

# It is not Dance, is Data: Gearing Ethical Circulation of Intangible Cultural Heritage practices in the Digital Space

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## Abstract

The documentation, protection and dissemination of Intangible Cultural Heritage (ICH) in the digital age pose significant theoretical, technological and legal challenges. Through a multidisciplinary lens, this paper presents new approaches for collecting, documenting, encrypting and protecting ICH-related data for more ethical circulation. Human-movement recognition technologies such as motion capture, allows for the recording, extraction and reproduction of human movement with unprecedented precision. The once indistinguishable or hard-to-trace reproduction of dance steps between their creators and unauthorized third parties becomes patent through the transmission of embodied knowledge, but in the form of data. This new battlefield prompted by digital technologies only adds to the disputes within the creative industries, in terms of authorship, ownership and commodification of body language. For the sake of this paper, we are aiming to disentangle the various layers present in the process of digitisation of the dancing body, to identify its by-products as well as the possible arising ownership rights that might entail. "Who owns what?", the basic premise of intellectual property law, is transposed, in this case, onto the various types of data generated when intangible cultural heritage, in the form of dance, is digitised through motion capture and encrypted with blockchain technologies.

**Keywords:** intangible cultural heritage, digitization, dance data

## 1. Introduction

The mutually correspondent dyad of dance and language and its cross-pollinating nature has illuminated the study of both phenomena in academic discourses. Eastern-European ethno-choreologists have focused on disclosing the implicit existent grammar in each dance idiom (Giurchescu and Torp, 1991). And as early as the sixties, Martin and Pesovár (1961) already employed the methodologies of linguistics to perform structural analysis of Hungarian folk dances. In the US., the usage of linguistic-based approaches to illuminate the intricacies of dance can be traced to Kaeppler (1972), who went as far as drawing analogies from phonemes and morphemes to build equivalent analytical units for dance like kinemes and morphokines. In (Hanna, 2001), the author frames dance as a form of language, because of its communicative affordances and its capacity to transmit emotions as well as ideas that range from very concrete to very abstract. Regarding the so-called hard-sciences, different experiments and metrics revitalizing the premise of the 'motor theory of perception' keep linking the mental simulation of bodily movements as the basis for any kind of cognitive operation, ranging from very conceptual tasks to the perception of language (Lieberman and Mattingly, 1985). As Godoy (2009) remarks, with the advent of brain imaging techniques, there now seems to be solid evidence in support of the idea of motor involvement in language perception (Luciano Fadiga and Rizzolatti, 2002). It is within this interdisciplinary matrix that dance and

movement practices make their entrance into the digital space(s) on the XXI century, but this incursion only spawns never-before-seen tensions regarding creativity, reproduction and embodiment as well as the intellectual property laws that protect them.

We have come a long way since the lawsuits of "Image rights VS free speech in video game" or the "Lindsay Lohan VS Rockstar games" for the alleged misuse of the identity of celebrities and performers in the form of 3D renderings for video-gaming platforms. After a pandemic that has pushed people to abandon the physical dance-floors and join the metaverse, users and content-creators are these days disputing over the dance steps performed by their virtual avatars. Movements and dance steps that used to convey the embodied skills of performers are now reproduced and sold as pieces of data. This is how online interactive video-game platforms like Fortnite, one of the most successful ones in history, make their revenues. By selling its nearly 350 millions of registered users, short sequences of movements or 'emotes' that allow virtual avatars to dance exactly like their favorite celebrity. The circulation of embodied creativity has made a 180 degree turn. After dismissing the four appeals made in US. Courts by dancers who claimed to have their movements stolen by this software and because of the heated feuds that intellectual property laws seem unsuitable to prevent, we raise in this article alternative ways to protect dance steps, maybe not under the category of 'choreography' but as pieces of data. Since the issue

of appropriation of kinetic or choreographic material by unauthorised third parties is both a legal problem and an ethical issue, we deploy and disentangle, over the following sections, the various layers that are unleashed when digitising the human body and the language configured by its movements. We will narrow our focus to two instances, the usage of motion capture recording technologies, as the one employed for digitising sign-language (Jantunen et al., 2012); and secondly the encryption of Non-Fungible Tokens (NFTs) on the Blockchain (Pilkington, 2015; Wood, 2014) associated to dance steps. It is pressing to consider all the digital assets and objects that are created throughout these processes, to then move forward to account for the authorial and ownership-related tensions that stem from them.

