# Revealing Sonic Wisdom in the Works of Cat Hope

SAM MCAULIFFE and CAT HOPE

Sir Zelman Cowen School of Music, Monash University, Victoria, Australia
Emails: samuel.mcauliffe@monash.edu; cat.hope@monash.edu

**There are many ways in which wisdom pervades artistic discourse. It is only recently, however, that a concerted effort has been made to understand the wisdom embodied in music. Drawing from the literal translation of phonosophy, this article attempts to unveil what might be described as *sonic wisdom* from a composer's perspective, derived from an interview between Australian philosopher Samuel McAuliffe and composer Cat Hope. Hope's notational practice challenges the hierarchies established by common practice notation, resulting in her contemporary art music being accessible to a wider range of performers, including those that do not read any music notations. Engagement with Hope's notation leads to a revealing and transfer of a different kind of sonic wisdom than found in more traditionally notated works, in a process facilitated by technologies and articulated through musicianship.**

## 1. INTRODUCTION

Cat Hope is an Australian composer, sound artist, musician and researcher. It could be argued her music practice attempts to address issues of hierarchy and segregation that arise with respect to the somewhat alienating character of Western notation, which limits the accessibility of notated works to those proficient in reading what is often complex notation. This article highlights how Hope addresses these issues in her work, and why grappling with such issues has led to a certain re-thinking of the dominant paradigms of Western notation. These issues of hierarchy and segregation include situations where musicians may find themselves relegated to particular roles, disciplines and traditions due to the way Western art music has siloed itself through increasingly complex notation systems and institutional organisation.

Hope's notational practice enables her to eradicate certain hierarchies whilst putting in place new ones, revealing new ways of thinking about and making music. McAuliffe undertook a semi-structured interview with Hope that allowed the theme to be teased out through a back and forth between interviewer and interviewee. After the initial interview, the task of posing, interrogating and answering some of the more complex questions that arose through the interview process was a collaborative effort. Quotations from the original interview are presented in the text.

## 2. SETTING THE TONE

Hope's compositional practice engages with many tropes of the classical Western Art Music tradition, whilst discarding others. From a philosophical hermeneutic perspective, we may say that Hope is aware of the historicality of her being-in-the-world (Heidegger, 2008). That is, she understands that human knowledge and practice are borne out of tradition and culture. She acknowledges she has inherited a particular notation system that has been passed down to her through tradition and she thus understands the cultural traditions within which her work is positioned. She is aware of *her* situation, aware that her interpretation of the history of Western art music is precisely *hers* and that one's understanding of history and tradition is both transformative and formative. Which is to say that when one arrives at an understanding, they are transformed by that understanding, but equally, through that transformation we are able to generate new formations of understanding. Transformation is a process of formation that structures subsequent understanding. An awareness of such a process of understanding history, tradition, and oneself in the hermeneutic sense (Gadamer 2013) means that Hope understands that the culture of which is she is a part is not stable or fixed.

The technology she employs to facilitate her compositional practice was not available to those generations that established the notational traditions passed on to Hope. Hope demonstrates a certain responsiveness to her historical situation – a responsiveness that we may say has been at the forefront of all significant cultural change. An inheritor of a particular notation system that we refer to as 'common practice notation' (CPN) (Dannenberg 1993: 21), Hope has made a conscious decision to reorganise the fundamental hierarchies established within that historical system to better reflect the modern world. In doing so, she has sought to establish a different approach to reading

*Organised Sound* **25**(3): 327–332 © Cambridge University Press, 2020. doi:10.1017/S135577182000028X

https://doi.org/10.1017/S135577182000028X Published online by Cambridge University Press

and performing music that facilitates more open systems of pitch organisation and stylistic input.

