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Differentiating (an)notation practices: an artist-scholar's observation

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Differentiating (An)Notation Practices: An artist-scholar's observation

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Abstract

Video annotation is an emergent practice and is not (yet) a common method in dance studies or research. Subsequently, there are limited accounts that detail the practice of using annotation in dance. The accounts of video annotation that are available serve diverse and particular purposes (see, for example, the documents in this special issue) but a common understanding of what annotation *is* does not theoretically cohere. Furthermore, the tendency to use the terms *annotation* and *notation* synonymously conflates these practices and risks overlooking the significant contributions of each. This article presents four different approaches to annotation and highlights the varied but distinctive nature of this mark-up method from an artist-scholar's perspective. In discussing my experience, reflections, and observations of working with annotation to augment a notation score and video documents, I offer an understanding of annotation, what it offers in analysing and transmitting ideas about dance, and the importance or implications of annotation. Crucially, drawing lightly from Bernard Stiegler's philosophy of technology, I position annotations as *technical memories* created in dialogue with existing *mnemotechnical* forms, or *technical objects*. Such characterisation illuminates how annotation helps to overcome limitations of documentary forms and highlight information otherwise missing or previously unnoticed. To further emphasise annotation as a method of amplification I make comparisons between my experience of annotation and of Labanotation to highlight the similarities and differences between these distinctive methodological tools. While the examples of annotation primarily focus on dance the insight developed in this article is valuable for any field working with time-based media.

Differentiating (An)Notation Practices: An artist-scholar's observations

Since the 1990s, video annotation has been adopted by a handful of researchers to articulate and transmit the thinking and knowledge that arises through the practical and theoretical experience of dance. The development of tools such as Piecemaker, Research Video (Lösel, 2021), and Rekall (Bardiot, 2015) indicates growing interest in video annotation for dance research, however it is not (yet) a common method. The limited accounts of video annotation that are available serve diverse and particular purposes (see, for example, the documents in this special issue) but a common understanding of what annotation does not theoretically cohere. Although gaining currency in dance with the rise in interdisciplinary and digital working, the practice of video annotation is not clearly defined nor understood. As such, I have observed a tendency amongst dance colleagues towards the synonymous use of *notation* and *annotation,* owing to the familiarity of the former (both codified and idiosyncratic forms) and the unfamiliarity of the latter. Motivated by a paucity of accounts detailing the practice of video annotation, this article offers an understanding of what annotation is from an artist-scholar's perspective.

I present four examples to highlight varied but distinctive annotation practices. Example 1 focuses on supplementing a Labanotation score and is the article's only example of annotating an analogue document. Its inclusion affords a preliminary point of comparison between the methods of notation and annotation and illustrates how the latter can be used to overcome the limitations of a particular kind of choreographic representation. The remaining three examples focus on different applications of manual video annotation using Piecemaker and demonstrate how research questions, one's relationship to the video document, and audio-visual content shapes annotational activity. The investigation is auto-ethnographic: through description and formative and summative reflection, I foreground personal experience of annotation in four different examples of practice. Together, the examples make it possible to highlight characteristics of annotation to shape an understanding of what annotation can be and helps to distinguish it from the more recognisable practice of dance notation. While demonstrating the value of video annotation for dance research, the insights articulated in this article reveal the method to be suitable for any field working with time-based media.

Example 1: Annotating notation
Labanotation is a comprehensive and logical method of analysis and documentation for anyone versed in the "language," but experience and research led me to contemplate what it offers as a stand-alone practice, particularly in instances where the intention is to give prominence to more than the movement of the mechanised body. As a dancer and

Labanotator I became particularly interested in how the qualitative and performative insight of the dancer could present a perspective hitherto missing from the typical notation score. As combinatorial symbol-based systems, notation is the closest things to an alphabet for movement.[1] Notation involves a process of *grammatisation*[2] whereby movement is broken down into discrete elements and translated into symbolic spatial forms. This discretisation often lacks qualitative insight into movement content beyond analysis of movement dynamics. I wanted to explore how to augment the notation score to overcome the challenges of articulating the experiential knowledge derived from performing in a work and not only that arising through observation.

I notated *Youkali* (2009), a work in which I performed, commissioned by London Contemporary Dance School for the postgraduate performance company EDge and choreographed by Jesús Rubio Gamo. Like many contemporary dance works, the dancers' contributions were fundamental to the development of *Youkali*; we responded to tasks and choreographic instruction to develop movement content, its intention, and the manner of performance. While the movement in *Youkali* may appear simple to the external eye, the embodiment and attention of the dancer is integral to its performance. Accordingly, the knowledge of the work was held not only by the choreographer but distributed amongst the dancers. Subsequently, there is no single fully-known version of the dance but interpretations informed by one's role and relationship to the work. It is traditionally understood that an authentic score 'is that notated by the choreographer [… or] written in collaboration with the choreographer' (Hutchinson Guest, 2000, p. 66), 'often provoking a Cartesian split between two differentiated agents: the one who moves and the one who writes' (Salazar Sutil, 2015, p. 135). Drawing upon the intrinsic discourse central to the development of a dance work has the potential to bridge the gap between observational and performative perspectives.

