Saxophone without mouthpiece

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Introduction

Hello, my name is Don-Paul Kahl, I am a saxophonist, educator, and researcher. Welcome to my PhD research on saxophone without mouthpiece.

Saxophone without mouthpiece (SWMP) is the practice of playing the saxophone without the object which produces the common practice sound of the instrument: the mouthpiece. Taking away this seemingly integral part of the saxophone, in fact, opens new sonic possibilities. Innumerable possibilities exist for the player who wishes to explore this arguably new instrument properly and thoroughly - I would like to be your tour guide on a journey into the sonic world of this instrument. As a starting point (and to focus this research topic) I will examine the most used techniques found in the repertoire, as well as some major problems concerning notation. I will focus on four techniques: air sounds, tongue rams, trumpet sounds, and saxo-flute hybridity.

I first encountered these techniques while studying in Paris in 2014. A composer, Juan Arroyo, was working at IRCAM and had a work performed there as part of a series of concerts led and curated by him and his colleagues. After the concert, I approached Arroyo to congratulate him and introduce myself. As one so often does after a concert, we grabbed a drink in a local pub and sat down to discuss our practices. He informed me that he already had several works for saxophone but that they were "different;" they were for SWMP, largely unperformed, and available for me to look at if I would like. Fascinated by the idea, I eagerly awaited the next day to discover his scores.

In my initial discovery phase, I was both enamored by the sounds but simultaneously confused how to approach the techniques that Arroyo employed, for example in his composition *Sikuri I* (2012) for tenor saxophone and live electronics. I scoured the internet looking for any information that could help me on these techniques. I found little to no solace there. I looked in my technique manuals and could not find all that much information or data on these techniques - only a small page or a short paragraph here and there. I asked my teacher at the time, Jean-Michel Goury, who could help to an extent. He gave me an overview of how to approach several of the techniques and to go about working on them and making them sound better - especially the trumpet and flute sounds. I worked for hours upon hours on this piece *Sikuri I*, until I felt that I was ready to play it for Arroyo.

After working with Arroyo, I realized that some of the practices that I had been told by my teacher might not be achieving the precise sounds which he demanded. I had to rework, rediscover, and invent methods to learn these techniques for myself. I ended up performing *Sikuri I* many times throughout Europe and the United States and was left with a palpable urge and desire to know more about playing SWMP.

From there, I went on to seek out other pieces, other saxophonists performing these techniques, and composers who were interested in them. And since these techniques, up until now, have not received the proper investigation, I set myself down a path towards an artistic research project which I deem necessary for contemporary saxophonists, modern pedagogues, composers of our time, and artistic researchers with similar interests in other instrumental fields. I sought out a means to perform this research in a structured and guided way; thus, I started my pursuit of a PhD in Artistic Research on SWMP techniques.

Abstract

Saxophone without mouthpiece (SWMP) techniques involve removing the mouthpiece from the saxophone's neck, adjusting the embouchure, and blowing air in specific ways to produce distinct sounds. This dissertation will focus on four such techniques: air pitch, tongue rams, trumpet sounds, and saxo-flute hybridity. Since the 1980s, composers have incorporated these techniques into their works. However, they have remained relatively under-researched, leading to many misconceptions among both performers and composers. Through my practice-led research, which includes experimentation, historical and aesthetic contextualization, sonic analyses, pedagogical insights, in-depth performances, collaboration with composers on new works, and addressing notational challenges with potential solutions, the intricate nature of these techniques can be more comprehensively understood by saxophonists, composers, and researchers.

The culmination of this research is an online dissertation featuring text and videos, which will examine three primary components:

1. **Contextualization of SWMP**: This component investigates SWMP techniques within an historical framework. It situates these techniques within various aesthetic movements and perspectives in music, providing a richer and deeper understanding. Additionally, it examines the techniques in the context of modern performance practices.
2. **Technical Information for Performers and Composers**: This section offers performers practical advice on successfully executing these techniques. It also provides composers with guidance on how to properly incorporate these techniques into their works.
3. **An Analysis of Notation**: This section looks at the role notation plays in the interpretation of SWMP pieces and techniques. The analysis examines the importance of some more or less standardized guidelines when composing with these techniques and highlights the critical relationship between composer and performer in both composition and performance.

The texts and videos are supplemented by a comprehensive collection of personal audio and video performances, a detailed pitch manual (including recordings of each individual

note possible), and other essential materials, such as a searchable database of repertoire that employs SWMP techniques. Furthermore, I personally conducted interviews with several composers and one performer, which are included as part of this supplemental material.

Research Questions - https://youtu.be/4Y8N9ZixesU

Any research should ideally set down clear and decisive goals, initially formulated in the form of research questions. These questions and goals serve to guide the examination and allow one to stay critical throughout the entire trajectory.

The overarching question that will guide my inquiry, and to which I will consistently return, is: What is SWMP? From this broad foundational question, several more specific inquiries emerged, further focusing my research. The first and logical follow-up question I pose concerns the technical craft of the practice: What is the artistic, technical, and sonic potential of SWMP techniques?

