

SAXOPHONE PLAYERS' SELF-PERCEPTIONS ABOUT BODY MOVEMENT IN MUSIC PERFORMING AND LEARNING: AN INTERVIEW STUDY

NÁDIA MOURA

Universidade Católica Portuguesa, Porto, Portugal

SOFIA SERRA

Universidade de Aveiro, Aveiro, Portugal

QUANTITATIVE STUDIES DEMONSTRATE THAT performers' gestures reflect technical, communicative, and expressive aspects of musical works in solo and group performances. However, musicians' perspectives and experiences toward body movement are little understood. To address this gap, we interviewed 20 professional and pre-professional saxophone players with the aims of: (1) identifying factors influencing body movement; (2) understanding how body movement is approached in instrumental pedagogy contexts; and (3) collecting ideas about the impact of movements on performance quality. The qualitative thematic analysis revealed that musical features (i.e., musical character, dynamics) constitute a preponderant influencing factor in musicians' body behavior, followed by previous experiences and physical and psychological characteristics. In the pedagogical dimension, participants presented an increased awareness of the importance of body movement compared to their former tutors, describing in-class implementation exercises and promoting reflection with their students. Still, a lack of saxophone-specific scientific knowledge was highlighted. Regarding performance quality, participants discussed the role of movement in facilitating performers' execution (i.e., sound emission, rhythmical perception) and enhancing the audience's experience. We provide insights into how professionals conceive, practice, and teach motor and expressive skills, which can inspire movement science and instrumental embodied pedagogy research.

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BODY MOVEMENT PLAYS A CRUCIAL ROLE IN music performance, reflecting musicians' intentions on motor, cognitive, and emotional

dimensions. At a foundational level, it encompasses the actions related to instrumental manipulation, consequently responsible for effective technical execution. For example, professional pianists precisely vary the force applied to key surfaces to control timing and dynamics (Goebel, 2017). Movement is also a source of expression and communication. Studies have shown that performers associate expression with movement: when asked to play restricting natural expressive intentions, they move considerably less than when asked to play in projected or exaggerated conditions (Davidson, 1993, 1994; Massie-Laberge et al., 2019; Thompson & Luck, 2012). Further, structural parameters of the repertoire are recurrently associated with performers' gestures: the head motion of pianists reflects rhythmic sections, conclusive chords, and main themes (Massie-Laberge et al., 2019; Thompson & Luck, 2012), and the bell motion of clarinet players coincides with melodic phrasing, dynamics, and harmonic transitions (Teixeira et al., 2014; Wanderley et al., 2005). Additionally, in shared performances, movement is essential for coordination and joint emotional expression (Bishop et al., 2019, 2021; Chang et al., 2017, 2019). Hence, although movement is not the goal in music making (such as it is in sports), it is an important behavioral marker because it is intimately related to the cognitive processes underlying the musical experience as a form of communication and interaction (Godøy & Leman, 2010; Leman, 2008, 2016).

Musicians acquire movement skills through repetitive practice, which produces permanent changes in motor development (Muratori et al., 2013), allowing for memorization and replication of motor programs (Davidson & Correia, 2002; Jäncke, 2006; Lehmann et al., 2007). For instance, clarinet players presented consistent gestural patterns when recording the same piece months apart (Wanderley et al., 2005). Considering the unfeasibility of focusing on each movement while playing, professional musicians engage in anticipatory mental imagery to support their performance (Bishop & Goebel, 2017; Keller, 2012). Frequently, the imagined musical intentions generate associated body movements, as confirmed by several studies (Demos et al., 2017; Desmet et al., 2012; Massie-Laberge et al., 2019; Thompson &

Luck, 2012; Visi et al., 2020). Further, expert practitioners use somaesthetic awareness to shift between reflective and unreflective modes of body attention (Toner & Moran, 2015), whereas novices benefit from directing attention to movement execution (Beilock et al., 2004). Therefore, the associations between musical contents and body movements can be deliberate or automated: one performer may intentionally circle the instrument regularly to support pulse perception in rhythmical sequences, while another may execute the same gesture as an unconscious response. Certain layers of information, like those mentioned above, can only be obtained by questioning the first person involved in the task, which led to the conception of this interview study.

Although a comprehensive understanding of the motor learning involved in playing is not a demand, it is fundamental that musicians recognize their importance (Dahl, 2018; Davidson & Broughton, 2022). Nevertheless, it has been discussed that many musicians present limited knowledge about the physics and physiology involved in their movements (Gaunt, 2007; Parncutt, 2007; Shoebridge et al., 2017). Partly, this could be attributed to the long-lasting implementation of teacher-directed methods, in which the biomechanics of performance, alongside other components, are mostly taught based on the subjective beliefs and experiences of teachers, promoting imitation and modeling (Altenmüller & McPherson, 2007; Burwell et al., 2019; Lennon & Reed, 2012; MacRitchie, 2015; Palmer & Baker, 2021). Vulnerabilities have been pointed to such methods, emphasizing the need to reform conservatoires' curricula (Palmer & Baker, 2021; Rumiantsev et al., 2020). Although we did not find research particularly dedicated to musicians' perceptions of movement, reviewing several motion studies enabled us to extract some information from complementary comments and interviews. Performers mention that technical difficulty, stress level, and ergonomics influenced their movement (Wanderley et al., 2005). They also assume to move according to phrasing structure, dynamic shape, and rhythmic and melodic patterns (Massie-Laberge et al., 2019), although they are unaware of how they move in detail (Wanderley et al., 2005). The impact of movement on performance quality has also been discussed: movements affect performances negatively when uncontrolled and positively when they contribute to embellishing them; they can also aid phrasing and communication with the audience, according to clarinet players (Wanderley et al., 2005). When playing immobile, performers report difficulty keeping expressiveness, fluidity, and naturalness (Massie-Laberge et al., 2019; Thompson & Luck, 2012). Compared to

instrumentalists, vocalists tend to be more attentive to their body movements, facial expressions, and appearance (Kokotsaki et al., 2001; Sandgren, 2019). In broader studies about performers' experiences, musicians report including motor-related strategies in their study (Loimusalo & Huovinen, 2021) but also do not mention them at all when discussing their practice (Li & Timmers, 2020), performance (Clark et al., 2014) or previous experiences (Palmer & Baker, 2021). In the study of Kegelaers and colleagues (2022) about orchestra auditions, the only mention of body movement musicians made related to focusing on technical and physical aspects to concentrate and avoid anxiety. More information is needed to represent the conceptions and practices of expert musicians related to body movement nowadays and their implementation in pedagogical contexts.