Working from video, physical memory of the work, and sketchbook notes, I notated *Youkali* after the work had finished touring. Many iterations of the Labanotation score emerged, each more complete than the last: on paper I mapped the structure of the work first, then blocked out movement phrases and pathways, and gradually assembled and refined layers of information until a full representation emerged. The score was authored solely from my

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[1] Dance notation scholar Ann Hutchinson Guest argues that dance 'like verbal language, has basic "parts of speech." There is a clearly constructed grammar that defines the relationship of the movement words to each other and their given function in the movement sentence' (2005, p. 14). Hutchinson Guest equates movement components to language in her use of verbs to refer to action, nouns to refer to partners and objects for example, and adverbs as factors that modify actions such as timing, dynamics, and manner of performance (2005, p. 14).

[2] Stiegler uses the term *grammatisation* to refer to the translation that effects a transformation of the original spatial and temporal properties of speech into the written word (see Stiegler, 2006).

perspective as just one of the dancers in the work and did not therefore encompass the distributed knowledge of all of those involved. However, notating *Youkali* from a dancer's perspective already resulted in a score that would have differed from that of a notator adopting an observational perspective. Subsequently, the score presents *a* perspective, but one that arises from an intimate and embodied relationship to the work as understood by the performer and this is reflected in the choice of notation symbology. However, there were still elements of the work that could not be articulated through symbology alone and the final printed notation written with Labanwriter[3] became the starting point for annotation.

Two workable methods of annotation materialised: colour coding and a textual overlay. As a visualisation tool, colour-coding symbol clusters draws attention to sections of the choreography where the specified movement content acts only as a guide and where the performer is free to deviate from what is written so that performative intention takes precedence (see Figure 1). Performer insights that could not be relayed through colour-coding, such as the use of imagery or responses to visual and audible cues, were inscribed on a transparent overlay formed using overhead projector (OHP) paper.[4] Applied directly to notation symbols, colour-coding does not directly affect their meaning and the transparent nature of the annotation overlay did not alter the score as the "base layer" for annotation: the notation beneath was fully visible and this meant that the score could be read with (Figure 1) or without (Figure 2) the overlay. Both of these 'mark-up' techniques do not directly affect the notation score as the primary document but supports its reading.

Example 2: Annotating Performance Footage
Though the benefits of engaging with live work are well documented,

> moving images on screens have become a dominant, arguably *the* dominant, mode of viewing throughout our increasingly mediatized culture. From portable DVD players to video iPods to cellular phones, modern culture communicates onscreen (Bay-Cheng, 2007, p. 37).

The ubiquity of video in documenting and accessing the performing arts necessitates a discussion about how we might efficiently and critically engage with time-based media. The

