, family issues and now you go into a greenroom and 90% of the people are checking their individual phones and people are not communicating the same way in person as they were when I was younger.

Ha Neul Kim, on the other hand, approached this point of the discussion by identifying it as a cultural loss on the global scale. She said that “this does not change how our job is done. I don’t think... it doesn’t really matter how we do our job. As a society as a whole is changing into that.” For Kim, changes in society is “a bigger loss.” She believes that there is no loss in “doing the job” because she still communicates “with her singers and there is a trust in that and each other, and they rely heavily on my information so even if we email each other, there is still that relationship.” Indeed, the society as well as the profession have tremendously evolved in the last few years, and technology can be credited for affecting our lives for better. Because of the technological advances, achievements within the stage management community in Alberta and the strides it has made are immense. The communication has become clearer, faster and more efficient. Creating, sharing and storing documentation is no longer limited to a single physical copy but a digital bite or a server or a data cloud. Though it might seem like we have lost something, we have gained so much more, and as Al Gadowsky put it: “I don’t wish for the old days”. Looking at stage managers’ shared stories and experiences, it is clear that stage managers’ connections with technology precipitated dynamic and unpredictable lines of flight for stage management profession. Departing from the profession’s present, these lines of flight illuminate its new ways to respire by tracing new outcomes.

CHAPTER THREE: Becoming and Tracing New Outcomes

Deleuze and Guattari explain that “there are no points or positions in a rhizome, such as those found in a structure, tree, or root. There are only lines” (9). The engagement with interactions between stage management and technology, using rhizomatic approach, opens multiple points for revisiting the past, looking at the present of the direct involvement of stage managers with technological tools and appliances, and tracing new outcomes in the future.

Technology has in many ways had a positive effect on stage management, and made “job seeking, networking, and information sharing much more accessible” (Kelly 8) for stage managers. As described by Kelly, “back then, the only way you knew what other stage managers were doing, thinking, or feeling was by working together or the occasional social meeting” (8). Now stage managers “participate in forums and chat rooms where young and old stage managers share experiences, tools, feelings, and emotions that are basically of interest to only those crazy enough to seek stage management as a profession” (Kelly 9). In all the interviews that I conducted I most always felt general fascination with technology and acknowledgement of the power and multiplicity of options provided by technological tools. However, there was always some skepticism present. It is amazing that skeptical views that I heard during the interviews were not only about the lack of reliance on technological tools and electronic versions, or loss of “spirit of creative collaboration when people sitting alone in front of a computer make decisions on the process of production in a vacuum” (Kelly 9). They were also

related to many other lines of flight that became noticeable during the analysis of the interviews.

Stage managers and socially responsible thinking about ecology:

One of the current societal concerns worldwide and in Alberta is about the continually expanding environmental problems that are reported every year. Some of the main conversations within the global and local contexts are about ecological crisis, preserving natural resources, cautious use of electricity, oil and water that make up factors contributing to ecological footprint size. According to *National Energy Board* website, for example, about 89% of electricity in Alberta is produced from fossil fuels – approximately 50% from coal and 39% from natural gas, and only the remaining 13% is produced from renewables, such as wind, hydro, and biomass. In the theatre context, these issues refer to the attempt to be more ecologically conscious while showing concern about environment and adding a voice into the world upon the true changes that need to be made.

Eco theatre is fascinating because it strives to make a change and encourages the audience members to make a change in their lives. It aims at encouraging people to move towards the different views and be different within this world. But as we look at the production on its own, it is interesting to question whether those who are calling for change also strive to be ecologically conscious and environmentally friendly within their own production, and whether the production and the theatre itself follow the same rules that they strive to inspire other people to follow. Many theatres in the current climate do

talk about how to be environmentally conscious. A lot of them recycle programs and use glass cups in the bar but not much more than that. Many theatres have been switching to LED lighting fixtures that use a lot less electricity and sometimes are more versatile. With all the changes, the interest, the encouragement, the participation into the eco conversations and the voices that we hear from the production side mostly come from design. One of the conversations within the stage management community is the one regarding how to be ecologically positive during a production. And the question is mostly about being environmentally friendly during a rehearsal period: can a paper, metal and glass recycling bin be enough during a production and can a theatre overall support this?