A thorough contextualization provides insight into how SWMP techniques have evolved, why composers have increasingly adopted these techniques, and how they contribute to a richer and more profound theoretical understanding. This process prompts several additional questions: What is the historical background and context of these techniques? And from where did they originate? The saxophone, an instrument ripe for investigation, invention, and discovery, serves as a venerable playground of sounds and possibilities. Furthermore, what are the potential relationships between the performer and their instrument? How do SWMP techniques fit into the performer-material-composer narrative? How can we understand the practice of SWMP through the lens of various aesthetic movements in music? By addressing these questions, we can better appreciate the unique aesthetic space these techniques occupy and their significance in contemporary musical practice.

Notation is a deeply personal and historically divisive topic. What notational trends have composers employed in recent decades when utilizing these techniques? Can a more standardized notational model be proposed for these techniques that allows for a basis of understanding upon which composers can potentially expand? Furthermore, regarding the broader role of the performer as a co-composer, in which contexts should a performer exercise artistic judgment when faced with notational discrepancies? How can the relationship between composer and performer be more closely aligned in the notation of SWMP techniques in works that are intended to be passed from one performer to another?

Presentation of Thesis

The presentation of this thesis takes the form of a bespoke website which includes videos, text, figures, manuals, and databases of works and recordings. Each chapter will explore a distinct aspect of the research, addressing the research questions and contributing to a comprehensive understanding of the field of study on SWMP techniques.

A purely written model was not chosen for this research. This is for two important reasons: firstly, to convey the knowledge based on my artistic practice, I must show how playing SWMP can and perhaps even should be performed and practiced. Secondly, it is my intention to disseminate the research to as many channels as possible. A comment forum section is added to the website to allow for future discussion and discourse from interested viewers from around the world.

The following chapters will be explored as part of this thesis: contextualization of SWMP techniques; SWMP techniques (air pitch, tongue ram, trumpet sounds, and saxo-flute hybridity); and notation for SWMP. These six body chapters are preceded by this Introduction and followed by a Conclusion.

Research Method

In this research project, I focus on the development of a performance practice with and through SWMP techniques; as such, I need to shed light on the specific possibilities and issues of this topic from an artistic perspective. Therefore, I have developed a methodology to meet the needs of my performance practice and research.

From the beginning of my inquiry into these techniques and sounds I have used a plurality of methods and approaches. Some of these include:
- Experimenting with the techniques through my practice.
- Investigating a historical narrative.
- Discovering repertoire, recordings, and composers writing for and performers using these techniques.
- Performing works using SWMP techniques and utilizing them in public improvisations.
- Working as a pedagogue to discover how to better practice, learn, and master these techniques and how to teach them to my colleagues.
- Working with composers on new works and using my specific knowledge of these techniques to commission, perform, and record new pieces.

The "State of Art" - https://youtu.be/SqZIUq8ibYk

The "State of Art" is a barometer by which the necessity of a research topic is measured. To whom is it directed? What impact will this research bring to those groups of people? It

examines why this research must be performed now and addresses what knowledge gaps it will fill.

SWMP techniques have been employed in contemporary composition since the 1980s. However, a fully realized, researched, centralized, open-source, and dedicated understanding or knowledge of these techniques is yet to exist. While several historically important figures such as Daniel Kientzy, Jean-Marie Londeix, Marie-Bernadette Charrier, Marcus Weiss, and Giorgio Netti have discussed them in published books, there remain significant gaps in the profound comprehension of these techniques.

For whom is this research meant? First, for performers who are puzzled by how to approach the techniques in their practice. In most pedagogical institutions a systematic approach to these techniques is still lacking today. Ultimately, the performer is left to wonder about creating consistency in how they function and how to produce them reliably. What is ultimately missing is a centralized hub where practical, technical, artistic, and aesthetic knowledge for performers and educators is collected and made accessible.

However, not only performers can benefit from this research project. All topics addressed here are also useful for composers. If performers are unintentional about how to produce SWMP techniques consistently and effectively then how are composers to write and use them in their works? Many composers are forced to do their own in-depth research into these techniques to understand even how to begin to work with them. Notation also poses historically and continuously contentious issues here. There is a lack of a better thought-through notation system for writing these techniques. While notation can be seen as a highly individualized and personal matter, a system that gives more structure could be in place so that saxophonists have the tools to recognize and easily adapt to the notation system chosen by a composer. A more standardized structure model would in this case be helpful; therefore, one will be presented should a composer wish to use it or purposefully deviate from it, depending on their personal thoughts and ideology on notation.

Going Forward

Given that air pitch, tongue rams, trumpet sounds, and saxo-flute hybridity are being used in an ever-growing number by composers of today and that modern saxophonists need a thorough understanding of them to be able to interpret these works, this research aims to contribute to the further development of these techniques. It also aims to show that they are not just a novelty but require a dedicated, practice-led system to execute and use them properly.

Through this research process, I provide a foundational contextualization of these techniques, enabling them to stand independently as extensions of the already rich and dynamic world of the saxophone. In doing so, I also offer transparent empirical and pedagogical data on the sonic possibilities of these techniques. The works employing

them constitute a significant portion of the discussion, and they are highlighted and critiqued to serve as a valuable resource for saxophonists and composers. Despite ongoing debates about notation, offering a historical understanding and a subsequent general framework for notating these techniques might promote their wider acceptance and ultimately enrich the future tapestry of notational possibilities. Finally, with the aim of offering the necessary foundation for these techniques to thrive, I present a narrative that situates them within the broader domain of saxophone performance practices, allowing them to assume their well-deserved place.