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[3] Writing a score by hand is an exacting and time-consuming process. The process becomes more efficient when using digital software such as Labanwriter which was created Ohio State University for Macintosh computers (see The Ohio State University, 2020). The software features tools that we have been accustomed in word processing software such as copy and paste and the easy deletion of incorrect entries.
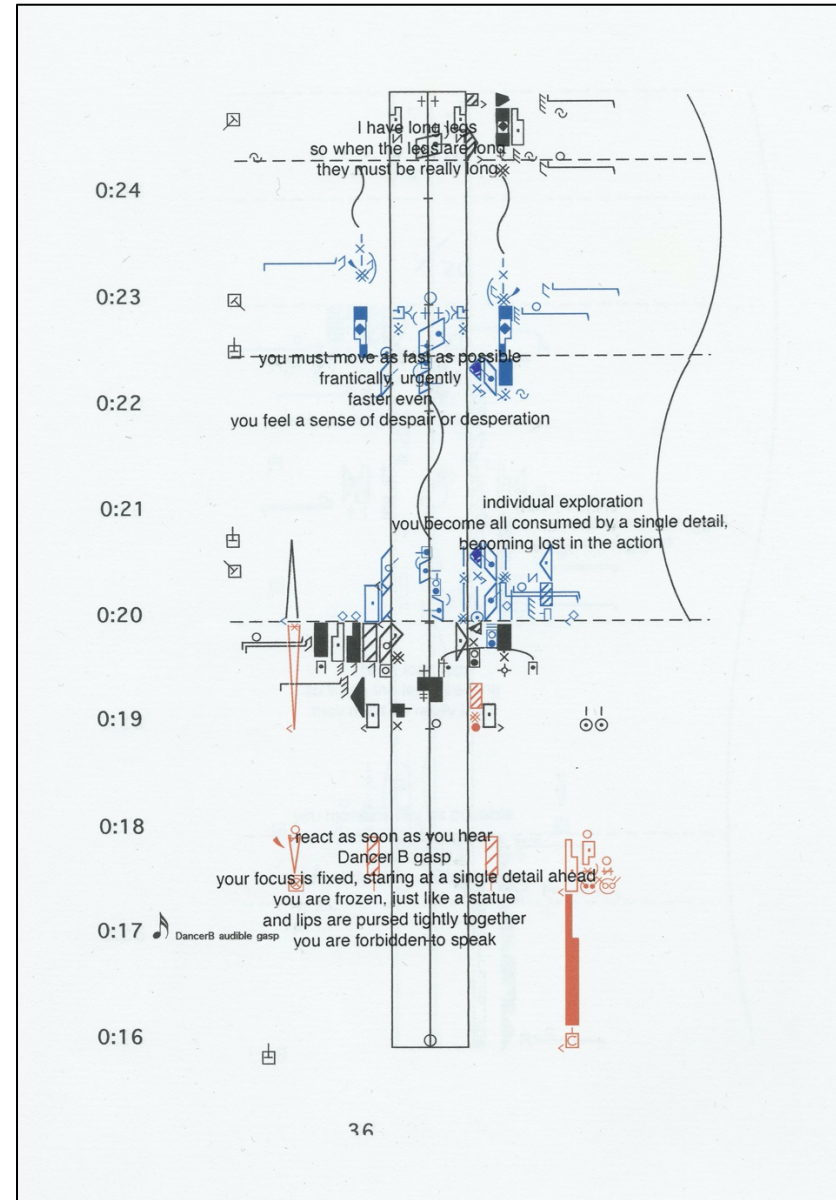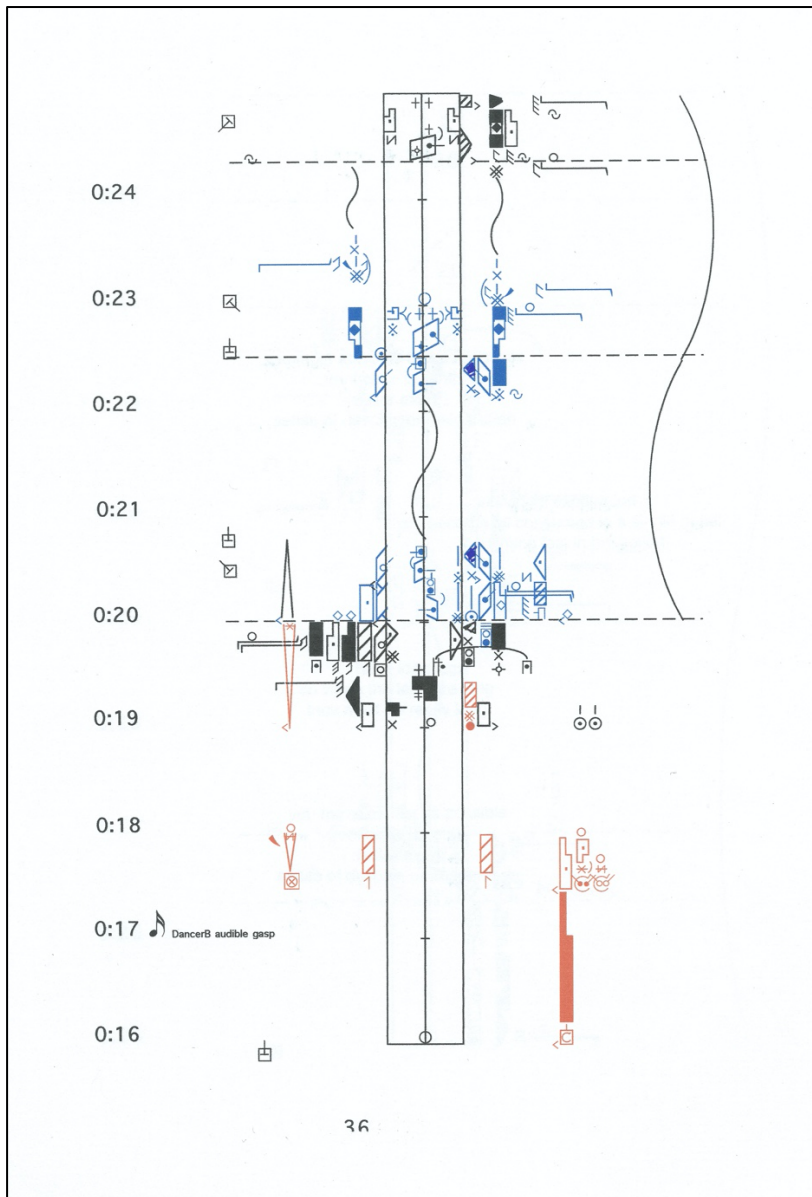
[4] In *Notation in Movement* (2007), Benesh notator Eliane Mirzabekiantz notes the inclusion of quotations and comments on the score, details that emerged in the demonstration and teaching of work, to better capture the movement intention. This text is part of how the work is documented in comparison to the approach in Example 1 which was created as an annotational layer.

development of dance-specific annotation tools makes it possible to work with video documents in new ways. The approach to annotation detailed in this example has great potential for circulating exegesis of dance and as a pedagogical tool to develop visual literacy.

I analysed a video recording of *Sacre* by Sasha Waltz and Guests, first premiered in 2013 using Piecemaker. The video document, retrieved from *YouTube*, had been edited, bringing together different vantage points to enable views of the whole stage and close up shots of movement content. My primary intention in working with this video document was to gain insight into the practice of video annotation and how it informs close study and dance viewing. The outcome of the video analysis for this example was secondary and the resulting annotations were not, in this instance, intended to be shared.

The analytic process was intuitive and methodical, and nothing was predetermined. To begin, I mapped the choreographic structure to create an annotation "scaffolding" formed by "tagging" preliminary observations. This scaffolding helped to compartmentalise the activity of viewing and focus my analysis which felt important because of the volume of information content: at 41 minutes and 22 seconds long the video document of the large ensemble work presented a wealth of content available for analysis. To begin, not much consideration was given to the content of these annotations, or "tags", because they functioned primarily as brief notes, or time-based markers. With repeat viewings the annotation scaffolding grew and tags were concurrently adjusted and refined, developing an expansive framework of observational data.

Figure 1 (left) and Figure 2 (right) are the same excerpt from the notation score of *Youkali* (2009) where colour-coding is used to identify when the performer is free to explore and deviate from movement material (blue) or moments when the focus on performative intention takes precedence (red). Figure 2 features an annotation overlay created using OHP paper. The information content inscribed into this annotation layer identifies performative intention, direction, and use of imagery.