Looking into a small part of stage management practice, I focus on just the use of paper as an example for this practice. To produce paper is a significantly resource intensive process. However, many think of using paper as such a small part of the bigger ecological needs that we need to face and make a change. Starting from the first day of each production, the stage management team is almost daily required to create paperwork, photocopy numerous pages of scripts for distribution. This is often in addition to creating actor packages as well as to distributing physical copies of production schedules, dailies and production notes to all of the departments. If there are last minute changes in the script or if it's a new script, any rewrites and additions would have to be reprinted and distributed among the production and cast on that day.

From my personal experience related to my work on a production composed from multiple chamber music songs, I remember that the stage management team originally created a musical score collection made out of three hundred pages of music. Later the score dwindled to fifty pages' production with only part of the music being from the

“original” score. And it’s not something unusual for a devised theatre production which might have a live ever-changing and moving script, but what wasteful ecological effects all this might have.

An important point about stage management profession and ecology of the theatre, was brought up by Ha Neul Kim in her interview. This was when I asked her about how important it was for her to integrate technology into her work of stage manager. When explaining how easier her life had become because of technology, she stopped for a moment and then said: “it is totally saving trees.” Then she went on to explain:

In a way, I think we are the worst. As a stage manager because I like paper copy prompt books because it is much easier to find things quickly. Maybe I should try with an iPad but I still don’t. I haven’t made that transition yet. But for, for this world I think we should stop using past copy and even chorus. I sent out all of these digital copies. That’s what we have been doing so we don’t have to print out thousand copies of chorus music but yeah. I mean it’s part of our work too but now when I think about it, this is very important.

Kim’s thoughts echoed with those of Gadowsky. In Gadowsky’s opinion, his invaluable experience of work as stage manager has also made him think about ecology in theatre. His explanation was as follows: “We try to edit on our computer versus printing and then sort of re-editing and then printing again, try as much as possible to reduce paper, and I’m trying theoretically so far figure out how to do my job without printing a script”.

Though the issues related to using less paper or relying on technology were not originally part of my interview topics, they are very important for both the profession and theatre context. I was excited about stage managers' socially responsible thinking and their willingness to convert paper-based documentation to electronic as their response to the environmental crisis we are all facing. For example, Gadowsky talked about using computers and iPads. He also mentioned making use of electronic prompt books for the production. Electronic promptbooks, according to Kim, are an easy solution for "eliminating some of the printing." In fact, as pointed out by Gadowsky, "many opera singers and musicians carry a lot of their music on digital devices". By doing so, they "eliminate the need to carry and travel with multiple binders and musical scores, and having access to them all the time, and being light" (Gadowsky). Even though as mentioned before there is always a "mistrust towards the technology because of it being dependent on electricity and needing to be charged, sometimes requiring internet connection to access all of the notes, or being stored on a Cloud" (Gadowsky). This is in addition to it "being breakable and still "unstable" compared to the physical prompt book/score that can be carried by a stage manager" (Gadowsky). When we started discussing the other side of the coin, Gadowsky argued that we "we need to acknowledge that a physical paper prompt book/score is not an ultimate ever lasting solution." He talked about prompt books that can be damaged by water, torn or dropped and damaged at any moment because they are made of paper. Another question about prompt books Gadowsky and I discussed in the interview came from ownership over it. Gadowsky argued that "the theatre holds the ownership over the book after the production is done. That being said when the book is created, all materials, including the binder, paper and all

information in it.” He further questioned the ownership of the binder with the electronic prompt book while acknowledging that the ownership of the information still belongs to the theatre. Gadowsky explained that in a lot of professional theatre companies, the supplies are provided for the theatre. So, in his view, that presents the question about who would provide the digital surface for the creation of the book? The ownership, according to Gadowsky, is also related to insurance issues, and even a bigger question that opens up about whether theatres would invest into an ecological change with encouraging or even purchasing digital surfaces for the employees.