Regardless of the advances in movement research, integrating the resulting scientific knowledge in music pedagogy still constitutes an obstacle (James & Cook, 2013; MacRitchie, 2015; Massie-Laberge et al., 2019). Several health promotion programs have been developed, addressing the physical and psychological needs of performing artists, hence tackling the topic of body movement through the lens of injury prevention (Ackermann et al., 2014; Baadjou et al., 2020; Matei & Ginsborg, 2021; Shoebridge et al., 2017). Other methods, such as Alexander technique (Davies, 2020) or body mapping (Wilson, 2020), have expanded the scope toward increasing body awareness and unleashing physical freedom and expression. However, these are occasional events and often lack bridging to instrumental specificities such as technique or repertoire. The implementation of body movement recommendations in instrumental lessons regularly is necessary. While some playing schools are critical of excessive movement, arguing that energy should be focused on sound production (Caterina et al., 2004; Wanderley et al., 2005), others encourage body expression as part of the interpretative dimension of the performance (Dahl et al., 2010). In the study conducted by Wanderley and colleagues (2005), four out of five participants reported that their teachers gave minimal attention to body movement and were likelier to criticize unnecessary movements than discuss them. It could be that this paradigm is changing, considering recent findings where instrumental and vocal teachers identified the need to have a basic understanding of anatomy and physiology (Norton et al., 2019) and recognized that the absence of information and interest in the topic had led teachers to motivate detrimental behaviors among students, such as the "no pain, no gain" motto (Shoebridge

et al., 2017). In the study conducted by Michalko and colleagues (2022), drumkit and violin teachers described the in-class implementation of motor skill acquisition strategies, including practicing targeted exercises to improve motor control, demonstrating postures and positions, and explaining long-term adverse effects of bad habits, or endorsing rhythmical games. Complementarily, Davidson and Broughton (2022) provide instructions for the development of fluency, balance, and body alignment; the experimentation of individual physical expression; and the exploration of the role of gestures in emphasizing expressive locations and communicating with co-performers. Recording and analyzing videos and promoting relaxation exercises and sports practice were transversal suggestions in both works (Davidson & Broughton, 2022; Michalko et al., 2022). In line with the previous authors, Bremmer and Nijs (2022) introduce the concept of Embodied Music Pedagogy, in which physical interaction with the musical environment plays a significant role in music learning and teaching. The authors present a core of movement-based activities through which movement and sound are linked meaningfully, promoting the understanding of structural and emotional components of music through active physical engagement (Bremmer & Nijs, 2022).

In this study, we aimed to gain a thorough understanding of the conceptions, beliefs, and previous experiences of music professionals and higher education students about body movement. More specifically, we were interested in: (1) identifying factors influencing body movement; (2) understanding how body movement was approached throughout the performers' pedagogical background and how it is nowadays approached by those who teach; and (3) collecting ideas about the impact of body movement on performance quality. This study is framed on a larger project concerning body movement in saxophone performance and conceived to provide qualitative knowledge impossible to extract from the quantitative measurements used in previous research stages (Moura et al., 2022, 2023). The participants' perspectives, emerging questions, and needs will be further considered in the design of upcoming movement studies.

Method

PARTICIPANTS

Participants were 20 expert classical saxophone players (9 female; mean age: 26.3, $SD = 5.4$ years). To collect diverse data, we selected participants with different main occupations within saxophone performance

(9 teacher-performers, 3 performers, 8 university-level students) and contrasting academic backgrounds (8 from Portugal, 9 from The Netherlands, 3 from other countries). Inclusion criteria were: (a) a minimum of 10 years of saxophone practice (counted from the start of formal music education), and (b) completed higher education in performance and having an established career (saxophone teacher or performer) or currently pursuing higher education in performance. To target higher levels of professionalism and musical maturity among the student group, only bachelor finalists and master students were invited. Detailed demographic and professional information about the participants is presented in Table 1.

Prior to the interviews, the participants had participated in a series of motion capture recordings. At this point, they were contacted via email and phone and were selected from the professional network of the first author, who has specialized in saxophone performance and teaching.

INTERVIEW DESIGN

Considering the study's focus was the participants' personal experiences, we adopted a semi-structured format to promote in-depth conversation and flexibility while assuring a certain degree of standardization (Howitt & Cramer, 2020). An interview guide was designed, including four main sections and related questions (see Appendix A in Supplementary Material accompanying the online version of this paper at mp.ucpress.edu for a complete interview guide):

1. Music analysis task. Participants were presented with five musical excerpts they had previously studied. They were asked to highlight locations where they consciously move and describe how and why it occurs (additional information about the excerpts in Appendix B of Supplementary Material accompanying the online version of this paper at mp.ucpress.edu). This section aimed to introduce the interview with a practical exercise, facilitating the reflection on movement by providing specific musical contexts well-known by the musicians.
2. Sociodemographic and artistic characterization.
3. Influencing factors of performative movement. After a free discussion, allowing participants to generate their personal influencing factors, we targeted pre-determined categories of factors (physical, psychological, pedagogical, musical).
4. Body and gestures in saxophone practice. This group aimed to understand how the participants

TABLE 1. Sociodemographic and Professional Characterization of the Participants

Participant	Sex	Main Occupation	Years of Saxophone Practice	Academic Habilitation (in Saxophone)	Country of Studies
1	M	TP	21	Performance (Bs), Teaching (Ms)	PT
2	M	TP	16	Performance (Bs), Teaching (Ms)	PT
3	M	TP	22	Performance (Bs, Ms), Teaching (Ms)	PT
4	F	S	11	Finalist of Performance Bs	PT
5	M	S	13	Performance (Bs), Finalist of Performance Ms	PT, BE
6	M	TP	19	Performance (Bs), Teaching (Ms)	PT
7	F	S	14	Finalist of Performance Bs	PT, AT
8	F	S	11	Finalist of Performance Bs	PT, NL
9	F	TP	13	Performance (Bs), Teaching (Ms)	PT
10	F	TP	23	Performance (Bs), Teaching (Ms)	PT, ES
11	M	TP	26	Performance (Bs), Teaching (Ms)	PT
12	F	TP	32	Performance (Bs)	PT
13	M	P	19	Performance (Bs, Ms)	PT, NL
14	F	P	13	Performance (Bs, Ms)	PT, NL
15	F	S	14	Performance (Bs), Finalist of Performance Ms	NL
16	M	S	13	Finalist of Performance Bs	NL
17	M	TP	17	Performance (Bs, Ms), Teaching (Ms)	PT, NL
18	F	S	18	Finalist of Performance Bs	NL
19	M	P	12	Performance (Bs, Ms)	PT, NL
20	M	S	12	Finalist of Performance Bs	NL

M: Male; F: Female; TP: Teacher-Performer; P: Performer; S: Student; Bs: Bachelors; Ms: Masters; PT: Portugal; BE: Belgium; AT: Austria; NL: The Netherlands; ES: Spain.

integrate the body movement dimension in their study and performance, the most recurrent movements among saxophone players, their associated functions, and how body movement influences performance quality (in both technical and expressive perspectives).