0:24
0:23
0:22
0:21
0:20
0:19
0:18
0:17 ♪ DancerB audible gasp
0:16

36

0:24
0:23
0:22
0:21
0:20
0:19
0:18
0:17 ♪ DancerB audible gasp
0:16

I have long legs
so when the legs are long
they must be really long

you must move as fast as possible
frantically, urgently
faster even
you feel a sense of despair or desperation

individual exploration
you become all consumed by a single detail,
becoming lost in the action

react as soon as you hear
Dancer B gasp
your focus is fixed, staring at a single detail ahead
you are frozen, just like a statue
and lips are pursed tightly together
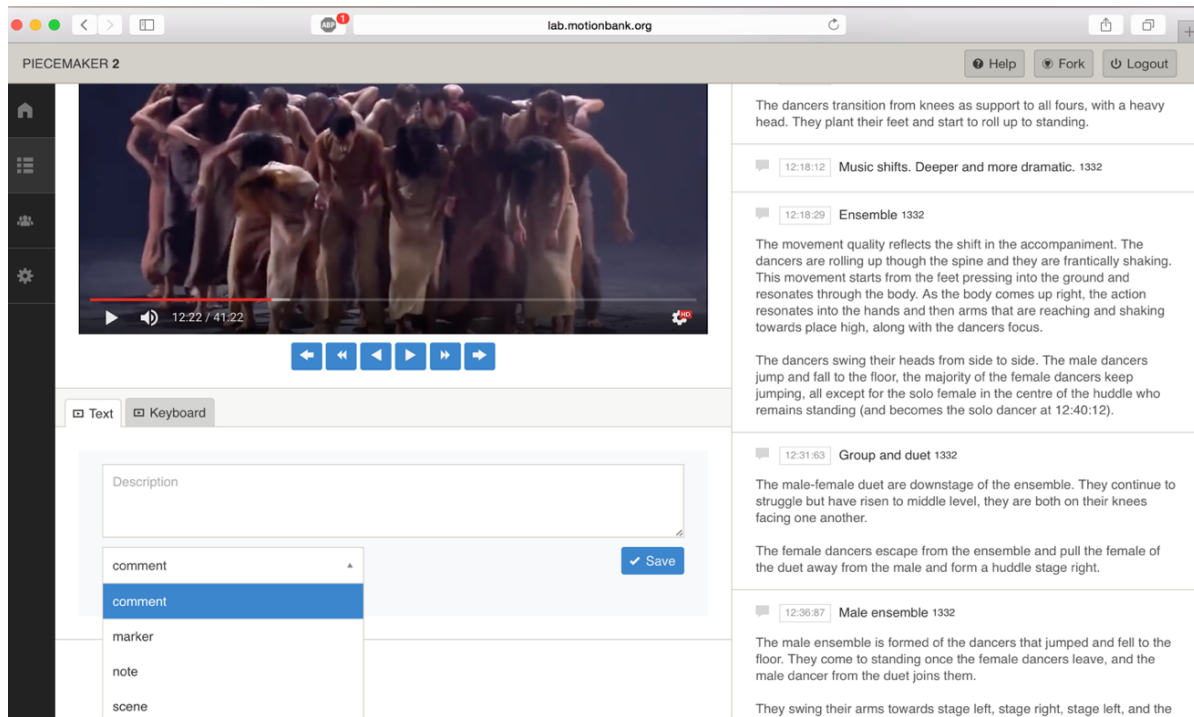you are forbidden to speak

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Figure 3: A screenshot of Piecemaker. The video document sits in the left half of the screen and annotations are created beneath, while completed annotations are on the right.

While the term *scaffolding* may give the impression of a spatial structure, Piecemaker annotations are not layered over the video content (as was the case for the mark-up in Example 1) but sit adjacent to the video stream (see Figure 3). However, as *linked annotations,* Piecemaker annotations have an indexical function which increases the utility of video document by enabling the efficient search and retrieval of information content.[5] This function will be discussed later in the article.

Example 3: Visual ethnography

In a current research project that examines cross-arts creative collaboration I am using the recently reworked version of Piecemaker, which is now part of the Motion Bank Web Systems, as a tool for visual ethnography.[6] In February 2019 I observed a student-led interdisciplinary project that took place as part of CoLab at Trinity Laban Conservatoire of Music and Dance (Trinity Laban).[7] Focusing on one project, *an* instance of creative

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[5] This was the intention of Piecemaker, which was created by dancer David Kern for the Forsythe Company to organise and retrieve the content of archived video materials and arose in response to the desire to "properly document the rehearsals and performances of choreographies that were evolving over time" (Ziegler, 2007, p. 34).

[6] For more about visual ethnography see Pink, 2013.

[7] For two-weeks each year students and staff from across the music, dance and musical theatre programmes at Trinity Laban come together to develop creative cross-arts collaborative projects. CoLab culminates in a festival of work developed during these two weeks.

collaboration, I sought insight into the dynamics of co-presence that arise when bringing together artists from different genres and traditions to collaborate. I became interested in the leadership hierarchies that emerged through the contributions of different participants, and the challenges and tensions encountered in improvisational and collaborative processes. The ethnographic study involved observing the week-long project and taking written notes to develop a thick description, video documentation, and semi-structured interviews with project participants. At the end of the project, I worked with the unedited video footage and triangulated my analysis with the observational and interview data. My motivation for employing video annotation was to move beyond the initial impressions and observations and to look more deeply at the various factors contributing to interdisciplinary collaboration.[8]

My approach to annotation was in many ways similar to Example 2: it was an iterative and recursive process through which both annotations and understanding became more comprehensive and fine-tuned with repeat viewing. However, the volume of video (16 hours in this example versus the 41 minutes and 22 seconds in Example 2) was a key difference that shaped the research. I found it necessary to study one hour of project footage at a time and to construct a preliminary scaffolding for each hour before moving onto the next. It took approximately four hours for every hour of footage to tag initial observations, to lay down time-based markers for general information content. Once complete for all 16 hours I returned to the beginning of the project footage to undertaken the next stage of analysis. This stage is currently in process. While annotations in Example 2 were guided by the choreographic structure and movement content available in the video recording, this ethnographic study was directed by my research questions which led me to pay particular attention to details of collaborative and communicative exchanges between student participants such as instruction, debate, and the exchange of ideas.