## 2. Intangible Cultural Heritage (ICH)

We find value on the notion of 'intangible cultural heritage' as an analytical label to engage with a set of practices and practitioners in the effort to explore the potential that new human language technologies hold for ethically circulating creative products, as it is precisely collective creativity, the one that is in a heightened state of vulnerability. Herein, we introduce several definitions of the term that help map-out embodied practices, specially in their original form, since, as we will see over the upcoming sections, all kinds of movements get equalized into pieces of data once they enter the digital space.

The UNESCO (2003) convention has defined intangible cultural heritage as "the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artifacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognise as part of their cultural heritage". According to the same convention, such expressions of ICH can be manifested in the form of: (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; (b) performing arts; (c) social practices, rituals and festive events; (d) knowledge and practices concerning nature and the universe; and (e) traditional craftsmanship.

An analogous definition of ICH can be found in the developments of the World Intellectual Property Organisation (WIPO) under their analytical category of Traditional Cultural Expressions (TCE). Such expressions may comprise pre-existing materials dating from the distant past that were once developed by "authors unknown" through to the most recent and contemporary expressions of traditional cultures, with an infinite number of incremental and evolutionary adaptations, imitations, revitalisations, revivals and recreations in between.

As seen, intangible cultural heritage or traditional cultural expressions both, could be effective categories to frame the embodied creativity of communities who put an accent on transmitting knowledge from one genera-

tion to the next, within which, language, oral traditions and performing arts become the more relevant cases to be foregrounded for this study.

### 2.1. Copyright Issues for Dance as a Digital Object

To address the issue of dances being "stolen" across digital spaces, it is necessary to narrow the scope with the question, "what is it that is being appropriated when a virtual dance is being misused"? And to solve such query, it is necessary to first account for the kind of materials that virtual dance steps or choreographies are made of, when they circulate as digital objects. To illustrate these matters, we are choosing the case of motion capture technologies, which are an efficient and very precise way to digitise the dancing body.

Motion capture has been used for an array of digitisation initiatives that range from sign language (Jantunen et al., 2012) to dance (Romarheim, 2014). Notably, this technology does not register or portray images in the same way that regular video recordings do. On the contrary, faces, bodies and gestures are reduced to coordinates and rudimentary skeletons made out of segments and 3D points against a black background. This very anonymisation of the identities of the four plaintiffs described before in the Fortnite cases, has been enough to extinguish their legal aspirations, since they were all dismissed in court; but paradoxically, it was ineffective at derailing the performers from recognising that their creativity was being taken and sold within the video game in the first place. The four plaintiffs in these cases, could not succeed at obtaining protection for their dances because they were 'too short' for qualifying for copyright protection, which is a constrain in the US not necessarily present in other jurisdictions like France. On the other hand, because their dance steps identified in the software were anonymised by the interchangeable avatars and their customisable 'skins' available on the video game, the dance-related data ended up being obscured and indistinguishable in the eyes of decision-makers, which were unable to see the resemblance claimed between the dancers/plaintiffs and the digital avatars dancing their steps. This is not the first time that courts have difficulties grasping or 'seeing' kinetic material as an object of legal value in itself. During the first half of the XX century, Court Houses in the US, were unable to identify the value of dance, as body language material worthy of copyright protection until a technological development such as Labanotation scores, allowed to render it visible in the form of a written notation to reveal its underlying structure (Kraut, 2009). Such conditions have further reiterated the predominance that written language and musical scores have had over embodied creativity when it comes to obtaining protection from the law as they were already fixed over tangible mediums. Now that digital technologies, such as motion capture, can finally apprehend, reproduce and transcribe dance and move-

