

Face-making: task-specific facial tensions and grimacing in musicians

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I have been told that my facial expressions while playing are quite pronounced, and numerous audience members have asked me what in the world I am saying to myself as I play. In the act of practicing or performing, I am totally unconscious of any of this: I had to be asked and told, and to watch myself on video, to realise it was happening. It really does look as if I'm having a lively conversation with myself. Curtis Lindsay, pianist: blog at Quora.com. 11 June 2015

At a piano recital in a London concert hall, MS, seated on the right side of the auditorium, fairly far forward, was able to view the face and upper body of the pianist across the top of the Steinway concert grand piano. The performer, as usual, was seated right side-on to the audience. The performance, of a difficult programme that included works from the 18th and 20th centuries, was exceptional, technically near-perfect, emotionally expressive, with brilliance in tonality and colour. However, it was marred by the pianist's florid, distracting facial movements, evident throughout the performance, even during a closing encore. Here, we consider the nosology of these performance-associated extraneous facial movements.

The Facial Mannerisms: 'Face-Making' During the performance the pianist displayed brief pursing movements of the lips, intermittent furrowing of the brow, forceful lateral and twisting movements of mouth and face, snarling expressions, a minor degree of tongue protrusion, darting eye movements to both sides, head retraction, elevation of the shoulders, forceful intakes of breath and, less frequently, a maintained posture of leaning backward away from the keyboard. The pianist's legs seemed unaffected. There were no associated vocalisations. The facial movements appeared during every piece of music, commencing at the onset of each piece, but not evident before or immediately after the performance. During the performer's walk across the stage towards the pianoforte, when standing to receive tumultuous applause, or when leaving the stage, there were no facial mannerisms or inappropriate gestures. The pianist was an early career professional, already much admired. An internet search for biographical details revealed no evidence of declared neuropsychiatric disorder.

Facial And Bodily Gesturing In Professional Pianists And Other Musicians

There are many videos of professional pianists available on the internet.¹ Review of videos of 22 contemporary classical pianists showed that over half displayed accompanying movements of trunk, head and neck, and arms but, less often, grimacing facial, eyelid and mouth movements. Perhaps unsurprisingly, these videos in general avoid full-face images of pianists with facial tensions and grimaces. A free play of emotionally expressive facial grimacing movement during performance is more evident and more frequent in contemporary pianists than in videos of the virtuoso pianists of the past, in whom such 'face-making' a term introduced by the music teacher, Daniel Kazez, was rare.² Other musicians, especially string players and rock guitarists, may be similarly affected.^{2,3} YouTube videos of Herbert von Karajan (1908–1989), the revered Austrian conductor of the Berlin Philharmonic Orchestra, show that while conducting he developed rather similar facial spasms, especially during periods of tension in the music. We separate emotionally expressive body and head posturing in musicians from formless, 'face-making' grimacing.²

A Contextual Understanding

Involuntary grimacing and facial tension rarely receives comment in contemporary reviews of musical performances. It is notable that in his three collected volumes of music criticism spanning

>50 years from the 1890s George Bernard Shaw (1856–1950) does not mention any such distraction to his musical experience,⁴ although he was characteristically forthright in his comments on other aspects of the London and European musical scenes of his day. However, in 2008 a musical correspondent for the New York Times, referring to florid postural accompaniments of performance, not facial grimacing, bemoaned with some force that 'these histrionics in performance undermine the music and the pianist',⁵ commenting that it seemed to have become American conservatory practice to accept such movements as facilitating emotional expression in performance. Behavioural and motor eccentricities have become almost a trademark characteristic among some professional pianists, for example, Glenn Gould and Lang Lang.¹ Glenn Gould famously sat in a crouched, flexed, posture, counted beats with lips and mouth (sometimes aloud) and often hummed to the music he was playing. He was inclined to raise one arm and gesture in time with the time signature he was recalling.⁶ To some it seemed as if he was acting