Example 4: Live annotation

The live documentation of a choreographic re-staging is the last example of annotation introduced in this article. *Drumstick* (2015) is a re-imagining of Rudolf Laban's *Dancing Drumstick* (1913)[9] by Alison Curtis-Jones and was re-staged on second-year undergraduate students at Trinity Laban in 2017 as part of a three-week Historical Project intensive.

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[8] Provided that the necessary ethical considerations are in place, video annotation could be sure to share the findings of ethnographic analysis. However, in this instance video annotation was employed as a research method.

[9] Curtis-Jones (2017) describes *Drumming Drumstick* as a 'lost' work as there is little material evidence of its existence. While few of Laban's works were notated, his schrifttanz (written dance, or notation) was not published until 1928, well after the creation of *Drumming Drumstick*. Curtis-Jones's *Drumstick* but is a new work that is created to make use of the skills of dancers today (Curtis-Jones, 2017, p. 16).

Interested in Curtis-Jones's archaeochoreological methods (see Curtis-Jones, 2017), I had observed the development of *Drumstick* in 2015 and later documented its re-staging using a version of Piecemaker modified for real-time annotation.[10] The tool enabled time-stamped observations to be linked to webcam video recordings which are brought together in post-production. Though motivated by documenting the re-staging, the primary intention of this study was to understand more about the practice of live annotation: the development of a shareable choreographic representation was secondary.[11] Subsequently, a more traditional approach towards documentation was adopted.

I attended more than 20 hours of studio rehearsals resulting in thousands of annotations. In live annotation, the video recording and annotating are simultaneous. The annotational activity focused on live studio events and not the video document.[12] Subsequently, the process was responsive to, and determined by, the pace and content of the re-staging and rehearsal activity. Documenting the re-staging provided access to the *building blocks* of the work, including but not limited to choreographic direction, creative tasks, and use of imagery which I inscribed into the video document.[13]

Summary of the four studies

The case studies introduce four distinct approaches to annotation both in terms of the motivation for annotation and the object of study. In all instances, annotation is undertaken in relation to a document: the notation score in Example 1 and video footage in Examples 2, 3, and 4.[14] These documents are technical, or artificial, memories of live events, or *temporal objects* following philosopher Bernard Stiegler (2011):

> A temporal object is constituted by the time of its flow – as, for example, is the case with a musical melody, a cinematic film, a radio broadcast, etc. An object is temporal, in the Husserlian sense, to the extent that it is *constituted* by the flow of its passing, as opposed to an object like a piece of chalk, which is constituted through its stability, by the fact that it does not flow.
>   A temporal object like a melody only appears in its disappearance: it is an object that passes, and that in this sense bears a remarkable relationship to its

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[10] At the time of the study, the ability to film and annotate simultaneously using Piecemaker was possible only on specially configured computers. However, this was how the original version of Piecemaker was used almost exclusively by The Forsythe Company.

[11] Studies 2 and 4 were undertaken as part of my doctoral research *Video annotation for the articulation and transmission of dance and movement knowledge* (Stancliffe, 2018).

[12] While Example 3 combined the methods of observation and the annotation of pre-recorded footage, the study focused only on the live event and the resulting video documents were not studied. However, further research, beyond this initial stage of documentation, could provide further insights and deeper comprehension of the work.

[13] At this stage, the annotations are not formalised for sharing beyond those involved in the form but could form the starting point for a bigger research project.

[14] In annotation, a representation of the temporal object, rather than the temporal object itself, is the object of study. The exception to this is Example 4 which involved the study of the live event, yet the annotations created were linked to the video documentation of the live event.

passing, and also, therefore, to a question of the past. In the same way, a film only appears to *the extent that* it disappears, and according to the *manner* of its disappearance: the disappearance is not uniform. Depending on the temporal object and the person that creates it, it marks different styles (Stiegler, 2014a, p.17)

I draw from Stiegler's philosophy of technology because he explores how our present is informed by past experience and the implications of technology as a means of storing and accessing information. The documentation of temporal objects, such as dance works, results in mnemotechnical forms (technical objects), or accounts, that exist outside of the mind and transform their originary spatio-temporal constitution. Such memories may be generated for public and/or collective use.

In all but Example 2, I had direct access to the temporal object through my experience as a dancer (in Example 1), researcher (in Example 3), and annotator (in Example 4). As mnemotechnical forms, the notation score or video document are representations that stand in for and provide access to something of the temporal object. This access is, however, restrictive or partial: the translation of the temporal object into a technical object transforms the original spatio-temporal properties of the live event or dance work so that it can become an object for prolonged study and analysis, which is not otherwise possible owing to the ephemeral nature of dance. Furthermore, these technical objects, according to Stiegler (2014b), combine sense perceptions (primary retentions that are conditioned by prior experience), memories (second retentions: former primary retentions) and externalised memories (tertiary memories or mnemotechnics). This construction is important to consider when examining what can be discovered through engaging with technical objects.