ment, the evanescent nature of embodied languages has become tangible at last in the form of data. As such, 'stealing steps' from a video or even by learning it from their creators is a phenomenon of a different scale and strain, if compared to the reproducibility of motion capture data, that used to be 'dance' before being digitised, being transposed to the virtually infinite avatars/bodies of the users of online gaming platforms. The former being an illegal human-to-human operation, given that a copyrighted choreography is involved, and the later being an unethical human-to-avatar one by proxy of the digitisation process.

## 2.2. The problem of "who is the owner?"

Misappropriation of dance in the 'real' world of dancers made out of flesh and bone, involved the apprehension of kinetic material embodied by the appropriator. Despite the fact that the misappropriation of dance in the form of motion capture data is manifested in virtual bodies or avatars, one could still trace the movements to human bodies whose labour and creativity engendered the movement at some point. Cultural practices have been in dispute already in relation to the UNESCO promulgated system for the Safeguarding of Intangible Cultural Heritage. As Lixinski (2011) points out, inscription of an element on the representative list does not imply exclusivity or constitute a marker of intellectual property rights. With the advent of the digital era, not only metadata of intangible cultural heritage items are circulating across the digital space, but also representations of the practices in themselves. Further advancing the multi-layered prism of data that is spawned by digitization processes, blockchain technologies are now adding up another 'encrypted' layer of information when dance is being digitized. With its tamper-proof-qualities and authenticating possibilities, blockchain related applications for the documentation and digitization of cultural/artistic expressions are flourishing at light-speed. Besides the practical and innovative uses that all these technologies are making available for the creative industries, the truth is that there is little to no clarity about the entailing rights and consequences that follow the digitisation and 'encryption' of the dancing body, its likeness, its movements and image. The WIPO (2019) report published by the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore raised awareness about how difficult it is for intellectual property laws to prevent collective cultural expressions, such as the one held by indigenous peoples across the globe, from being misappropriated. The impossibility to match transient practices, such as dance, when they are sustained by entire communities of practitioners and the protection that intellectual property laws offer, is the subject of several research works (Karjala and Kirkwood, 2003; Gervais, 2003; Long, 1998; Frankel, 2014; Burri, 2008). Despite the agreement that typically conceived intellectual

property regimes are not suitable nor intended to cover transient/oral practices that are collectively transmitted from one generation to the next, the issue gets further complicated when such expressions enter the digital space. For this reason, we synthesize in the following section, the complexities around the data produced through motion capture recordings and the blockchain, based on the digitisation of embodied practices, in an effort to start deploying and clearing the new tensions that arise in relation to intellectual property.

## 2.3. Digitisation and Protection of ICH Data

Several initiatives are currently working to digitise, document and protect human movement that is performed with artistic, ritual, aesthetic, social or religious connotations. The interest behind this archive fever ranges from safeguarding purposes to commercial interests, as will be reviewed over the following lines. With each type of method employed for the digitisation of the human body and its movements, there are not only different possibilities that arise, but also different kinds of data that is engendered, with their correspondent challenges in terms of management, protection, storage, interoperability, and so on. As a matter of fact, objects of a different order arise in the digitisation/tangibilisation of the human body language and its movements: data-sets, assets, files, and encrypted tokens that still need to be reckoned with current intellectual property regimes. As evidence of the profound impact that the seminal texts of Taylor (2003) or Lepecki (2010) have had in the field of the performing arts for reclaiming the epistemic value of movement and performance, there is now a plethora of initiatives devoted to record, abstract, render and reproduce practices related to embodied creativity in the digital space, as proper pieces of embodied knowledge.