Training issues:

When asked about in-service or any training involving new technology, most of the interviewees referred to training in using new headsets or Drop Box. But stage managers learn independently about any other technological tools that they try to incorporate into their work. They use their own judgements to make decisions and start using new technological tools. For example, they may come with an initiative to use new applications for communication, calculation of distance, or even operation of Qlab. It is because of stage managers’ internal need for self-development and their interest in learning and incorporating the technology into their work. This begs a question of whether a bigger change into the technological movement needs to be done starting from stage managers or from the theatre itself. A lot of stage managers have mistrust in technology because it often fails and is sometimes not so effective as old-fashioned paper and pencil. Stage managers’ reservations about technology also come from the requirement to learn it on the fly as the production “train” moves by them. Even if

theatres invest into providing the technological tools or do their best to ensure that the devices are utilized by the stage managers' teams, still the team members are often left with mistrust towards the technology. Training and learning are the solutions to boosting confidence in the devices that can be utilized by the production. Peter Dean in his practical guide, *Production Management: Making Shows Happen*, maintains that "stage management are most likely to have trained at drama schools" (39). According to him, "this will have given them a background in all technical theatre departments, and practical experience in everything that goes into preparing and running theatrical productions" (ibid).

The educational requirements to stage managers, according to *Occupations in Alberta*, include "people skills and technical skills", and, "the technical aspects can be learned by working in the theatre or through formal training". As pointed out by Oliver Armstrong, he would always be "responsible either choosing a technology or learning a technology" by himself, and "there was no training." During his professional career, he believes, "it was just assumed" that he "would start operating with ... that technology." Michelle Chan has had similar experiences. However, she has some plans to learn more about "some interesting and exciting programs" and hopes for getting some support from the Citadel Theatre company she is working for because she does not "want to use all" of her own equipment.

Technology failures and successes:

The interviews allowed me to see multiple concerns of stage managers related to technology's ability to fail at any time. I also share this concern which is exemplified by

my personal experience when something unexpected happened during one of the most recent performances of *Blood: A Scientific Romance* by Meg Braem. As the two actors on stage were interacting and talking with their parents' voices, the computer that was used to play the sound unexpectedly froze and stopped producing the sound. A technical issue in this sound sequence, during which the lead actors were introducing the backstory about their parents' car accident that has become the catalyst of their current existence, led to the absence of the parents' response and, consequently, the performance was automatically taken from the realm of the play. The actors froze for a moment on stage due to the lack of interaction with the sound cues. The realness that the sound design had to establish during the first minutes of the show was lost and somehow disappeared because of the sound frozen on a machine not responding to the human work. The vital moments that could be created and sharpened by the sound were lost and, unfortunately, were not fully recreated, and this produced a catastrophic effect on the audience. The magnitude of the car crash, the reverberations of the voices of the two dying girls, beeping noises of the ambulances could hardly be transcended at that moment by the interpretive dance of the actors and the changing of the lights called on the sound cues. The actors tried to weave the story in a creative way to explain the situation to the viewers. Though their performance was phenomenal, this was not enough. The loss of sound in this situation left the audience lost and confused, and brought everybody out of the carefully constructed illusion. At such moments you just dream of some new technology that works flawlessly and does not freeze. Because stage managers are expected to maintain and produce the performance that is identical to the director's vision

without problems appearing on stage, they are ceaselessly exploring future developments in technology and exploring new tools and appliances that will aid in achieving this goal.