DATA COLLECTION

Ethical approval for this study was granted by the Comissão de Ética para a Saúde of the Universidade Católica Portuguesa (CES-UCP) under protocol number 137/2021. Oral and written information about the study was provided before participation, at which point participants signed the informed consent.

Individual interviews occurred in person at Universidade Católica Portuguesa between March and August of 2021. The same researcher conducted the interviews to avoid inter-interviewer bias (Seale, 2018). These were audio-recorded using a Zoom H4N. The average duration was 47 minutes (range: 29–76 min).

DATA ANALYSIS

The interviews were transcribed verbatim using Audacity 3.0.2 and Microsoft Word. The transcripts were then analyzed using MAXQDA 2020 (VERBI software, Berlin).

A thematic analysis was performed following the steps described by Braun and Clarke (2006, 2013): (1)

familiarizing with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. In (1), the 20 transcripts were read multiple times for familiarization. In (2), meaningful data extracts were systematically coded across transcripts. In (3), codes were sorted into a preliminary hierarchy of overarching themes and sub-themes. In (4), the extracts and thematic map were reviewed and refined, including the emerging, merging, and collapsing of themes. Finally, in (5), summary narratives were produced for each theme and sub-theme; in (6), the final analysis report was written. Since collaborative coding approaches develop richer data readings (Braun & Clarke, 2019), during steps (3) and (4), NM and SS discussed and changed the thematic map until a consensus was reached.

Results

The analysis resulted in a final thematic map including three overarching themes identified in all the interviews (“Influencing Factors,” “Pedagogical Dimension,” and “Impact on Performance”) and 10 sub-themes rising from the central topic “Body Movement in Saxophone Performance”. A graphical representation of this model is presented in Figure 1. A summary of the themes, sub-themes, codes, and corresponding numbers of mentioning participants/percentage of mentions is provided in Table 2.

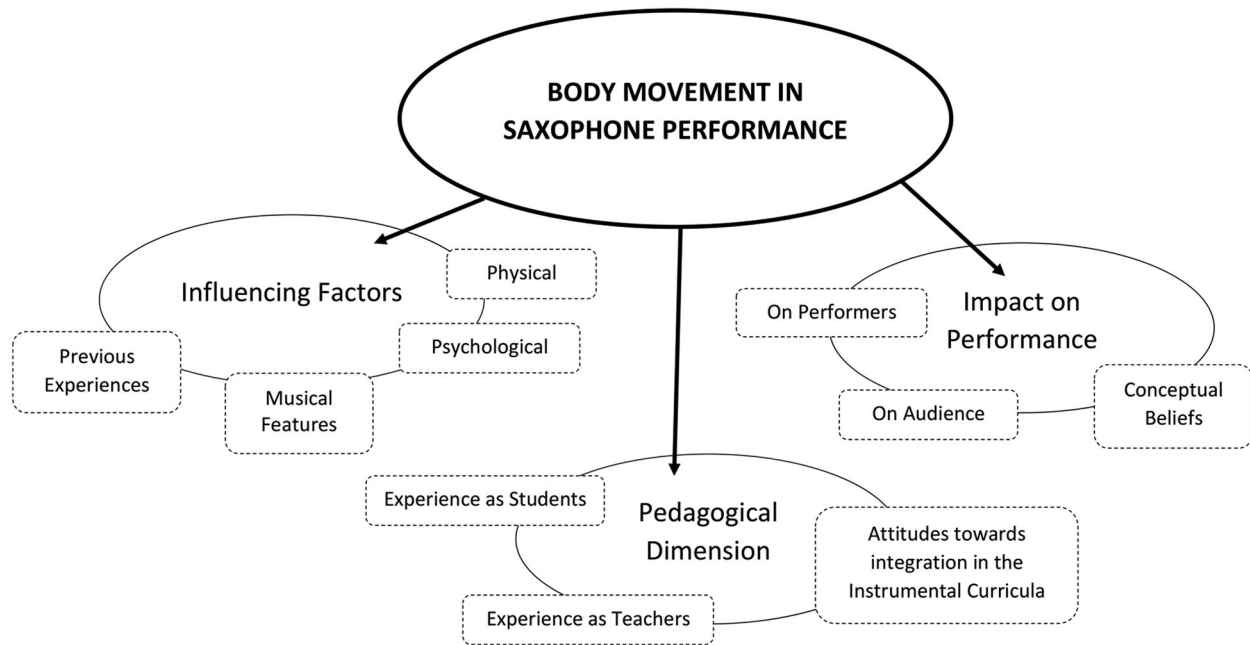


FIGURE 1. Thematic map of overarching themes and sub-themes.

INFLUENCING FACTORS

Musical Features

Musical Features were the most recurrent influencing factor, organized into two codes: in-score notation and external features. The first code comprised the following musical features, ordered by the number of mentions: musical character, structure, dynamics, articulation, rhythm, technical complexity, pitch, and harmony. The second code included features independent of the score, namely musical genre and type of ensemble.

Musical character, defined as the emotional intention of the music, was mentioned by 19 participants. When discussing this feature, participants relied on the comparison between two antagonistic musical character types: low arousal (“calm,” “mysterious,” “intimist”) and high arousal (“energetic,” “active,” “rhythmical”). Low arousal characters were associated with smaller quantities of movement [“... in calmer moments I don’t feel as much need to move (P9)”]; “This is a peaceful excerpt, *andante*, *dolce espressivo*, personally, in my way of playing, I would naturally play this with little movement (P14)”, and longer or wider movements [“Generally, more, hum... expressive lines, I think of a wider movement (P18)”]. Other observations included adopting a “closed posture (P5)”, performing “smaller gestures (P14)”, and having “more body awareness (P12).” High arousal characters were connected to the urge to move more [“Energy generates more movement

(P12)”] and performing shorter, faster gestures [“Where there is a much crisper character, then body movement will also be much crisper, will have more nuances, more, hum... abrupt, fast movements. (P13)”].

Fourteen participants reported moving according to the phrasing **structure**, and two further considered that this was the musical parameter with a greater influence on body movement. Matching movement cycles to the duration of musical phrases was believed to help accomplish the projected phrasing [“Yes, I think body movement here is, hum, a bit intuitive, because... it is a movement that has to help us direct the phrase. (P20)”] and to aid the audience’s understanding of the music [“I use my body so that people better understand the phrase, where it st-, where it starts and where it ends (P19)”]. Bell circling and flapping were identified as movement patterns related to expressive phrasing. Climaxes were identified as crucial movement locations where players execute saxophone lifts, open the chest, take steps forward, extend their knees, and generally look for more exaggerated, affirmative gestures. In phrase endings, two participants described lifts and sideway sweeps of the saxophone accompanying the conclusive idea:

“... until the last two bars... and there what will probably happen will be that the saxophone, hum, there will be a finalization movement, and

TABLE 2. Number of Mentioning Participants and Percentage of Mentions Across the Entire Dataset for Each Overarching Theme, Sub-theme and Code