### 2.3.1. Safeguarding initiatives

An example of current projects dealing with the safeguarding of human movement-related practices is "Practicing Odin Teatret's archive: training transmission, interaction and creativity"<sup>1</sup>. Originated as an academic endeavor, the project aims to use new digital technologies to capture the corporeal and vocal training techniques of the members of the iconic company, the "Odin Theatre" of Denmark. The outcome of such digitisation processes is still a work in progress but several VR environments are already on the making, wherein users can train alongside the motion-captured representations of the members of the famous group, that dance, sing and perform right next to them, within digital and immersive spaces. This initiative proposes to create a sustainable model for the development, transmission and distribution of virtually archived theater acting techniques, in which the user becomes in-

<sup>1</sup><https://research.flw.ugent.be/en/projects/practicing-odin-teatrets-archive-training-transmission-interaction-and-creativity>

teractively and creatively engaged in the production of knowledge. Similarly, the "Bodies for Empathy Museum" by the Non-Profit Embodying Reconciliation-Colombia is working on developing motion capture-based alternatives for traditional practitioners and communities to digitise their dancing practices in a period marked by the constraints of social isolation. Through a basic motion capture platform that is available on any device, visitors of the Museum are offered the possibility to engage with practices that used to be transmitted physically on one-to-one dynamics, but that now are being extrapolated to the digital space. Projects like this, that are based on the recording, abstraction and reproduction of human-movement through motion capture technologies, are the reverse of video-games like Fortnite since all the performers and actors are consciously participating of the digitisation process of their embodied practices, even though they might employ the same methods and produce the same kinds of data. The 'Terpsichore' project (Anastasios Doulamis, 2017) offers a platform for transforming intangible folkloric performing arts into tangible choreographic digital objects. In the same way, the 'i-Treasures' project (Iris Kico and Liarokapis, 2018) implemented a digital environment for capturing the Intangible Cultural Heritage and Learning the Rare Know-How of Living Human Treasures .

### 2.3.2. Protecting initiatives

'Protecting' initiatives, as the Intergovernmental Committee on Traditional Knowledge at WIPO has expressed: The word "protection" is understood to mean protection in an IP sense (sometimes referred to as "legal protection"), i.e., protection of human intellectual creativity and innovation against unauthorized use. IP "protection" in this sense is distinguishable from the "safeguarding", "preservation" and "promotion" of cultural heritage (?). Aligned to this aim, the project 'Beauty in the streets' intends to <sup>2</sup> to protect human movement-related practices by 'tokenizing' dance movements and short steps on the Ethereum blockchain. By turning them into NFTs, the project allows performers to sell or circulate their movements as they consider more suitable. Under the same perspective, "Meta-movers" by Dylan Mayoral is an effort to try to gain attribution and stewardship of dance steps, once they start circulating on the metaverse. This initiative involves designing 2D representations of virtual characters performing dance moves that can later be used to mint unique NFTs on the Ethereum blockchain, ready to be sold to collectors and enthusiasts of crypto-art. For these last two cases, digitisation strategies of the dancing body go one step further, because on top of recording and reproducing movements for enjoyment, creativity and also profit, the artists behind them are invested in obtaining a degree of ownership over embodied creativity by attaching imperishable certificates

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<sup>2</sup><https://www.beautyinthestreets.com/>

of authenticity on the blockchain. Nonetheless, such ownership aspirations are yet to be reckoned with other no-so-cutting-edge frameworks, i.e. intellectual property regimes and related rights.

## 3. Our proposition : Between indexicality and commodification

As Auslander (1992) has debated, the issue of disputes of authorship and ownership in the arts is hardly new but its contemporary digital iterations are still waiting to be solved with each generation of creators, consumers, and their correspondent technological affordances and challenges. While walking in this direction it is important to not bring new technologies and possibilities under the restrictive authority of existing legal definitions, which translates into thinking of ethics in-and-out of the law, specially when it comes to intellectual property laws and their spirit of commodification of cultural production. This critical approach towards the premises contained in intellectual property laws does not translate to an animadversion of the possibility to profit from cultural products, should the communities or practitioners behind them render it desirable. In this way, the ideas we raise in the following lines try to grapple with these tensions while recognizing that there are no 'one-size-fits-all' solutions for the issues raised but there are definitely some conclusions that can be raised after the cases and rationale deployed over the previous sections.