Some of the questions that were asked about technology in the profession led to talking about stage managers' personal discoveries of new tools, applications and programs done during their free time. Most of the participants were excited to talk about them and share their finds. As I mentioned before, every show is different and new, and each is approached with some innovation and excitement. Through the interview process none of the interviewees acknowledged a true disinterest towards technology. All the participants admitted willingly and enthusiastically accepting technology in their professional and personal lives. All of them use computers and the internet. They send emails and communicate via a cellphone and not a landline. When asked about the future and how they see the future developments in the stage management profession due to the technology they all were positive towards it.

On the extreme end of the technological advancement, some stage managers recognized that technology had the power of replacing the stage manager during the performance. Ha Neul Kim, for example, said:

I personally think that it could replace our job. Technology itself. Maybe from a five stage management team down to three. I don't know. But you know technology does not mean that if we are doing a scene change you could have one scene already set up on the flat and it could be moved to the rehearsal hall and it could be struck by a computer or some kind of other machine or machinery. So there is always a fear. We talked about it twenty years ago, when email just started to come out and we were just like "Oh My Gosh". One day it could just

totally replace us. I can see that happening. But you know I still that it could replace us. One of us for sure. So have a way smaller team or it could be one stage manager working with different technology.

The perspective drawn by Ha Neul Kim is, in fact, possible with a lot of cruise ship productions where there is a technology that currently does not require a stage manager. The system is created where the stage manager who is present in the booth during such productions only calls the first automation, lighting and sound cues, and the rest of the performance is timed, auto followed and automated while leaving no room for the “breath” for the performance. John Raymond and Oliver Armstrong also follow that trajectory but they believe that instead of the need for fewer stage managers, the technological change would possibly affect the other members in the production process, such as technicians and board operators.

Believing that maybe “some stage managers will embrace technology more and will become, and start to operate more technology,” Oliver Armstrong is of the opinion that it is quite possible that “stage managers will replace some technical operators”. He also cites the cruise ship industry as one of the environments where technology has overtaken those job positions. In such environments, according to Armstrong, “stage managers have expanded their role” and nowadays there is “operation automation in addition to their [stage managers’] responsibilities to supervise and call the show”. Such view is shared by John Raymond. He believes that more tasks and functions will be included into stage management profession in future, because, as he puts it, “they are always there”. He believes that:

it's important that stage managers either know or have the tools and how to use that technology or ... be able to learn something quickly. Because if things become all you have to do is press "Enter" here. They are going to give... some of those jobs are going to come to stage managers.

He further explains: "and if somebody can press a button instead of having an additional person there, theatres are going to want to save the labor costs." So, he expects that "there will be fewer people, fewer operators, or board operators, and that stage managers may be operating something more frequently. Like lighting board or sound." John Raymond therefore thinks that it is important to "stay culturally where things are moving." Other study participants predict that in future technology will minimize the post time in the rehearsal hall. Al Gadowsky commented in our discussion on the development of technology as an organizational tool. He believes that a variety of different scheduling programs will be adapted by smaller theatre companies. He also envisions a potential "rise of such programs." Here, he talked about a possibility of having a one programming document with a possibility of being a blocking entrance and exit document that can provide a function of shifting into a DOFF/DON³ or costume tracking paperwork. Hoping that with multiple options and possibilities in programming and development it would be possible to shorten the time creating intricate documentation for different parts of the production, Gadowski said:

There is something like a stage right program that is quite effective in a rehearsal hall to be used. So that in your one program you have you blocking notation that also in a way has an ability to become and exit entrance document and that in a

³ Clarification of terminology- a DOFF/DON is a document created for costume tracking purposes during the show. This terminology is mainly used in Alberta. It can also be defined as Dress off and Dress on.

way has an ability to become your costume plot and some of your paperwork to be coming out of the content you've put in into tracking and blocking and information like that. I am thinking that maybe that is a thing we will see. I guess the hard part about it is that it's such a finite group of people who would use a program like this that maybe it doesn't move forward. I think we will be more technologically integrated before we find a good medium.