Hope's compositional practice engages graphic notation put into motion, often referred to as a kind of animated notation (Hope 2017a). This is facilitated via the 'Decibel ScorePlayer' iPad application (Hope and Vickery 2011: 2), which provides a tool to coordinate multiple performers reading an animated, moving score during performance. Hope's notation drastically changes the performer's relationship to the compositional material contained within each score. The score is created as a software image file in full colour complied with certain other materials (outlined below) into a unique file type that is uploaded to the iPad application. Some of the more obvious differences between CPN and the notation facilitated by this digital presentation include:

1. By putting score information in motion, a static staff is replaced with a dynamic one. This results in more accurate, coordinated reading of graphic notation.[1]
2. The scores include information that fixes tempo, instructions, parts if required and 'direction' information (challenging the left to right reading paradigm).
3. The scores have the capacity to contain pre-made sounds included in the composition, effectively creating a 'super score' (Emmerson 2016: 131), where notation and fixed audio media can be synchronised accurately and be clearly linked together conceptually and practically.
4. The score contains information that enables it to 'communicate' with a remote computer via the Open Sound Control protocol (Hope, Wyatt and Vickery 2015: 316). This can be used to signal elements in a Max Patch, for example.

Influenced by early coloured drawing drafts for compositions by composers such as Iannis Xenakis and György Ligeti (James and Vickery 2018), Hope replaces monotone black and white scores with a full range of colour and shade. This colour is usually used to prescribe instrumentation, and shade for dynamics and/or textural information. Rather than split instruments across numerous staves, by assigning different instruments a colour, each player can easily and clearly identify relationships between instruments because they are right there next to one another. As proportional scores, their pitch relationships are clearly described, as they can be clearly seen to move closer or farther away, or even cross other instruments. A vertical line signals the point of performance – this is known as the 'playhead' (Hope and Vickery 2011: 4).

A key element of Hope's compositional practice is the re-organising of compositional hierarchies that has developed through her engagement with this notational system. Hope asks performers to choose a pitch to start the work, but the choice is governed by simple proportional rules that are maintained throughout. For example, most of her works use the highest point of the digital page as the highest pitch, the lowest the lowest pitch, and performers must navigate these parameters in relation to each other. Whilst the score is very strictly controlled in terms of time within the automation of the 'Decibel ScorePlayer', set by the composer and embedded in the score document, there are elements of indeterminacy in regard to pitch in each work. Thus, while one instrument's pitch sequence may begin with an ascent, that ascent may begin from an E2 in one performance, and a D3 in the next, for example. Hope's works are also characterised by a focus on drones and glissandi, which are poorly represented in CPN. The 'Decibel ScorePlayer' presentation coordinates an accurate and clear reading of such techniques.

What we notice when we consider the implications of this practice is that many of those aspects of traditional notation that make it difficult to read – complex pitch and rhythm groupings, for instance – are alleviated. While Hope's works embody a certain complexity of their own, the notation does not render this complexity inaccessible to performers operating outside Western art music. Thus, whereas CPN makes complex music available only to players trained in that notation practice, Hope's approach to notation makes complex music available to players who do not necessarily read notation at all: non-Western performers, improvisers, rock musicians, and so forth. In light of this, we can notice how Hope's work responds to what she sees as an issue with Western art music – its reliance on a particular notational system that limits access only to those well versed in the reading of CPN. Hope seeks a way to welcome musicians from disparate backgrounds to engage in Western art music and perform her works and works by other composers whose compositions have been arranged to be read via the 'Decibel ScorePlayer'.[2] Thus, Hope's works demonstrate certain wisdom in their reconsideration of dominant paradigms, enabling the wisdom of performers' musicianship, rather their CPN reading ability, to emerge. This in itself opens up the act of music reading to a much broader and stylistically diverse range of backgrounds.

[1]Graphic notation is defined as the representation of music through the use of visual symbols outside the realm of traditional music notation (Pryer 2011).

[2]Percy Grainger's 'Free Music,' is one such example of a work that has been arranged for the Decibel ScorePlayer (Hope 2017b).

https://doi.org/10.1017/S135577182000028X Published online by Cambridge University Press