### 3.1. Defining a new Ethical Framework

Stealing someone else's dance steps, specially if they are not protectable under IP law can be done in the 'real world' too. However, the extended reach, fluidity and reproducibility that dance steps (stolen or not) can have in the form of data, as the hundreds of millions of users of platforms like Fortnite bear witness to, should invoke a distinctive treatment. In the same way that ethnographers used to inadvertently win ownership rights over their recordings of folk songs recovered over their fieldwork periods, using motion capture to record the way that someone moves should also be considered as a process worth of discussion and regulation. But since recording, extracting and reproducing the likeness of someone else's movements is not only a legal issue but an ethical one, we propose that in the same way that the GDPR normative regulates the obtention, usage and reproduction of personal data recovered over interviews, motion capture files should be regulated too, specially when salient features or prominent pieces of choreographic material that belongs to an individual or a community are being used for commercial purposes. The field of visibility and power that academic spaces hold wherein researchers and informants hold asymmetric positions, has been already established and discussed but the unequal conditions to enter the digital space(s) to create assets based on human activities such as dance or movement, as well as

the distribution of profits that this entails, still needs to be reckoned from an intersectional stance. In the same vein, we raise the possibility of pursuing ownership rights over dances that have been digitised with motion capture, not under the category of 'Choreographic works' that most IP national laws offer, but rather as sets of data protectable through copyright. The result, scope and viability that this would imply are still to be discussed, specially if we consider that dancers themselves very rarely have the access, interest or literacy in these kind of technologies. In other words, recognise the very moment that the corporeal practice of dance is transformed into motion capture data and protect it as such, to try to solve the innovation requirement, which in countries like the US imply the exclusion of dance steps that are 'too short' to be considered worthy of protection. Parallel to the power dynamics mentioned between researcher-informant, the duo animator-dancer also has to be carefully considered, as there is a great risk of well-versed professionals in computerized methods of human movement recording to end up hoarding every dance that enters the digital space in the form of data. As (Brekke and Haase, 2017) signals, computer scientists and tech developers are the new priest caste, "but there is very little awareness of the position of power and influence and very little willingness to accept the responsibilities that come with such a position of power".

In synchronicity to the various and odd intents of choreographers and dancers at the beginning of the XX century to have their craft finally being recognised as worthy of protection by intellectual property techniques, the digitisation of choreographic material could unleash a plethora of new ways to try to gain ownership and stewardship of the resulting data. For example, claiming that a data-set created based off a dance or a human performance should be granted a patent, is an alternative route that could be explored by practitioners around the globe. To support such strategy, it is interesting to recover the provision of Title 35 of the United States Code regarding Patents, which further describes what can be patentable: "First, the invention must be a new and useful process, machine, item of manufacture, or composition(!). The second requirement of your invention that has to be met to get a patent is that it must be non-obvious and reproducible by one skilled in the art."

### **3.2. Collecting Dance Data through Motion Capture technologies**

To disentangle the multiple threads at play in the digitisation of the dancing body, first let us describe the output or the kind of data generated while working on the kinds of digitisation processes that we have narrowed our attention to. When using motion capture technologies to capture and extract movement, the kinetic material or embodied knowledge of the performer is being transformed and recorded as discreet points in a 3D