out the music he was playing with such extraordinary finesse, but the rather different jerky facial grimaces and mouth movements that he also developed irritated other concert-goers.⁶ Davidson⁷ studied facial, upper body and arm postures in videos of Lang Lang playing and concluded that his adventitious movements served to reinforce emotional expressivity in performance, and that his facial movements and postures could be linked to perceptual cues within the music itself. Review of Lang Lang's videos on YouTube reveals florid and ecstatic facial and bodily gestures but there were none of the face-making mannerisms observed in the pianist described here.¹ While the ecstatic bodily and arm gestures and heaven-ward gaze exhibited by some contemporary pianists may be considered part of their performance persona, serving to enhance their emotional relationship with the audience, it cannot be argued that they are a necessary component of pianistic skill, even at the extraordinary level of the virtuoso performer, who may strike the piano keys at rates approaching 30/s.⁸ Moreover, emotionally driven bodily movements are rather different from the automatic, task-specific face-making grimaces and tensions, beginning from the onset of performance, which we describe here, and seen in a video of Alfred Brendel.¹

Among an older generation of classically trained virtuoso pianists, such as Ignaz Paderewski (1884–1969), Wilhelm Backhaus (1884–1969), Vladimir Horowitz (1903–1989) and Tatiana Nikolayeva (1924–1993), all of whom have performances available to view on YouTube, body posture is erect, yet comfortable, without extraneous or unnecessary arm movements. The head and neck are held steady, and there are no extraneous movements of the face. Indeed, so impassive was Wilhelm Kempff that he was once described as 'Wilhelm Kempff listening to Wilhelm Kempff playing'.⁵ In the past, bodily and facial mannerisms were derided and music teachers strove to eradicate them.⁹ For performers of a previous generation, such as Artur Schnabel (1887–1982), a perfectly maintained posture and attitude at the piano was expected. MacDonald Critchley,¹⁰ writing in 1977, referred to Carl Flesch's (1873–1944) account of violin teaching in support of his personal distaste for 'audible gestures, habit spasms, facial grimaces, nervous tics and tapping feet during concert performances' and opined that such movements 'would not be tolerated today'. However, in some musical genres, for example, rock guitar players, facial and bodily contortions are often incorporated into the performance, perhaps enhancing its intensity. Critchley thought that 'facial tics might start as mere bad habits', but commented that they were usually considered as unconscious and uncontrollable.¹⁰ In his memoir of a life spent teaching and performing, Flesch, like Shaw, does not comment on facial tensions and grimaces in musicians, especially string players, during his era of musical experience.¹¹ We comment that Critchley was using the word 'tic' in a somewhat different manner from modern practice.

Kazez² considered face-making movements 'silly and unprofessional' noting that they caused the audience to be 'distracted' and 'almost certain to be disturbed'. He concluded that 'face-making' seemed usually to commence intentionally but, if persistent, could become an involuntary habit that was difficult to eliminate, even with postural feedback therapy. He noted the onset of the habit during learning the intricacies of instrumental technique, although he was puzzled by its continuance in advanced students while playing comparatively simple musical scores. He cited AA Babynchuk, a distinguished 20th century teacher of the violin and viola, who said 'in the early stages of training these mannerisms are reflexive since they automatically appear whenever technical difficulties appear, but they become habitual after years of use, and will appear even when no technical difficulties are experienced'. This perceptive observation suggests that facial tensions and grimaces arise in a parallel pathway in the course of difficult motor learning and are then non-volitionally co-recruited with the musical task. Small facial movements during performance, such as those exhibited by Martha Argerich and Yuja Wang, who move their lips during piano playing as if they are whispering,^{1 12} are considered as constituting a form of non-verbal signalling, rather than involuntary interposed movements.^{12 13} However, the face-making mannerisms of other top-ranked pianists resemble the striking facial mannerisms of children and adolescents struggling to learn complex skills involving manual or bimanual coordination, as in learning to write, in that they are seen only during performance of such highly coordinated motor tasks.¹⁴ We do not consider face-making a 'functional movement disorder' or a conversion disorder,¹⁵ but, recognising research on facial expressions during intense emotional situations, as a complex or learnt series of facial actions with multiple causes and consequences.¹⁶