Annotation as technical memory
An important characteristic of annotation is how it functions as a form of technical memory, a form of memory that arises in dialogue with, and is overdetermined by, the technical object. Used as a tool for augmentation or amplification, annotation arises in dialogue with the temporal object to supplement or return something that may be considered missing. This suggests that certain kinds of information content may benefit from greater prominence, or that more can be understood from these objects by engaging with them in different ways. Through annotating, observations and insights are externalised as spatial forms by way of making selections of existing information content (for instance, the colour-coding in Example 1) or by adding new content to the technical object in the form of tags and written comments and observations. This externalisation is a process of *grammatisation* which refers to the transformation of the spatio-temporal properties of temporal flow, for example the discretisation of speech into the written word (Stiegler 2014b). In this transfiguration, speech becomes a new externalised technical form, an enduring form of memory. The annotated document therefore comprises technical memories (annotations: observations that are

externalised and spatialised onto the page or screen) created upon an existing technical memory (the notation score or video document). The result is a modified or re-authored version of the document that represents the original temporal object, a version that offers a particular, but not privileged, account of the work. The dialogical nature of the practice means that it is necessary to consider how we are informed by notated and video documents in different ways. Recognising how we engage with material representations of dance is important in examining because annotation practice is responsive to these factors.

Through dance notation, the concretisation of dance is achieved through standardised analytic and conceptual frameworks, shared by a community of users, that overdetermine what kinds of information are inscribed into the score. While the intention is to create as objective an account as possible, the resulting score is a representation of how the dance is seen according to the decisions made in translation, the notational framework employed, and the cultural context of documentation (Watts, 2013, p. 372). For example, my dual role as both performer and Labanotator in Example 1 is not inconsequential: The Labanotation score, which is a material trace of how I know and understand the work, sought to find workable solutions to overcome the limitations of traditional notation practice and present an often omitted intrinsic perspective.

Video content, in comparison, is characterised by the mechanical "objectivity" of the camera lens. Video creates a (more or less) stable record of dance and creates the conditions for sustained and prolonged study, at least on the basis of a media translation. However, this is contingent on suitable preservation strategies that enable access to video documents in the face of technological development and subsequent obsolescence. Video is a non-notational medium, meaning that it records dance but does not articulate details as notation claims to. A concrete record of the dance is created but it does not betray anything beyond what is "objectively" and mechanically captured. The ubiquity of video in performance studies has not removed the need for analytic representations nor the need to analyse movement practices. The necessity to work differently with video documents and to engage in close reading is a factor in the emergence of annotation practice.

Indexation and navigation

The indexical function of video annotation was identified by Stiegler in 1995 as part of the future of digital technology, as it would

> allow us to navigate through the flow of images in a nonlinear fashion toward even finer and more iterative elements, in the same way that we've been able to in books ever since there have been tables of contents and indexes, and what is more, it will allow us to navigate in hypertexts […] (Stiegler, 1995, p. 157)

While the use of fast-forward, rewind and pause in video technology already encourages fragmented and edited viewing (Reason, 2006, p. 89), these qualities are heightened when navigating video content through the indexical function of annotation. The linked annotations created using Piecemaker and the Motion Bank Web Systems are hypertextual making it possible to efficiently navigate the video document without having to watch it in full. Furthermore, the hypertextual function makes it possible to search for things within a video just as Stiegler suggests, which was not previously possible. Thus annotation offers not only a memory of observations but a way of navigating the video content by way of these memories.

The close study of video content through annotation and the possibility of hypertextual navigation, linking and referencing are closely entwined and result in a particular mode of attention. People will see or attend to different things on the basis of prior knowledge and experience which construct inclusion and exclusion criteria that overdetermines viewing.[15] As mnemotechnical forms, annotated inscriptions shape our reading of documents, but they are also selections of information content that are determined by the individual. During annotation the individual engages with the information content of the document as well as their annotations. Subsequently, each viewing (of the score or the video) is shaped by what the individual is inclined to attend to on the basis of prior experience which is refined or focused through the technical memories (annotation marks) of prior attention (previous viewings). While this refined attention can enable deeper insight it also limits or restricts what the annotator looks at meaning and details might therefore be overlooked. The path towards comprehension through video annotation is fragmented, asynchronous, and accumulative through which a heightened and fine-tuned perception develops. This looping of perception both narrows and heightens perception, augmenting visual literacy skills.

Thick description
Annotation creates a distinguishable mark-up layer through the activity of thick layering. This relates to Clifford Geertz's (1973) ethnographic idea of 'thick description' which was originally borrowed from Gilbert Ryle (1949). Studies 2 and 3 involved a process of creating and reworking annotations for precision and exactitude, moving from tagging, or surface level description, towards thick description. In refining annotations, the material trace of intermediary observations disappear as previous annotations are effectively overwritten. The 'audit trail' of thinking becomes lost amongst an increasingly intricate tapestry of annotations which represents the most recent state of comprehension. Nevertheless, the

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[15] The perception of temporal objects is outlined in Edmund Husserl's thesis of time consciousness (1964) which was later expanded upon by Stiegler to account for mnemotechnics in constructing perception.

details also accumulate in the annotator's memory and understanding of the source. An audit trail of thinking is, however, captured in Example 4 where annotations are thinly distributed over a number of video documents. What is more, an analysis of the annotations reveals how the information attended to or captured changes over time.