space with coordinates X, Y and Z. Their changing positions are registered as plain numbers that account for the trajectory they travel on the 3 planes. These data sets, that used to be dance steps in their previous form, are usually exported as *.fbx* or *.tsv* files, and can later be re-imported for an infinite number of 3D avatars to perform them across digital spaces, through software packages such as Qualysis. This very possibility of a virtually infinite number of 3D avatars performing the same data extracted from dance steps, was already identified as a key factor preventing Court Houses from recognising any appropriation in cases of unauthorized use of choreographic material. As seen over the Fortnite cases, judges were unable to 'see' what is it that is being misappropriated when Epic Games reproduced the movements of the four plaintiffs on their popular software. Notably, at the official hearing, judges saw virtual avatars performing the dance steps of the plaintiffs under dispute, but given that the software allows for these in-game characters to look like anything from human-size squirrels to robots, the dissonance between the image of the virtual avatars and those of the plaintiffs who claimed to have their moves stolen, was concealing the underlining usage of identical choreographic material. It goes without saying, that such visual inspection of the disputed materials is insufficient as it overlooks the underlying identical reproduction of data, that once was dance steps, being reproduced across different virtual bodies. Particularly because, at the core of the discussions dealing with cases like this, should be the illegitimate reproduction of embodied knowledge, in the form of data, and not the unlawful usage of the likeness of the dancers or performers behind it. This very condition of evaluating data collected based on the movements of human performers, but later 'performed' by seemingly dissimilar virtual avatars, obscures not only the labour and creativity of those who embodied the kinetic material in the first place, but is bracketing and invisibilizing the input and design made by visual-effects creatives as well as computer animators whose work is embedded in these new materials, that mistakenly keep being treated as a regular 'dance' or a 'performance'. This very problem has been already discussed in the context of film studies, when accomplished actor Andy Serki's salient performance as the 'Gollum' in the Lord of the Rings was dismissed by the Oscars, after considering the character as a result of mere animation, instead of the seamless hybridisation of data produced by the human actor, along with the computer-generated images built on top of it by animators. The Gollum problem is one of a series of interrelated scenarios in which digital information derived from a performer is used to create performances, and often performer, with varying degrees of independence from the source.

### 3.3. Safeguarding Dance Data with Blockchain Technologies

Nonetheless, and even though special attention needs to be granted to the way in which intellectual property systems recognise embodied practices, not all paths of protection of creativity need to rely on governmental authorities or centralized bodies. Herein, we highlight the experimentation that artists are working with within blockchain architectures and their applications. Regarding the blockchain, as a decentralised architecture for encrypted assets, (Greenfield, 2017) describes it rather enthusiastically as a technology that could give people powerful new tools for collective action, unsupervised by the state. Although, it is worth mentioning that the inclusion of a certain creative product on a blockchain platform, by proxy of a Non-fungible Token (NFT), does not equate to gaining copyrights over it, as the World Intellectual Property Organization highlights, it is nevertheless a robust alternative for creators who want to gain a tamper-proof and time-stamped certification of the moment when they 'upload' something onto the blockchain. We foreground these examples as encrypted certificates of authenticity and origin of creative products could work as para-legal strategies to settle disputes of authorship or educate audiences about the 'authentic' creators behind a practice, in the same way that communities of dance practitioners in the 60s used to sustain para-legal or extra-legal stewardship of originality and creativity of dance steps via mutual vigilance (Kraut, 2010). As relevant as such extra-legal strategies could be, they are not exempt of controversy. First, mutual-vigilance and good faith within communities of practitioners can go a long way, until it doesn't. Recognising someone else's authorship or ownership over a creative product, because they hold an NFT which pre-dates use or exploitation by other parties, could be an amicable way to settle misuse or appropriation disputes. However, such encrypted certificates of authenticity and ownership would not stand their ground against an actual copyright registration of the same element of intellectual creativity. In that sense, the law needs to further clarify the value that these new digital assets represent or their harmonisation with regular intellectual property systems. Second, even if the law prompts harmonisation between intellectual property regimes and the possibilities of these new technologies, recognizing the legal value of NFTs to prove authorship and ownership of creative products would not happen without problems, as that would prompt creators to rush into a 'tokenizing race'. In other words, equating holding copyrights or any other intellectual property rights over an element with having an NFT registered on a blockchain connected to it, would embark the creative markets, creators and artists on a race to be the first ones to 'tokenize' cultural expressions. As dystopian as this might sound, projects such as the ones described in the previous section, are already embracing this approach on the quest to 'tok-