The Distinction from Tics

Tics are sudden, brief (<100 ms) repetitive, purposeless muscle jerks that have a predilection for the face, head and neck and begin in childhood, with a male preponderance.¹⁴ They differ from normal gestures in that they are exaggerated and stereotyped and convey no interpretable non-verbal messages. They may appear in bouts and clusters and may migrate over time. An attempt at voluntary suppression of a tic leads to a build-up of inner tension which is only relieved by execution of the abnormal movement. More complex tics can be considered emblematic, aggressive or sexual displays. In contrast to the facial tensions and grimaces described here in high-level musicians, tics are aggravated by specific stressful situations and by boredom and are attenuated during purposeful activity such as playing a musical instrument or engaging in sport. They are usually considered as abnormal movements occurring in response to an involuntary sensory urge or impulse. For example, facial tics were observed in 35% of singers in a German boys' choir during an important and perhaps stressful

performance, but only before the concert and in the interludes between singing.¹⁷

David Helfgott, the Australian pianist featured in the movie ‘Shine’, who has suffered mental health problems, grunts, mutters, sings and talks to himself very loudly during a performance and exhibits a number of motor stereotypies.¹⁸ Nick van Bloss,¹⁹ a classical pianist who has had motor and vocal tics since the age of 7 and was diagnosed with Gilles de la Tourette syndrome at age 21 has written that:

As soon as I touched the keys, my tics went away. Everything that the piano gave me was satisfying my Tourette’s. It was almost ecstatic. I would always be thinking of music and dying to get to the piano, to place my fingers on the keys and just have a feeling of absolute, tactile delight. Now, as then, those 88 keys still implore me to touch them.

He also told one of us (AJL) that he saw his tics as an energy that he could harness when playing the piano. In the BBC Horizon programme made about his life, ‘Mad but Glad’, it is evident that as soon as he begins to play the piano his tics and vocalisations markedly attenuate, but return as soon as he finishes a recital. People with Gilles de la Tourette syndrome are often drawn to music, which they find calming and above all organising. It is intriguing to speculate whether the ticqueur’s sense of mimicry, innate compulsiveness and appreciation of repetitive rhythms may be innate qualities that draw them to music. Bodeck *et al*²⁰ studied the impact of musical activity in 29 ticqueurs and found a significant reduction in tic frequency during musical performance. They also found that both listening to music and mental imagery of musical performance could reduce tics but to a lesser extent. The suppressive effect of drum circles on tic frequency is widely known among people with Gilles de la Tourette syndrome. Clearly, tics in Tourette syndrome differ from the face-making mannerisms that occur in musicians, who are persons without neurological disease. The face-making described here is also very different from the potentially career-destroying occupational cramps than afflict some musicians.²¹

Discussion

Musical task-related facial tensions and grimaces—‘face-making’—as described here in concert pianists² also occur in other musicians, for example, classical string players, jazz pianists and Indian classical performers. Elsdon²² studied the jazz pianist Keith Jarrett and suggested that his head shakes and twitches seemed to be acted out melodies. Jarrett himself explained this as: ‘*Anybody in their right mind would try to find an outlet somewhere, so you know, like, if something’s really happening, the passion just takes over*’. Milt Buckner, Errol Garner, Bud Powell, Oscar Peterson and Thelonius Monk all muttered, moaned and grunted along to their solos. Playing an instrument activates those areas of the brain which are involved in the *syntactic* aspects of language processing, while suppressing some areas identified with the *semantics* of language. Emotionally driven bodily movements and postures may serve to convey the pianist’s emotional state to the audience. They are an external sign of passion generated by performance of the music and, as such, they can add to the experience of attending a concert. However, the specifically task-related, facial mannerisms of face-making seen in some performers do not obviously convey emotion. When these mannerisms become intrusive, however, as also with excessive gesturing during oratory, they distract the listener’s mental concentration and appreciation of the music.^{2 10}

During rapid learned movement sequences, as in piano performance, propriospinal efferents in the upper motor neuron pathway to the cervical motor centres for upper limb movement are activated.⁸ We suggest that face-making in pianists and string players results from co-recruitment of associated motor pathways, probably through the propriospinal motor system. These facial spasms are phenomenologically distinct from tics and also from the bodily expression of emotion often exhibited by professional musicians.^{12 13 23} Musician’s face-making does not resemble human orgasmic facial expressions.²⁴ It is strictly task-related and involuntary and is not associated with neuropsychiatric disorder.²³ Although these co-recruited facial mannerisms are not of pathological significance, as overflow motor phenomena they offer potential neurophysiological insights into interactions between emotional expression, motor learning and motor performance.¹⁶

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