This leads to an idea of sonic wisdom as an opening up, or welcoming in, of sounds for compositional and performative consideration. For example, let us consider how wisdom might be manifest in R. M. Schafer's acoustic ecology and works such as John Cage's *4′33″* –each engaging with sounds of the environment in different ways. On the one hand, Schafer's acoustic ecology examines the relationship between human beings and their environment through listening engagement (Schafer 1993). We hear, for example, the presence or absence of certain sounds, or the frequency or volume of sounds, and this provides insight into the character of the environment in question. But importantly, it invites listeners and creators of these works to think of these natural environments compositionally. On the other hand, Cage's *4′33″* creates almost the reverse. The formality of this work being 'scored' creates a scenario in which the concertgoers listen to and experience the environment they are in as music, again, creating a kind of access to compositional thinking facilitated by a 'performance'. Each approach frames the naturally occurring sounds of the environment in a way that challenges the listener to rethink how sounds constitute music and take the opportunity to be guided by their organisation as a form of composition. Similarly, Hope's music takes the range of sounds available to a performer and provides a structure in which they are guided in relation to each other. This approach requires a careful listening and musicianship from performers: qualities that are common across all music styles. Just as Cage and Schafer embrace all sounds in the compositional frameworks, Hope enables all musicians. The open elements of the notations enables performers to bring their style with them to the work in a way in which CPN does not, and it becomes an integral part of the work. Hope then aims to refocus the listener's attention to the sound itself, noting that:

> I am interested in using the very nature of sound itself as a tool to offer new musical discoveries in close listening. I am drawn to extremes in sound, and the intimacies that are found in them. In particular, I enjoy blending electronic and acoustic timbres and performance techniques. I believe that music holds a kind of hidden potential that is revealed in a different unknowable way for every composer, musician and listener.

What we can derive from Hope's statement is that in her practice she seeks to reveal certain acoustical possibilities via a close examination of sound from the perspective of the composer, performer or listener, and that it is by attending to sound itself that these possibilities are expressed. The wisdom of art speaks to each subject differently. This is not to suggest that aesthetic experience is merely subjective, but rather, the objectivity of the artwork discloses itself to the individual each time in different and perhaps unexpected ways (Malpas 2012). That artworks reveal themselves in potentially unknowable ways does not undermine the wisdom contained within. The way in which we receive such works as individual is a reflection more of one's own subjectivities and prejudice rather than a reflection of the wisdom of the work itself. The way in which the individual attends to and experiences an artwork is always structured by their prior understanding of art and the world more broadly (Gadamer 2013). In this way, there are always aspects of the artwork that go beyond the spectator. While one can never hope to exhaust the meaning of a work of art, one can assume a certain attitude that may assist them in accessing the inherent knowledge of art and sound. Such an attitude may include, but is not limited to, questioning tradition, coming to terms with one's prejudice, and with respect to Hope's work, embracing technologies that facilitate new ways of engaging with art. The inclusion of electronic sounds is part of this questioning of tradition, reinforcing the idea expressed earlier that transforming the range of sounds is indeed a formative act.

## 3. QUESTIONING TRADITION

Western art music has, in a way, siloed itself through increasingly complex and codified notation systems, segregating music into genres and styles. Hope makes a concerted effort to break down this hierarchy by establishing her own alternative to CPN, while still trying to maintain a semblance of traditional Western art music values without segregation. These values include the upholding of the composer/performer binary, retaining complexity and embracing the new practices of the day. Hope responds to this aspect of her work by stating:

> I embrace new tools and practices enthusiastically. I just use the tools available to me. I love that new technology makes colour easy to reproduce, documents easy to share, high levels of coordination possible, and enables activities to happen together while in disparate locations. I want to break down silos, but I also believe that dedicated training has its benefits. Perhaps I am tied to Western art music values because that is my training, and they are embedded in me after years of study. Yet I have tried to unlearn certain things about music as a result of this training – or as Donna Haraway puts it, become undone and redone, adding, not subtracting to my experience and identity [Haraway 2019]; that's how I arrived at my notation system. I believe in the value of musicianship as the defining element of sonic wisdom, in combination with the nature of sound itself – the interaction of the musicianship with sound is what renders sonic wisdom transferable. I believe in the 'idea' – a concept apart from the sounding and before the musicianship. I try to realise how the compositional idea – a developed, structured, complex idea represented by a music composition

https://doi.org/10.1017/S135577182000028X Published online by Cambridge University Press