enize' signature dance steps. On the other hand, the summing interest of the creative industries in 'tokenizing' cultural expressions on the blockchain, tend to blur in the gaze of audiences and traders, the different sets of data being produced by these encrypting' strategies, as well as the legal rights they might or might not entail. As exemplified with the aforementioned initiatives, dancers are already intending to increase the degree of ownership and stewardship that they have over the dance steps that they create, maybe in response to the public attention that surrounded the Fortnite cases. What they actually mean when they offer the service of 'tokenizing' a dance step or 'minting' an NFT on the blockchain, is obtaining ERC-721 tokens, whose metadata refers back to the creative product in itself, i.e. the dance steps. Usually these dance steps, or any kind of product being 'tokenized' rests on other digital storage services such as clouds or online repositories. In other words, the dance steps in themselves never really enter the blockchain but only the encrypted certificates that refer to them do. And as Iaconesi (2021) has straightforwardly point out, NFTs are not attached to the actual entities they represent, as we can find NFTs circulating even for the Trevi Fountain of Italy. In this sense, the current craze surrounding NFTs for the exchange of art pieces, along with the possibility of trusted digital evidence of their ownership, is at this point, and until new legal amendments, more of a euphemism. This is not to say that NFTs are not effective and successful, as people are already commodifying and selling their creativity with their help. As a complement, in the next section, we try to articulate the potentialities and short-comes of the crypto-space with other technologies and systems in the quest for more ethically-minded paths of circulation of embodied creativity across the new digital spaces.

## 4. Conclusion

Intangible cultural heritage practices, indigenous embodied creativity or dance, as a Western practice, they all hold different aesthetic, cultural and legal statuses; however, once that their are extrapolated to the digital spaces, facilitated by motion capture technologies or blockchain architectures, they are all equalized as data. The conversion of any of these practices of embodied creativity to sets of data needs to be aligned with broader strategies of safeguarding and protection, considering the legal limitations and constrains identified in the stewardship of intangible cultural heritage practices, even in their previous form before any digitisation process. Some initiatives for the digitisation of the dancing body aim to obtain a degree of ownership or stewardship of the related practices, precisely because of the unsuitability of intellectual property regimes to protect embodied knowledge in its manifold manifestations. We have described several lines of work that could articulate different kinds of technologies in-and-out of the law for enhancing the agency that artist have

regarding the ways in which their embodied practices circulate. Even though embodied practices can end up being equalized as pieces of data once they are digitized, it is pressing to think of what happens before such incursion on the digital space, what is necessary to do so, or if even that is the path that marginalised communities of practitioners want for their own intangible cultural heritage practices. On top of discussing the issue of the potentialities and shortcomings of new technologies of human-movement recognition, accessibility issues need to be reckoned as well. Indigenous communities and other communities of traditional practitioners could end up on a double state of vulnerability, both by not being able to be granted protection for their practices by intellectual property laws, neither benefiting from the para-legal strategies of protection and safeguarding that new technologies could afford. Finally, and as an extension of the scope of this paper, it would be relevant to differentiate the legal regimes from one country to another, to identify the consequences that would entail obtaining actual protection for short sequences of movement as the ones involved in the Fortnite cases, in terms of the extent of such protection. Complementary to this, further attention needs to be paid to the ramifications of protecting dance as data, in terms on the kind of limitations that such approach would entail for other practitioners within the metaverse, and even more intriguingly, for those physical dancers that want to replicate the steps underlining such sets of data, in the 'real world'.

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