Overarching Theme	P(N)	M(%)	Sub-theme	P(N)	M(%)	Code	P(N)	M(%)			
Influencing Factors	20	39.9%	Musical Features	20	27.2%	In-score Notation	20	24.7%			
						External Features	12	1.8%			
						Injuries	20	2.3%			
			Physical	20	4.9%				Instrumental Technique	10	2.1%
									Individual Characteristics	4	0.5%
									Personality Traits	13	1.7%
									Playing by Memory	8	0.3%
									Preparation	6	0.7%
									Anxiety	3	0.9%
									Motivation	1	0.1%
			Psychological	18	3.7%				Personal References	13	1.7%
Other Interests	1	0.2%									
Other Interests	1	0.2%									
Pedagogical Dimension	20	16.9%	Experience as Students	20	10.3%	Body movement was approached	19	4.5%			
						Body movement was not approached	1	0.1%			
						Discouraged movements	16	3.1%			
						Encouraged movements	14	1.9%			
						Modelling teachers' behavior	6	0.7%			
			Experience as Teachers	11	2.9%				Strategies to approach body movement	11	1.9%
									Discouraged movements	5	0.6%
									Discouraged movements	3	0.4%
			Integration in Instrumental Curricula	20	3.7%						
Impact on Performance	20	43.2%	On Performers	20	19.8%	Integration in Individual Study	20	3.8%			
						Facilitative Functions	19	12.2%			
						Incorrect movements	17	3.8%			
			On Audience	20	10%				Negative impact	17	3.7%
									Positive impact	16	3.8%
									Types of audience	9	0.9%
									Other visual components	4	0.4%
			Other Conceptual Beliefs	20	13.4%						

P: Number of participants mentioning; M: Percentage of mentions across the dataset.

Note: The sum of the percentages of codes per sub-theme is not always equal to the percentage of the sub-theme, as some sub-themes have general mentions that do not fit any code (i.e., some participants mention body movement has an impact on the audience, without specifying how – here, the mention is attributed to “On Audience”)

accentuation with the body. Probably, the saxophone will be taken off the mouth, hum, in performance, because it gives . . . gives it another interpretation. (P13)”

Additionally, one participant mentioned using body movement deliberately to emphasize section changes within the pieces.

Dynamics were mentioned by 18 participants, primarily focusing on the contrast between low and high levels. *Fortes* were associated with opening the chest, lifting the saxophone, and generally adopting larger movements, except for one participant, who said she could not move when playing *forte* due to the high

amount of air required. *Pianos* were linked to movement restriction and knee flexion. *Crescendos* and *diminuendos* were pointed out as important movement regulators, with four participants giving the example of sudden dynamic changes shaping movement (i.e., sudden knee flexion in a *forte-piano*).

Sixteen participants referred to **articulation**, with three considering it dependent on musical character and dynamics. Accents were recurrently mentioned, as they generate analogous accentuated body movements (head nods, bell gestures, full-body movements): “Accents influence very much, because when we execute the accents with the air, the articulation, everything else, the technique . . . the body always follows an accent. Always.

(P4)". Two participants added that movement helps their accent execution ["I don't think I can play certain accents without performing certain body movement (P12)"]. While two participants mentioned moving more in *staccato* passages, one said that restricted movement and two reported continuous movements in *legato* passages.

Twelve participants discussed **rhythm**. Some mentioned that body movement must reflect *tempo*, claiming that performances get confusing and out of context when the two are unsynchronized. A slow *tempo* enables greater freedom of movement for most participants, whereas one referred to not feeling the need to move. A fast *tempo* leads participants to be more actively engaged in moving, although movements become shorter, as they relate to the pulse. Moving "in *tempo*" is a strategy pointed out by seven participants to aid beat perception and feel internal divisions of the bars and beats ["I think from here on one can adopt a body movement slightly demonstrating the $\frac{3}{4}$... maybe not... not highlighting the first and second beats, but the first and third, which helps... to me. (P20)"]. In these scenarios, arm movements and swaying encompassing groups of rhythmical motifs were described.

Technical complexity was identified by 14 participants as a factor promoting movement restriction. Limiting movements helps achieve efficiency in technically demanding passages by providing "stability" and assuring "energy saving": "... pieces requiring technique, for example, contemporary music, a thousand notes, a thousand effects to execute, one won't be thinking much about movement, right? (P1)". Regarding **pitch**, seven participants described that the body's height accompanies this feature: body extension occurs in higher-pitched notes, including knee extension, foot and bell lifts, whereas body flexion is adopted in lower-pitched notes. Finally, two participants reported that they sometimes evidenced the **harmonic** content of the music through their body language.

Concerning **external features**, seven participants considered that musical genre influences movement, suggesting that jazz, tango, and popular music promote greater freedom than classical music. Regarding the type of ensemble, eight participants expanded on the differences in body language between solo and group performances. When playing solo or accompanied by one instrument, participants think more about movement, as they are the focus of attention. In chamber music, participants adjust their movement style due to the need to communicate with other co-performers ["For instance, in ensembles and so on... I move a lot, I feel

the need to communicate with my colleagues and so on, and it's through the body that it is done, so I tend to move a lot. (P7)"], and to homogenize the movement style of the group:

"In the quartet, we have two persons who move a lot, and two persons who don't move as much, and that also affects who watches, and affects the music, because we're not... we're not in syntony, although we're clearly listening and playing together. (P15)"

Physical

Physical factors were organized into three codes: injuries, instrumental technique, and individual characteristics. All participants identified injuries as an influencing factor in performative movement: seven reported recurring back pain associated with an increase in the duration of practice and difficulty of the repertoire; five reported past severe playing-related injuries that conditioned their ability to move for months (wrist, shoulder, and finger tendinitis, back contractures); and seven reported never having experienced any injury, hence no injury-related movement constraints. Additionally, two participants experienced non-playing-related injuries, which conditioned their freedom of movement in the long term. Regarding instrumental technique, breathing, type of saxophone, neck strap, and playing position were named influencers. Some participants explained that although breathing induces movement inherently, it also carries an aesthetic sense:

"... the breathing itself can carry an aesthetic concept inside and lead us to a different body movement. Sometimes if we breathe in a short way, our movements will be a bit shorter; if we breathe in a longer way, our movements will be a bit more undulated, or circular, and longer too. (P11)"

They also mentioned that playing heavier saxophones (tenor and baritone) promotes less movement freedom and that soprano playing produces a distinct body language due to its conical shape. Participants believed that wearing a neck strap to support the instrument's weight promotes the "leaning forward" characteristic of saxophone players. Also, playing in a seated position leads to higher movement restriction than playing in a standing position. Finally, four participants mentioned body weight and personal tics as interfering individual characteristics.