Another comment made by Al Gadowski in relation to thinking about future perspectives of interrelations of stage management and technology extended and expended in market driven spaces of modern theatre practice. He mentioned the fact that "theatres are shortening the rehearsal processes" because "money is getting tighter and we have less hours to costume fitting and everything else we need." However, according to Gadowski, "ultimately the show still needs to happen, the same way" even if "we are trying to do bigger, better and crazier things each year, more technical shows." Here lies the challenge for stage managers or, as Gadowski puts it: "How do we still get there with all of that happening?"

In spite of these uncomfortable thoughts about the future, there is also firm belief that the development of technology cannot replace the stage manager. Many see that technology will be there for them to create more useful and fool proof tools and gadgets to aid the profession. Michelle Chan explained:

You know I just hope that technology will become a tool for us to be able to grow what we can do and expand how we can do our job. In a really positive way. I don't think we should be overly reliant on it, because things can have happened. But I think it is a great tool for us to be able to do our jobs better. But I don't think

it's going to replace us. It's not going to change how theatre runs. I don't think, it's just going to make it easier, I hope. Time will tell I guess.

Armstrong agrees with that. In his opinion, even if there is a variety of project managing software,” an actual project manager is required to run the thing; and if that's the stage managers' responsibility, then that's going to be part of their work for the perceivable future.” Armstrong also encourages stage management professionals to even step back from using technology and thinking a little bit better about it in the profession. Based on his experience, he, for example, does not see “a digital future to advancing communication” and believes that “it should remain a bit more conventional.” Armstrong illustrates this by saying that he is not “holding his breath for the amazing new ways of sharing information in the Cloud”, and, though it is great for keeping information,” it is not “a replacement for a need to working together physically, having meetings and having real time conversations and problem solving in the real world.”

Overall, stage managers look with optimism at continued advancement of technology that “can only help all of us who work in this profession” (Armstrong). Through many opinions that were shared with me during the interviews the power of technology and the great advancements and strides that it had brought were evident. However, there is something in the profession that everybody favors: ‘breath’ and stage management practice, and this is what cannot be fully substituted by technology. In the Canadian Actors' Equity Association, stage managers are called artists, and I believe that the reason for this is the ability to breathe with the performance. Stage managers are the unseen performers behind the audience, or on the side stage. They watch the show with

everybody else, they breathe for the actors and they create a visual picture with lighting, sound, projections and every other element for every moment of the production.

Good stage managers who truly breathe with the performance can be called artists. They understand the show, and they know how the vision of the director from the rehearsal hall is being evoked on stage. They also know the future of the cues to come up because they can anticipate and solve problems if there is a change and are able to change the calling based on that. They are also existing and are present in the moment of each performance. The show is seamless and constantly flowing in the correct pace because of them and I believe that no technology or machinery no matter how meticulously timed it is can outdo that.

Deleuze and Guattari relate to the rhizome as being nomadic. Such account is given because the rhizome always makes and interrupts its connections. Also, when it interrupts, it always moves on. A new destination for the rhizome that I research is this strong willingness of innovations in the profession formed as online platforms and infrastructures, for examples, centers of education and learning and development with the aid of technology.

Currently, the University of Alberta is the only one educational facility in the country that provides an opportunity for young theatre practitioners to gain a Bachelors in Fine Arts degree specifically dedicated to stage management. But not many people would want to choose that route. There are many theatre practitioners who happen to become stage managers at some point in their lives and their introduction to stage management practice comes from mentorship and apprentice works in theatre houses. Most research on the internet which has become an amazing resource of information. Due to the