Close study through annotation elicits a certain kind of attention that involves noticing the previously unnoticed. Through repeat study, information content moves into the foreground of attention and are concretised as annotations to become technical memories. The previously unnoticed is documented and becomes available for further study and future research. However, it is important to recognise that annotations are partial and selective representations of knowledge. What is understood in the moment of viewing is shaped by past experience meaning that the choices made in viewing and annotation are guided by skills and expertise. In other words, a dancer will attend to a recording of a dance work differently to a non-dancer and, in turn, the performer will make different selections of information content in viewing to the choreographer.

Further to characterising annotations as partial and selective, I suggest that the annotator's understanding that arises through the engagement with the technical object exceeds the content of annotations because the annotator's viewing is guided by various ways of knowing and because translation is partial. The meaning of annotations, therefore, is generated in the relationship between the annotator, the information content, and the annotations. In other words, annotation creates a snapshot of insights and observations, but they are not complete representations of what is understood about the dance.

That annotation marks are not complete representations is not dissimilar to notation which needs the body to take on significance. As dance scholar Victoria Watts explains, one's engagement with notation is both textual and corporeal: 'an analysis of […] symbols alone cannot generate the holistic knowledge' (2013, p. 373, 383).

> Notators know from experience that the dance gradually coheres as a whole in the moving body, and that predictably the whole is much richer and more complex than the symbols used to describe it […] the symbols become meaningful only when the complexity of their relationship is given in bodily form (Watts, 2013, p. 376).

While annotators also draw from bodily knowledge and prior experience, a crucial difference for annotation is that it relies on a relationship to the information content of the notation score or the video document to ascribe meaning and value. In other words, annotation is essentially and inherently *dialogical*: meaning and value is determined by the annotation mark's contextualisation with an existing technical object. Without such contextualisation, annotations can lose their meaning and value. That annotations represent

only partial understanding and are characterised by choice, consciously or otherwise, indicates a tension between the mark-making process and what can be discovered through annotation. Furthermore, it suggests a link between memory and what is annotated which has implications for the contributions of annotated documents to cultural heritage. My experience implies that annotation is not necessarily more objective or scientific than any other mode of analysis.

In contemplating video annotation as a response to existing analytic or documentary techniques it is necessary to highlight the labour of the practice. Hutchinson Guest estimates that 'one minute of choreography requires eight hours of work' to create a Labanotation score which can be broken down into two hours of rehearsal and six hours of writing up notes outside of the rehearsal (1984, p. 125). By this estimate, a twenty-minute choreography would take 160 hours to notate. A direct comparison to video annotation is difficult because notation and annotation are different practices, but also because the motivation and methodology for annotation influence the labour involved, and there are few accounts that quantify this. My experience, however, indicates that video annotation can be a time-consuming process, even in preliminary stages of working with video content. For instance, in Example 3, it took approximately two weeks to tag the 16 hours of project footage with initial observations for my research into creative collaboration. Video annotation is a process that not only translates what is seen but articulates what is *not* seen, and that the labour of annotation goes hand in hand with the investment in deepening comprehension. I suggest that the labour involved in annotation and notation practices and the commitment to a close reading of an artefact (in annotation) and the temporal object (in notating or annotating the live work) are comparable. Annotation is no less exacting nor labour intensive than notation.

The notator and annotator

Live annotation bore a striking resemblance to my experience of a typical approach to Labanotation (as opposed to the less conventional approach adopted in Example 1). I sat in the margins of the studio immersed in and attentive to, but distinctly outside of, the creative process. Traditionally, for the notator,

> every word the choreographer speaks, every movement thrown out, sheds light on [… their] thinking processes, on [… their] attitude and approach, and on the concepts and motivations of the movements, thus helping the notator to know how best to record the resulting phrases. (Hutchinson Guest, 1984, p. 122)

In live annotation, I also worked with such details that were available to me through observation. However, live annotation did not demand that I decide on how to accurately translate these details as would have most certainly been the case had I been notating the work. The process was responsive and the documentation immediate: the information that I

attended to did not need to cohere in my physical body before grammatisation. The experience felt less autonomous in comparison to the other studies where I was responsible for directing my own analytic activity.

My experience of live annotation led me to contemplate the purpose of documenting information that would also be captured in the video record as audio-visual data. If details of a choreographic work already exist as part of the technical object (i.e. choreographer's verbal instruction, gestural direction) could annotation be described in some instances as duplications? And, if so, what was the value of this? The purpose of such "duplication" becomes clear when returning to the annotated videos where this information becomes the means of navigation. In locating a particular instruction, comment, or moment in the work, it is no longer necessary to watch the video footage in its entirety. Instead, annotation enables one to navigate the video in a hypertextual fashion or conduct a keyword search. Beyond these advantages, inscribing audio-visual data into the technical object means that viewing becomes more skilled, knowledge more comprehensive, and the analtyic eye more sophisticated through repeat engagement and the concretisation of observations.

Live annotation felt that I had unwittingly undertaken that which I sought to avoid in Example 1; I had omitted the dancers' perspective and created an account of the work from a predominately observational stance. This omission was primarily because of the motivation for live annotation: I was seeking insight into the practice and not intending to create an accurate representation for dissemination. Nevertheless, my experience emphasises the necessity to consider the logistics and ethics of including voices other than the choreographer in documentation. As video annotation becomes more prevalent, it is essential to explore the integration of video mark-up in creative process. For this to become a reality an understanding of the value of annotation is required, which is what this article seeks to offer along with clarity of how the benefits of annotation outweigh any intrusion or modification in working methods.