Previous Experiences

Eighteen participants discussed how previous music-related experiences, such as workshops, concerts, books, musical pieces, contests, recordings, and people,

including teachers, saxophone peers, and other instrumentalists, contributed to developing their body behavior. It was a transversal opinion that musicians discover movements based on what they see in others. The more diverse content they consume, the more likely they are to find their musical and, consequently, movement identity. Emphasis was given to the influence of saxophone teachers, not only because students tend to model their stage behavior but also because they can encourage and discourage certain movements (see “Pedagogical Dimension”). Other interests included the dancing experience of one participant, who thought of music-related movement as a choreography.

Psychological

Psychological factors comprised five codes: personality traits, playing by memory, preparation, anxiety, and motivation. Eleven participants mentioned that traits like introversion, shyness, or insecurity often translate into more restrained movement profiles and that sensitivity, decisiveness, and leadership intrinsically pour into the body behavior of musicians. In contrast, two others mentioned that personality should not be reflected in body behavior, as the musician should attend to the musical character independently from their identity. Three participants reported that playing by memory enabled them to move more freely. Six participants stated that when their preparation level is lower, they constrain movement to focus on the score. Music performance anxiety was described as provoking movement freezing and lack of control, whereas higher motivation levels encourage active movement.

PEDAGOGICAL DIMENSION

Experience as Students

Experience as Students originated five codes: body movement was approached, body movement was not approached, encouraged body movements, discouraged body movements, and modeling teachers’ behavior.

Eighteen participants mentioned that their saxophone teachers **approached** the topic of body movement in classes (all for technical correction purposes; 15 also including body expression directives), compared to only two participants who stated teachers **never discussed** it:

“Most of my teachers never approached the topic of movement . . . hum, no. None, none approached the topic of movement. I think some . . . talked more about expressiveness, and not technique, and by talking about expressiveness, maybe, one by seeing what the others do . . . So, never talked about, only observed. (P3)”

Regarding technical correction, nine participants were warned not to move excessively to ensure efficiency in breathing and fingering; eight received indications to correct their posture (stabilize feet at the distance of the shoulders, flex knees slightly, avoid shoulder elevation), and one had injury prevention exercises included in lessons. Multiple participants mentioned being regularly instructed to maintain good posture, but no specific feedback was provided. Regarding body expression, only four participants mentioned it was first approached during their secondary-level studies, while the others reported learning about it only at the university. The following instructions were communicated by the teachers: to correct “anti-musical movements,” either because they considered students were moving excessively or minimally in relation to the music performed; to use movements to make the performance more interesting to the audience; to move naturally; and to encompass the musical intention when communicating an entrance.

Participants further described situations where teachers **encouraged** and **discouraged** performative movements. Generally, teachers encouraged movements that “go along with the musical idea,” warning students whenever they were too strict or static while performing and imposing boundaries on exaggerated movements. Specifically, they encouraged participants to keep stable foot positioning, lightly flex knees, be active when communicating with co-musicians, emphasize accents with the body, and look for a relaxed posture when attacking low notes. In opposition, teachers discouraged exaggerated movements, either because they “disturb technical skills, music production (P5)” or because they overlap the Music itself, making performances confusing: “There was an alert when there was an exaggeration . . . more movement than sound, sometimes (P2).” In these cases, participants reported being advised not to elevate shoulders, stretch knees and tap or lift feet.

Finally, six participants identified a **modeling pattern** between students and teachers, with four reporting to have copied movements from their teacher at some point and two pointing out that students of the same teacher usually present similar behaviors.

Experience as Teachers

Experience as Teachers originated three codes: strategies to approach body movement, encouraged body movements and discouraged body movements. Only participants with previous teaching experience contributed to this theme.

Eleven participants described their **pedagogical practices involving body movement** in saxophone classes.

Regarding technical correction, four participants mentioned being attentive to the students' posture, correcting the shoulder, arm, and foot positioning, and ensuring that the saxophone's height is appropriate, consequently avoiding curling the neck. Two participants further advised students to contain movement in demanding passages. Regarding body expression, six participants mentioned first letting students develop their body language naturally and then intervening to shape it according to the piece. One participant mentioned that he does not address this topic because it is too personal. To work on body expression, participants promote exercises of playing by memory, dancing, and walking to the music; introduce pieces with movement indications; and advise students to watch videos and go to concerts. Two participants reported that in initial levels of learning, they prioritized postural concerns, whereas one reported integrating the concept of musical movement from the beginning, although it is sometimes challenging.

Six participants reported **encouraging** movements following the music, analyzing musical features, and discussing the adequacy of movement styles to the musical ideas with the students. They further described that when students are too static, they motivate them to move and show their personality. In opposition, three participants mentioned **discouraging** excessive movements detrimental to the performance and movements reflecting an opposite message to the musical content.

Integration in Instrumental Curricula

All participants considered it "important" to include body movement in the instrumental curricula, emphasizing that little knowledge is available in the specific case of the saxophone ["... there is a lack of research in my instrument. (P11)"] and that looking back, they identify vulnerabilities about the topic in their development [{"Sometimes we feel there are things that fail in our journey, and I think it would have been extremely positive... and benefic for me to have heard about this... this relationship between music and movement. (P17)"}]. One participant mentioned how it becomes even more critical for students pursuing a career in the field.

Thirteen participants provided additional suggestions about how to perform this integration. As an independent discipline, they proposed it included a component directed to musicians' health (including topics like anatomy and injury prevention) and a more expressive component, including theatre, dance, and movement exercises with and without the instrument. One participant added that it would be interesting to include this

discipline in elementary learning levels, as it would allow for correcting bad habits that usually carry on for years. Two participants cautioned that the approach to this topic should never aim to standardize movement among musicians.

IMPACT ON PERFORMANCE

On Performers

This sub-theme generated three codes: integration in individual study, facilitative functions, and incorrect movements.

Six participants stated that they study body movement when **practicing**, seven stated they do not, and seven stated that they do it sometimes (depending on the repertoire or whether they must execute communicative gestures to co-performers). The following strategies were described when asked about how this integration is accomplished: video recording and analysis; studying with a mirror; and developing a stage persona, its character, and movements, according to the piece, from early on.

All participants agreed that movement could play a **facilitative role** when employed effectively, underlining the importance of good posture as the basis for all movements. The following model posture was defined: the lower body assures balance and stability by placing the feet slightly apart, not moving them much, and keeping the knees unlocked and slightly flexed (the "monkey position"). In the upper body, one should keep the back straight and shoulders relaxed, adjust the height of the instrument, and ensure the arms have control over it. This posture should be individually adapted, ensuring comfort and avoiding muscular tension.