> (a sonic idea rendered conceptually through time) – can be enhanced by different kinds of performer contributions like those found in pieces notated with CPN.
>
> This complexity of an individualistic comprehension of music can be extended to its reading via notation. Most music reading preferences the communication of tempered pitch and symmetrical rhythms, and whilst many composers have stretched CPN's capacity beyond this, its potential to notate the incredible sonic ranges of electronic music or more contemporary improvisational practices is quite poor. I want notation to communicate ideas that are open on some levels, and fixed on others, bringing performative musicianship into a certain degree of co-creation 'post idea', irrespective of performers musical or cultural background. This way, the range of timbral and collaborative musical experiences is expanded. I celebrate musicianship by making my ideas open to different types of musicians who I invite into my compositions by using notation that is understandable by any musician. This way, music creation can be more collaborative and embrace contemporary practices more broadly. Notation also needs to provide instruction for the interpretation of a composer's ideas into the future in a way a recording cannot.

## 4. TRANSFERRING WISDOM

We are using the phrase 'sonic wisdom' to refer to the wisdom or knowledge embodied in music. Typically, when we think of 'wisdom' or 'knowledge' we consider it to be transferable – philosophers write books *explaining* how to live an ethical life, for example. The written or spoken word facilitates that explaining. This raises the question of how wisdom in instrumental music is transferred from the composer, to the performer and then to the listener. If we consider wisdom as a kind of intelligence that has evolved through the accumulation and synthesis of knowledge, we can perhaps describe the experience of music as something that is not merely subjective, but something that bears within it a type of knowledge or wisdom. Hope notes that:

> I think there is an objective wisdom we can arrive at through music. It is transferred through sound but articulated through its organisation. Each one of us highlights different elements of that organisation through our own, personal reading of – or rather listening to – music. There is a lot of power in the intimate nature of listening – I mean really listening – not just hearing sound. The difficulty is perhaps, in the objective. Art's power lies in it not needing to explain itself. It can be analysed, interrogated, interrupted and queried, but it does not, in itself, require a context unless the listener – or the composer – provides one. It's abstract quality is its power, its ambiguity is a haven for a much more complex knowledge.

On the one hand, we may say that the wisdom of music is not as easily quantifiable as the wisdom of science, for instance. But on the other hand, we may argue that the wisdom of science is simply narrower. Heidegger writes that 'mathematics is not more rigorous than historiology, but only narrower, because the existential foundations relevant for it lie within a narrower range' (2008: 195). When we consider the breadth of the humanities and the wisdom that music, for instance, attempts to transmit, it is a broad wisdom that speaks beyond the narrow confines of scientific method.

Hope refers to the ambiguity of the wisdom of art and reframes it as powerful. Heidegger's 1935–7 lectures on *The Origin of the Work of Art* (Heidegger 2013) notes a difference between truth as 'correctness' and truth and 'unconcealment'. Too often, when people speak of knowledge, wisdom or truth, they are referring to correctness. But the power of art, as Heidegger recognised, is its ability to *unveil* truths about the world. Hope writes that we receive these truths, of which there is not one but many, by offering our own 'personal reading of – or listening to – music'. Truth as unconcealment offers insight into our own being-in-the-world. For instance, Heidegger sees an Ancient Greek temple as an artwork that offers truths about a people's relationship with their god(s), and it 'makes visible the invisible space of air' (Heidegger 2013: 41), and 'in its standing there, first gives to things their look and to men their outlook on themselves' (ibid.: 42). This, we suggest, aligns with the wisdom accessible through sound and music. By extension, Hope's notated works serve a role similar to Heidegger's temple. They hold truths about a performer's relationship to sound, as articulated in the rendering of her idea. The openness of Hope's animated notation, in comparison to CPN, facilitates an examination of the performers themselves and the stylistic forms they bring to the composition. Further, her notational practice demonstrates the potential of accessibility and inclusivity in contemporary Western art music more broadly.