Comparison to notation
Dance notation systems are governed by formalised analytic and conceptual frameworks that overdetermine what is inscribed into the technical object and thus cultural memory of dance. The prescriptive nature of notation limits what kinds of knowledge can be inscribed and thus how useful it is considered to be for contemporary movement practices. Despite its comprehensive nature, Labanotation is not as ubiquitous in dance as many advocates hoped it would become. Few dancers and choreographers today read dance notation[16] as it is 'a

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[16] The relatively recent surge in Labanotation in France counters this trend (see Challet-Haas, Cottin, and Simonet, 2016).

different way of looking at and relating to movement' than is customary in dance practice (Hutchinson Guest, 1984, p. 136) and it is generally perceived as being too difficult and time-consuming to use (Bleeker, 2010, p. 3). The author of a notation score is necessarily also a score reader which means that notation is accessible to an expert and limited community of users. Performance scholar Maaike Bleeker suggests that in response to dissatisfaction 'with more conventional modes of notating or documenting dance by means of dance notation systems like Laban and Benesh, descriptions, drawings or video registration, [artists] set out to develop new digital tools to transmit, analyse and interpret dances' (2010, p. 3). Video annotation is one such tool.

Elements of the annotation process are similar to notation, the discretisation of information for instance. In both annotation and notation, what one is observing is translated into small units that are available for study. Translated into a notation score, units of the dance work are available for reference and detailed study, while annotation divides the video content into more manageable units of annotation. Both methodologies are iterative and recursive processes: a structure or framework is first created followed the addition of information layers that become more refined and precise with viewing. Subsequently, the quality of viewing in both processes is fragmented and understanding asynchronous. Finally, the information inscribed into the technical object is determined by the decisions of the notator (in translation) or annotator (in augmentation) and the cultural context of documentation.

My experience of video annotation for dance analysis, visual ethnography, and documentation indicates common characteristics does not appear to have a similar identifiable and sharable purpose to notation. Annotation does not have a predetermined scheme: the annotator works according to a framework (more or less consciously) determined by their particular needs, interests, and research questions. And this ultimately shapes their understanding and what is documented. Subsequently, annotation is a more accessible method than many dance notations because the process and output do not require specialist skills. Annotation does not necessarily (although it could) pose pre-determined limitations on what can be discovered or communicated as is the case with dance notation.[17] This means that the responsibility for inscribing the cultural memory of dance has the potential to be diverse and more democratic than notation. Nevertheless, notation systems such as Labanotation are celebrated as a means of international communication as its 'nonverbal symbology poses no language barriers to international exchange and research' (Hutchinson Guest, 2005, p. 5), while the language of text-based annotations such as those facilitated in PM may present challenges widespread dissemination. Even so, the dedication

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[17] Nevertheless, annotators may choose to employ notational frameworks and terminology in the analysis of video content and the potential of this remains to be seen.

require to reach fluency in systems such as Labanotation also limits how and where dance scores can be shared.

Concluding thoughts

This article was motivated by a paucity of understanding of video annotation practice. The four examples discussed illuminate immersion in the phenomenon of annotation from different perspectives and accounts of this experience have been used to develop an understanding of annotation. Annotations are responsive and tightly correlated to the information content of the technical whence they arise. Subsequently, the content of annotations are determined by the materiality of the object (in these cases, the score and video document); the content it represents (a choreographic work or creative process); the intention of annotation activity (dissemination, analysis, ethnography, documentation) and what the annotator brings to the process.

My annotation practice has enabled a comparison to my experience of Labanotation helping me to articulate some similarities and differences between the processes, outcomes, and attentional demands for the two practices. Notation is used primarily for the purpose of creating a representation of a live event while the primary motivation for annotation is augmentation. Notational and annotational practices concretise ideas and knowledge but through different processes and outputs. Annotation facilitates a particular kind of engagement which is distinct from notational activity in terms of the mode of enquiry and what kinds of information is selected for concretisation. This comparison was more challenging than initially anticipated, partly because a single approach to annotation did not transpire. Different technical objects invite particular approaches to annotation as does one's relationship to the source. The four presented studies illuminate varied and diverse intentions, processes and outputs of annotation and, therefore, intended functions are not universal. Nevertheless, I propose that the adoption of annotation is rooted in notational ideologies of grammatisation and the desire to find an appropriate method of illuminating, stabilising and legitimising movement practices.

Video annotation can provide valuable insight into the knowledge that arises from the artistic, creative, experiential, phenomenological movement encounters. However, it is an emergent practice and, despite gaining momentum, is not (yet) ubiquitous in studio practice and research. Video annotation has analytic, pedagogical, and collaborative potential for artists, researchers, and anyone working with or interested in dance, but it is unclear to what scale video annotation tools will be embraced and integrated into artistic practices. Broadly speaking, the adoption of video annotation indicates a shift in analytic practice from codified notational *systems* used by experts and governed by agreed and shareable

frameworks towards *tools* employed by individuals and driven by their interests and expertise. This arises from the need for idiosyncratic approaches for documentation and greater flexibility in responding to contemporary practices. It also represents a shift in documentation practice, from creating complete representations of work towards capturing process. This is not to say that codified systems of dance notation are obsolete. They are valuable research tools and educational aids (Hutchinson Guest 1984: 78) and 'are systems of analysis that can be used to illuminate many aspects of the phenomena of movement' (Youngerman, 1984, p. 101, see Watts, 2013, p. 372). Notation systems may well be integrated into annotation practice by some users, but one of the strengths of video annotation is that it is unhindered by esoteric frameworks. Video annotation is a logical development in the trajectory of analysis and documentation, a way to draw on the benefits of technical inscription and the value of video capture.

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