Participants further described the role of movements in aiding sound emission, communication, expressiveness, phrasing, and rhythmical perception. In sound emission, seven participants stated that opening the chest and lifting the saxophone helps amplify sound projection, and six participants reported flexing their knees and trunk and increasing finger pressure to emit low notes. However, two contradicted those beliefs and reported keeping a regular posture. In communication, 10 participants discussed the relevance of developing clear gestures for inter-performer coordination (i.e., giving entrances, cutting the ending of phrases), although no specific guideline was provided. Five participants referred to the fact that without movement, they would not be able to express themselves fully and that matching movements to the phrasing of the music helps to guide their interpretation: "Usually it helps me to lift the instrument, or even draw a line... like a guiding line

with the instrument. (P2).” Nevertheless, one participant considered that restricting movement helps focus on the phrasing: “When I cut off movement, it makes me think better about the phrasing, because sometimes movement can mislead us, in the sense that we cut each phrase . . . (P15).” Finally, five participants described executing minimal movements (i.e., with the wrist or head) to count or subdivide *tempos* and synchronizing the overall movement with the pulse to aid its perception.

Some movements were identified as **incorrect** by the participants: shoulder elevation, as it incites tension and prejudices breathing; head nods and other gestures potentially compromising the embouchure; excessive arm movement, as it interferes with fingering; keeping the knees locked and extended; exaggerated posterior flexion of the trunk can cause injuries); repetitive circular movements considered tiring and arbitrary; lifting the feet can cause postural instability. Moreover, they reinforced that any movement that interferes with proper execution or goes against the organics of the music should be corrected.

On Audience

This sub-theme developed four codes: positive impact, negative impact, types of audience, and other visual components.

Regarding **positive impact**, 16 participants agreed that body movement has a preponderant role in audience engagement. By matching movements to the music, musicians enable audiences to better understand the pieces’ structural and emotional components. Further, they recognized body movement as a way to establish meaningful connections with the observers, especially on instruments where the face cannot be used to convey expression, such as the saxophone. Two participants added that combining auditory and visual stimuli is essential to redesigning the model of classical concerts and motivating people to attend them instead of consuming recordings only. From a different perspective, six participants mentioned that body language is vital in conveying professionalism and confidence to the observers. Two participants added that they had participated in contests where the jury considered body movement in their evaluation:

“I was recently in a contest . . . hum . . . and the . . . the guy who won the first prize, hum, played very well, and then, of course, I asked the jury what their suggestions were, and . . . essentially, they told me his victory was because his attitude on stage leaves no doubts. (. . .) That his attitude and his movements leave no doubt to the audience, to the

jury, because they’re confident . . . you simply look and see a professional, a soloist . . . (P15)”

Regarding the **negative impact** on audiences, 17 participants described situations where movement can be unfavorable, acting as a distractor and tiring those watching. Seven participants mentioned that exaggerated movement generally distracts people from the sound, which should be the focus of attention. Six participants discussed that when movements do not accompany the music, they become confusing to the audience and are easily perceived as wrong:

“I’m listening to a musician, and it’s making me tremendously confused, because the message he’s delivering, in sound, is completely different from the message of the body. I close my eyes and enjoy much more the concert and . . . then when I open my eyes, I get a bit disappointed. (P2)”

One participant added that co-performers presenting distinct movement styles on stage might also induce negative impressions. Constantly moving the shoulder and arm and circling the bell were pointed out as distracting gestures by three participants. Additionally, for seven participants, musicians who remain static or move minimally translate as “boring and academic (P15),” “passive (P19)” or “not even making an effort (P14),” and are unable to convey emotion even if they are playing beautifully.

Regarding **types of audience**, eight participants believed that nonmusicians are more easily influenced by body movement and tend to prefer performers who move more, as people with music instruction pay more attention to the sound. However, one participant stated that that was the most obvious observation and that he had had contact with professional musicians who valued movement. Lastly, two **other factors**, “dress code (P5)” and “visual contact (P11, P20),” were also mentioned as visual influencers of audience perception.

Other Conceptual Beliefs

Other conceptual beliefs comprise general beliefs about the impact of body movement, consistently appearing in participants’ discourse.

All participants considered that body movement influences performance quality and can play an active role in its enhancement [“What I understood later was that body movement is directly related to the more musical part of many people (. . .) and if that part is stopped, the other is automatically stopped too. (P13)”] or deterioration [“It’s important to have conscience about what we do, because some movement may prejudice some technical part and we don’t know why, and

it can help to have knowledge and consciousness that some movement causes a musical effect (P3)"]. Nevertheless, 18 participants said that in several moments, particularly in the context of performance, movement becomes “spontaneous” or “automatic.” They consider that, like other playing dimensions, it should be addressed during practice to become organically integrated into the performance. The most recurrent considerations reported about movement were: movement rises from the musical language, so it should always be in accordance with it; “Less is more,” as musicians should seek an easy, natural body language to convey their intentions, avoiding unnecessary overstatements; movement is individual, therefore, all indications should be adapted to the characteristics of the performer, and other possibilities are acceptable, depending on one’s conceptions. Finally, seven participants mentioned that more than considering movement beneficial for themselves, performers must consider who attends their concerts and integrate the visuals into their concert model as an engagement strategy.

Discussion

In this interview study, we investigated the perspectives of experienced saxophone players toward performative body movement. Based on the qualitative impressions of the performers, we aimed to identify factors influencing body movement, understand how body movement is approached in pedagogical contexts, and understand how movements can affect performance quality. We divided the discussion into three main topics, each related to one overarching theme from the Results section.

MUSICAL FEATURES AS PREPONDERANT INFLUENCERS OF BODY MOVEMENT

Musical Features significantly outstood *Physical*, *Psychological*, and *Previous Experiences* in the number of mentions, suggesting that musical characteristics constitute the main influencing factor on participants’ body movements. According to embodied music cognition theories, the human body mediates meaning formation during music performance and perception (Godøy & Leman, 2010; Leman, 2008, 2016; Leman & Maes, 2014; Lesaffre et al., 2017). Multiple studies establishing relationships between expressive gestures and musical intentions support that performers rely on sensorimotor mechanisms to encode expression into sound (Demos et al., 2017; Desmet et al., 2012; Leman & Maes, 2014; Massie-Laberge et al., 2019; Thompson & Luck, 2012; Visi et al., 2020). Further, clarinet (Wanderley et al.,

2005) and piano (Massie-Laberge et al., 2019; Thompson & Luck, 2012) players commented that musical characteristics influence their movement patterns.

However, this finding should be interpreted carefully. First, since we were discussing music performance, it is natural that participants were more inclined toward reflecting on the effects of music-related features, which are conceptually common to all performers and visible in performative contexts. In contrast, the other factors (i.e., personality traits or pedagogical references) are more personal and difficult to grasp from an audience perspective. For instance, we can observe a musician vigorously lift the instrument in a resolution passage, but we cannot infer whether this movement was modeled after his/her teacher. Second, while the other factors contribute to the performer’s personal movement style, musical features constantly change in and between performances, leading the same performer to behave differently. Hence, one performer has more content to expand on musical characteristics, while other factors can be delimited straightforwardly. Finally, the interviews started with a music analysis task and comprised several music-related questions (see Appendix A), which likely contributed to an increase in the number of musical features’ mentions compared to other factors.