## 5. EMBRACING TECHNOLOGY

Hope's embracing of technology is embodied in her notation. On their own, as printed or e-documents, the scores are unperformable – even with a conductor there is no way of coordinating their performance. This is because they do not use pulse as a framework to measure time. As such, the 'Decibel ScorePlayer' was developed by a group of composers and performers, the Decibel New Music ensemble, that Hope directs. The application facilitated Hope's use of graphic scores through a collaborative authorship process:

> The Decibel ScorePlayer was developed by the performers, composers and programmers in Decibel ensemble. It enables networked reading – in a local and an internet

https://doi.org/10.1017/S135577182000028X Published online by Cambridge University Press

> (global) scale of music-making. It works best for the coordinated reading of scores featuring predominantly graphic notation, long durations and works where notation needs to be tightly synchronised with fixed sound media. It made the performance of my musical ideas possible. I also think it facilitates musical outcomes such as increased accuracy of certain notations that have been difficult to make accurate in the past, and enables a more organised and synchronised approach to the reading of graphic scores – defying the oft-held misconception that graphic scores are 'completely open', rather than offering a different hierarchy for musical elements. This enables a new musical organisation or priorities for performers in some way.

The invention and popularisation of the printing press shaped not only how we share and distribute music but also, as we learnt from Goehr (2007), how we conceive of musical works more generally. Western art music has seen few successful alternatives to CPN, but there is a possibility that developments such as animated notation are significant enough to see a similar reconfiguring of how we think about music more generally as we found with the printing press or even the tempering of the score. Hope is particularly passionate about this idea:

> The barrier for the evolution of music notation is a cultural one: the openness to the evolution of contemporary practices alongside heritage ones. I do believe the very nature of a music work is challenged by animated notation, and that the openness this notation provides is not necessarily desirable by all composers or performers. In the case of my music, pitch choices are not provided by me. I don't have any interest in choosing a precise pitch, but I like to control its trajectory through a work and design the way pitches relate to each other without dictating predetermined harmonic frameworks. Works such as *The Lowest Drawer* [2014] exemplify this building of harmonies or clusters – depending on what notes are chosen, for electronic and acoustic sounds. *Longing* [2011 is the first of many works of mine that provide guides to assist musicians remember their original pitch choice, so they can stay faithful to it, proportionally, alongside the challenge of needing to navigate the other musicians pitch choices. This creates a problem that can only be solved by careful listening. But this listening is very much informed by the nature of the performers themselves. I devised my notational system to communicate more open methods of reading, as well as the description of long durations, timbres and electronic contributions. Pitch choice and the resultant harmony or otherwise is subsidiary to those things in my music.

It is worth considering what some musicians and songwriters consider to be the alienating nature of CPN, as employed in Western art music. While there is no doubt that the increased complexity of such a system has afforded certain composers and performers the ability to create incredible works of art, there is also a sense in which this complexity closes off contributions from practices beyond the scope of such a system. Of course, Hope is not the first to attempt to create a practice that levels the playing field. Zorn's *Cobra* is an example of a work that encourages musicians from different backgrounds and genres to perform together (Brackett 2010). Yet here are many differences between Zorn's *Cobra* and Hope's compositional practice; the most significant being the level of improvisation. Whereas *Cobra* is largely improvisational, Hope's compositional practice is more prescribed, if less so than CPN.

When performers are required to adhere to and play certain ideas composed by another, notational systems are clearly of benefit. Hope finds a balance between traditional compositional values on the one hand, and accessibility on the other. She is the 'composer' just as, for example, composers who align themselves with CPN are. Her scores embody and articulate a certain idea that is not necessarily an invitation to improvise in the sense that Zorn's *Cobra* demands improvisation of performers. Rather, they reposition the hierarchy of choices a performer makes when reading notation. Timbre and dynamics become more important than pitch or rhythm for example, and performer choices are related to the decisions made by other performers, not just by the composer. Hope's works are accessible to a wide range of musicians, without her necessarily having to simplify her ideas.

Sounds hold a lot of detail, energy (Kahn 2013) and complexity that we are only just beginning to grasp. Perhaps we are arriving at a point in our cultural evolution where the predominance of 'visual litany' (Sterne 2003: 15) is being superseded by a more multimodal way of understanding the world and each other. However, as O'Callaghan (2017) points out, our understanding of auditory perception is lacking in comparison with visual perception, for example. We believe a discussion of the transference of sonic wisdom will assist in developing a truly multimodal understanding of knowledge and perception. Music possesses a wisdom that goes beyond simplistic notions of subjectivity and/or experience, and this is at the centre of Hope's compositional attempts. What we notice in a turn to the sonic as the bearer of wisdom, a 'turn' that is occurring not just across music-specific disciplines but also with respect to our perception of the world more broadly (Nudds and O'Callaghan 2009; O'Callaghan 2017;), is that compositions address select hierarchical challenges that musicians (and the broader community) encounter. Hope's music attempts to address these challenges in a very direct way, challenging accepted wisdom, resulting in music reading being an activity that can become more broadly accessible. In this way, Hope's compositional practice paves the way for the

https://doi.org/10.1017/S135577182000028X Published online by Cambridge University Press

evolution of sonic wisdom beyond the dominant, pre-established siloes of Western classical music.