community being fairly small but also generously sharing their interest and knowledge, there is a plethora of websites, blogs and Facebook groups with people who want to share their experiences. There is a SMNetwork.org dedicated to creating a global community for stage managers. It has been around since early 2000's for conversations between different practitioners. It welcomes "those of all skill levels from around the globe who are interested in advancing the craft and discussing the practice of stage management" (PSMKay). This website is not exceptional. There are Tumbler blogs and Pinterest boards and Facebook pages dedicated for stage management practice. However, as I noted while doing this research, not many academic papers have been written yet. And in the end new and young stage management enthusiasts will not go to the library to look for such papers but rather Google search them. With the internet at our fingertips it is easier to research such information and also have an access to it in an instant. Though not many professional stage managers write academic articles and get published, they are able to share their knowledge electronically and digitally. It would be interesting to document how a new generation of stage managers, or those that came into the profession from non-academic practice, have developed those skills and how technology and the internet may have aided them in their journey.

CONCLUSION

After the graduation ceremony back in 2013 in Muscat, Sultanate of Oman, and a couple of months before going off to Canada I was told by Miss Hovland, my drama teacher: “Remember that stage managers don’t win the Tony Awards.”. And it is true. The biggest praise and celebration that any stage manager would receive is the acknowledgement by their peers and the cast. Many audience members still don’t even know who stage managers are and what they do; they never see them on stage, stage managers are usually not talked about, and breathing is only noticed when it stops or struggles.

Stage managers’ interactions with technology are not linear; they are rhizomatic the way they emerge and develop compelled by professionalism and desire of exceptional performance of job responsibilities. The most captivating stories about the interaction of technology and stage management in Albertan theatre practice are situated in multiple interconnected fragments of their professional and social lives and work. These stories tell us about things that support good deep steady breathing and things that inhibit it or cause the breath to be held. Though affected by certain destabilizing factors while using technology, they breathe deeply as the leaders of change, focused on self-development and innovation within the theatre practice. They are the ones who seek new options and applications within their practice and share those with the others. Though not always having confidence in technology, they are not stuck in the past with its traditional ways performing their functions and responsibilities. On the contrary, they are explorers and developers in the field who are looking for different options and solutions that can make their work more effective and efficient. The stage managers breathing with the show is a

crucial element to it being alive. Technology has to be a tool that supports the breathing in order for stage management practices to both continue in their vital role while also responding to the changing technology enhanced and advanced environment, and doing their best for show to go on.

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APPENDIX: Interview Script

- (a) Could you speak about contemporary stage management and the increasingly technologically driven world in which we live and work?
- (b) Thinking about Alberta stage management practices, consider the ways that technology may have influenced them.
- (c) How important is it to you to integrate technology into your work of stage manager?
- (d) Can you describe the role technology fills within your function and responsibilities as stage manager?
- (e) Have you received any pre-service or in-service training in using technology?
- (f) How have you integrated technology into your work? Has it been successful?
- (g) Have you applied any technology for running auditions/production week/etc.? What technology? How effective the technology was?
- (h) Have you applied any technologies as organizational tools? What technology? If so, how effective was the technology?
- (i) Have you applied any technology to facilitate the process of documentation and penciling the vision of the production and function as a source of the author's and actor-manager's thinking transmission, translation and representation (Cattell, 2015)? How effective the technology (e.g. electronic prompt book, automation of lighting and scenic elements was?
- (j) Have you applied any technology for communication? What technology (e.g. file-sharing of background tracks, computer-generated paperwork, emails)? If so, what technology, and how effective was it?

(k) If we consider that the function of the stage manager is to make the production run smoothly and that technology (when it works) can enable this, but it is also in many ways very fragile, for example, if there is a problem with electricity or an internet connection or a server.... The list goes on. Can you give examples of any types of back-up plans that stage managers put in place for failure?

(l) Can you see any correlation between the use of technology and the status of the stage management profession?

(m) How do you see the future developments in the stage management profession due to the technology?

(n) Thinking about transitions to technologies, consider if there is anything that has been lost or blocked, e.g. previous practices that valued things other than efficiency (like relationships, and face-to-face collaborations).