Our findings reinforce that musical features are preponderant influencers of musicians’ movement. Nonetheless, previous experiences, physical, and psychological factors should be explored in greater depth to produce a fair comparison, especially given the few studies found covering these topics. Regarding physical factors, most participants reported temporary or chronic injuries that conditioned their movements. In the study by Shanoff and colleagues (2019), 76% of the enquired saxophone players suffered playing-related injuries. However, most studies on injury prevalence concern orchestral musicians, not saxophone players (Ackermann et al., 2014; Kenny et al., 2014). Additionally, multiple psychological factors (i.e., motivation, anxiety) and previous experiences discussed by the participants have been extensively studied in music performance and pedagogy literature (Creech et al., 2021; McPherson, 2022; Parncutt & McPherson, 2002; Rink, 2002; Williamon, 2004), but are not yet associated with body movement.

Next, we discuss the conscious behaviors reported by the participants for specific musical contexts. The most mentioned musical features were **musical character** and **dynamics**. Sandgren (2019) found that instrumentalists related expressivity to dynamics and musical ideas, whereas vocalists prioritized timbre and emotions. Moreover, performers relate expressivity to body movement (Davidson, 1993, 1994). Our results align with the

previous, adding that instrumentalists, like vocalists, regard music's emotional character primarily. Participants associated low arousal musical characters (i.e., calm) with less motion, longer and wider movements, and closed postures. High arousal characters (i.e., energetic) were associated with increased motion and shorter, faster gestures. These descriptions match previous findings where sadness was kinematically associated with low activity and smoothness in the movements of musicians (Dahl & Friberg, 2007), dancers (Camurri et al., 2003), and listeners moving to music (Burger & Toiviainen, 2013, 2020a). Contrarily, happiness was associated with active movement covering large areas and high acceleration (Burger & Toiviainen, 2020a; Dahl & Friberg, 2007).

Regarding dynamics, participants associated *fortes* with ampler movements, including opening the chest and lifting the bell, whereas *pianos* were linked to low amounts of movement and knee flexion. Contradicting these findings, Nusseck and colleagues (2022) found that clarinet players increased dynamics at maximal knee flexion. Nevertheless, in the same study, another group of clarinet players increased dynamics when playing with arms raised compared to arms close to the torso. This finding is closer to ours, given that saxophone players reported lifting the bell and opening the chest in *fortes*, behaviors implying arm movement. Clarinet players also execute bell gestures when reaching higher dynamics (Teixeira et al., 2014).

The discussion about **articulation** was mainly related to accents eliciting jerky gestures (i.e., head nods and saxophone movements). Impulsive gestures—sudden tension-relaxation movement patterns—have been linked to accentuated staccato notes and beat tracking in performers and listeners (Dahl et al., 2010; Jensenius et al., 2010; Papageorgiou, 2012). **Structure** was also discussed, with participants describing moving according to the phrasing and intentionally emphasizing climaxes and resolutions with bell gestures. Concomitantly, studies have found that the swaying (Demos et al., 2017), bell motion (Teixeira et al., 2014), and knee flexion (Moura et al., 2023; Nusseck et al., 2022) of wind instrumentalists reflected melodic phrasing. Increased nontechnical gesturing has been identified in expressive locations (Buck et al., 2013; Davidson, 2007, 2012; Thompson & Luck, 2012), intentional phrasing targets of the musician (Desmet et al., 2012), and cadential resolutions (Buck et al., 2013; Chander et al., 2022; Juchniewicz, 2008; MacRitchie et al., 2013; Teixeira et al., 2014).

Regarding **rhythm**, participants discussed the relationship between *tempo* and velocity of movement and

reported moving strategically following the beat and rhythmical structures to improve rhythmical perception, in line with studies documenting tempo-variant body behavior (Coorevits et al., 2019) and gesture repetition in similar rhythmical structures (Buck et al., 2013; MacRitchie et al., 2013; Wanderley et al., 2005). Similarly, participants corroborated the need to restrict movements in locations of **technical complexity** for effective execution (Massie-Laberge et al., 2019; Nusseck & Wanderley, 2009; Wanderley et al., 2005) and the association between the height of the **pitch** and that of the body (i.e., knees extend when reaching higher notes; Davidson, 2012; Nusseck et al., 2022). Additionally, participants felt more inhibited to move when playing classical music, compared to lighter **music genres**. To our knowledge, no empirical studies have compared movement profiles across contrasting musical genres in performers. In listeners, electronic dance music (Burger & Toiviainen, 2020b; Gonzalez-Sanchez et al., 2018) and groovy music (Dotov et al., 2021; Witek et al., 2014) elicit a greater urge to move. Nevertheless, this tendency seems to be more related to the underlying rhythmical structure more than the genre itself (Burger & Toiviainen, 2020b; Dotov et al., 2021; Gonzalez-Sanchez et al., 2018; Witek et al., 2014). Lastly, participants mentioned that **ensemble** playing requires movement style adaptation for homogenization and communication, which aligns with previous research validating the role of gestures in joint synchronization (Bishop & Goebel, 2018; Chang et al., 2017; Coorevits et al., 2020) and expression (Chang et al., 2019).

In summary, despite not following academic literature, most participants' perceptions of how musical features shape body movements were consistent with scientific knowledge. We also identified that the same gestures regularly overlapped contexts, demonstrating the latent complexity and flexibility of gesture-making (Davidson, 2007, 2012). Another interesting point is the hierarchy of these influencing sub-factors: some participants mentioned that musical character and dynamics were the most significant aspects, after which others were adapted; similarly, movement variations are more likely to depend on rhythmical structures than musical genres. Further research is needed to understand if certain musical characteristics, or combinations, have a preponderant influence on gesture-making.

PEDAGOGICAL IMPLICATIONS AND DIRECTIONS TOWARD BODY MOVEMENT TEACHING AND LEARNING

Ninety percent of the participants' instrument teachers approached the topic of body movement during their pedagogical background. This result suggests that the

current generation of professional saxophone players has been more sensitized toward the importance of body awareness than prior generations. In previous studies, musicians described that teachers paid reduced attention to body movement (Wanderley et al., 2005), and music educators discussed that incorrect pedagogical practices related to movement are often promoted due to the absence of interest and knowledge (Shoebridge et al., 2017). Nevertheless, contemporary educators recognize the need for anatomical knowledge (Norton et al., 2019) and deliberately implement motor acquisition strategies during lessons (Michaiko et al., 2022; Shoebridge et al., 2017). In concordance with these findings, our study's teacher participants reported including movement instructions in their classes. However, these are mostly based on personal experiences, given the absence of saxophone-specific guidelines. We propose that a shift in the pedagogical paradigm is now occurring, with instrumental teachers realizing the need for movement education but lacking specific resources and directives.