## REFERENCES


Brackett, J. 2010. Some notes on John Zorn's *Cobra*. *American Music* **28**(1): 44–75.

Dannenberg, R. B. 1993. Music Representation Issues, Techniques, and Systems. *Computer Music Journal* **17**(3): 20–30.

Emmerson, S. 2016. Crossing Cultural Boundaries through Technology. In S. Emmerson (ed.) *Music, Electronic Media and Culture*. London: Routledge: 115–37.

Gadamer, H.-G. 2013. *Truth and Method*, trans. J Weinsheimer and D. G. Marshall. London and New York: Bloomsbury.

Goehr, L. 2007. *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music*. New York: Oxford University Press.

Haraway, D. 2019. On Staying with the Trouble. https://forthewild.world/listen/donna-haraway-on-staying-with-the-trouble-131 (accessed 8 April 2020).

Heidegger, M. 2008. *Being and Time*, trans. J. Macquarrie and E. Robinson. New York: Harper & Row.

Heidegger, M. 2013. *Poetry, Language, Thought*, trans. A. Hofstadter. New York: Harper Perennial.

Hope, C. 2011. *Longing*. https://doi.org/10.26180/5ceb453361978 (accessed 2 July 2020).

Hope, C. 2014. *The Lowest Drawer*. https://doi.org/10.26180/5cdcd23511943 (accessed 2 July 2020).

Hope, C. 2017a. Electronic Scores for Music: The Possibilities of Animated notation. *Computer Music Journal* **41**(3): 21–35.

Hope, C. 2017b. Reading 'Free Music': Adapting Percy Grainger's 'Free Music' Scores for Live Performance. In J Paget, V Rogers and N Bannan (eds.) *Proceedings of the 2015 WA Chapter of MSA Symposium on Music Performance and Analysis*. WAAPA and Edith Cowan University, 140–52.

Hope, C. and Vickery, L. 2011. Visualising the Score: Screening Scores in Realtime Performance. *IM Interactive Media – E-Journal of the National Academy of Screen and Sound*. http://imjournal.murdoch.edu.au/im-issue-7-2011/ (accessed 2 July 2020).

Hope, C., Wyatt, A. and Vickery, L. 2015. The Decibel ScorePlayer: New developments and improved functionality. *Looking Back, Looking Forward: Proceedings of the 41st International Computer Music Conference*. Denton, TX, 25 September–1 October. Ann Arbor, MI: Michigan Publishing, 314–17.

James, S. and Vickery L. 2018. Representations of Decay in the Works of Cat Hope. *Tempo* **73**(287): 18–32.

Kahn, D. 2013. *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts*. Berkeley: University of California Press.

Malpas, J. 2012. *Heidegger and the Thinking of Place: Explorations in the Topology of Being*. Cambridge, MA: MIT Press.

Nudds, M. and O'Callaghan, C. (eds.) 2009. *Sounds and Perception: New Philosophical Essays*. Oxford: Oxford University Press.

O'Callaghan, C. 2017. *Beyond Vision: Philosophical Essays*. Oxford: Oxford University Press.

Pryer, A. 2011. Graphic Notation. In A. Latham (ed.) *The Oxford Companion to Music*. Oxford Music Online. www.oxfordreference.com/view/10.1093/acref/9780199579037.001.0001/acref-9780199579037-e-3008

Schafer, R. M. 1993. *The Soundscape: Our Sonic Environment and the Tuning of the World*. Rochester: Inner Traditions Bear.

Sterne, J. 2003. *The Audible Past: Cultural Origins of Sound Reproduction*. Durham, NC and London: Duke University Press.


https://doi.org/10.1017/S135577182000028X Published online by Cambridge University Press