Parallel pedagogical practices were found between the participants and their teachers. Regarding technique, both groups recommended that students avoid excessive movement to assure technical efficiency, in line with previous reports (Caterina et al., 2004; Wanderley et al., 2005). Furthermore, they praised keeping a good playing posture: stable feet at shoulder distance, knees slightly flexed, and relaxed shoulders. The optimal posture for musicians is defined as a stable body alignment with a balanced base of support, enabling mobile limbs, consequently ensuring efficiency and coordination, and reducing tension and effort (Blanco-Piñero et al., 2015; Brockman et al., 1992; Shoebridge et al., 2017). These instructions may inspire further biomechanical studies investigating the postural requirements of saxophone playing. Regarding body expression, the main directive between groups was to move according to the music, finding a balance between being too static and too exaggerated. However, while the participants' teachers mostly focused on controlling "anti-musical" movements, the participants reported updated approaches, including implementing movement exercises to increase physical engagement with the music and promoting active discussion about movement styles. Analogously, violin and drum teachers implemented motor skill acquisition strategies (i.e., rhythmical games) in their lessons (Michaiko et al., 2022). In addition, the stimulation of reflection in one-to-one lessons has been a focus of interest as it transforms traditional practices by encouraging pupils' autonomy and agency over learning processes (Carey et al., 2017, 2018). We

hypothesize that the generational differences in pedagogical practices are linked to the improved educational qualifications of our participants when compared to their former teachers.

The educational stage at which body expression should be addressed was also discussed, with most participants having never worked in expressive movement until reaching higher studies. Nevertheless, although participants recognized that postural correction should be the priority in early learning, unlike their former teachers, they tackled music-related movement with their students at the primary and basic education levels. Participants also emphasized the importance of including body awareness in instrumental curricula as a regular subject with health and creative goals. These findings reinforce that the current generation of saxophone teachers, like other instrument educators nowadays (Davidson & Broughton, 2022; Norton et al., 2019; Shoebridge et al., 2017), recognizes the need to promote body awareness.

DUAL ROLE OF MOVEMENT: FROM SUPPORTING PERFORMANCE EXECUTION TO ENHANCING CONCERT EXPERIENCE

Participants described the impact of body movement on performance as bidimensional: on one side, it influences the performer's technical and interpretative execution, while on the other, it is fundamental to audience engagement and understanding. From the **performer's perspective**, participants expanded on the facilitative functions underlying certain body movements regarding sound emission, communication, expressiveness, phrasing, and rhythmical perception. It is well-established that some ancillary movements support sound-producing ones (Jensenius et al., 2010). Our participants' statements match studies associating ancillary movements with tempo perception improvement (Massie-Laberge et al., 2019; Thompson & Luck, 2012; Wanderley et al., 2005) and dynamics and higher register notes facilitation of execution (Bejjani & Halpern, 1989; Nusseck et al., 2022). Coorevits and colleagues (2020) found that restricting movements had a detrimental effect on joint timing and synchronization. Additionally, the behaviors described by the participants can be used to develop research assessing the effect of particular gestures on saxophone playing and further validate them as pedagogical guidelines. The participants also identified harmful performative movements that interfere with embouchure (head nods), fingering (excessive arm movements), or postural stability (elevated shoulders, overly extended knees and stretched back, foot lifts). Forward head position, elevated shoulders, and a rounded and inwardly curved back are

some of the most common postural disorders among saxophone players (Shanoff et al., 2019) and musicians in general (for a review, see Blanco-Piñero et al., 2017). The importance of grounding and foot positioning is also emphasized in the literature (Blanco-Piñero et al., 2015; Shoebridge et al., 2017; Wanderley et al., 2005).

Second, participants described how body movements influence the **audience's perspective**. When matched with the music, movement engages observers and aids their perception of structural elements. It also conveys confidence and professionalism, even in evaluation contexts. In opposition, participants claimed movement could be distracting and confusing when contrary to the music or exaggerated (i.e., constant shoulder and arm movements, bell circles) and boring when minimal. Studies have shown that expressive movement enhances expressivity ratings when compared to low or no movement (Bugaj et al., 2019; Moura et al., 2023; Nápoles et al., 2022) and that visual cues alone are enough to recognize expressive and emotional intentions in music performances (Dahl & Friberg, 2007; Vines et al., 2011). Further, gestures can influence the perceived tone duration (Schutz, 2008) or interval sizes (Laeng et al., 2021). Shortly, participants agreed that body movements are undoubtedly an important source of information in music performance perception. However, some of the participants' descriptions were quite general, suggesting they are unaware of how they move on a detailed level or that movement is automatic, similar to what was reported by clarinet players (Wanderley et al., 2005). Additionally, participants considered that nonmusicians value more body movements due to their lack of skills to evaluate the sonic outcomes, although multiple studies have reported comparable ratings of expressivity and quality between musicians and nonmusicians (Nápoles et al., 2022; Silveira, 2014; Tsay, 2013; Vines et al., 2011).

To conclude, all participants acknowledged that body movements might play an empowering or detrimental role in performance, and 65% reported considering their body movements when studying. They conceptualize movement as individual and trainable, although it becomes spontaneous during the performance. Our findings validate the increasing awareness of musicians about the impact of body movements on performance quality and their willingness to reinvent the traditional classical concert model through multimodal integration.

LIMITATIONS

Our main limitation is that performance data was not included in this analysis. This study is part of a larger project focused on the influence of ancillary gestures in saxophone performance, involving multimodal data

collections. Before the interviews, the participants had participated in a series of motion capture recording sessions, from which movement analyses were developed (Moura et al., 2022, 2023). Nonetheless, given the range of relevant topics covered in the interviews, impossible to directly relate to motion data, we decided to present this data separately. It would be interesting to design a study allowing for a fair comparison between the performers' reflections and their behavior, for example, by including a video analysis task.

Second, our findings are based on a relatively small sample of classical saxophone players framed in the context of the Western/European instrumentalist career tradition. Thus, they are only generalizable to a limited extent. Although we tried to compensate for this limitation by selecting participants with differentiated academic and performative backgrounds, including five countries, research involving wider samples and contrasting contexts is encouraged.

Conclusion

This exploratory study provided insights into professional and pre-professional saxophone players' conceptions, beliefs, and previous experiences regarding body movement. We provide information on the strategies experts use to improve motor and expressive skills by investigating the participants' performative and pedagogical practices, the factors that influence movement, and the impact of movements on performance quality. Our findings can inspire changes to current instructional methods and the development of intervention programs. Furthermore, the participants' doubts and difficulties can be translated into future research questions.

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The raw data used in this study can be made available by the authors upon reasonable request, under the reservation that the anonymity of the participants is granted.

Correspondence concerning this article should be addressed to Nádia Moura, Research Centre in Science and Technology of the Arts, Universidade Católica Portuguesa, 4169-005 Porto, Portugal. E-mail: nmoura@ucp.pt

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