# The Ethical Implications of the Technological Surveillance of Art

Norman Makoto Su

School of Information and Library Studies, University College Dublin, Ireland
*normsu@ucd.ie*

**Abstract.** Every night, traditional Irish musicians gather in sessions at pubs and other public spaces to play tunes together. Each public space has its own tradition and history: i.e., context, players, repertoire, styles, etc. Moreover, this tradition is temporally situated; for example, tunes go in and out of fashion. Yet, tunes themselves are mobile—they travel from session to session via recordings, players, and the Internet. Based on a 2-year long ethnography of Irish traditional musicians, I am developing TuneTracker, a system to record and track the tunes played in a session. In this position paper, I will ask of the ethical implications of surveilling tradition. I argue that focusing on the traditional, artistic genre demands a different set of questions regarding creativity, ethos, ownership, and power relations.

## Introduction

An oral tradition is a mysterious process due to the lack of historical records. For outsiders—those who have not been part of generations tasked to keep the tradition—the activities these members do seem effortless and almost magical. However, the truth behind the skill and craft in tradition is more complex. While tradition is often conceived of as forming through happenstance, scholarly work has shown it to be just as susceptible as other phenomena to being a socially constructed reality. For example, the Scottish people owe their "traditional" kilt and its tartan pattern to a well orchestrated movement that artificially created an independent Highland tradition (Trevor-Roper, 1983). Similarly, government organizations in Ireland have constructed the "standard" repertoire of Irish tunes (Fleming, 2004).

Drawing from a 2-year long ethnography of Irish traditional musicians, this position paper will first briefly introduce an agenda to demystify the practices of tradition. This agenda proposes to surveil, to an unprecedented scale, the practices of tradition. The data collected will be publicly presented online and at sites where tradition is maintained or made. This will unveil tradition and, I argue, facilitate face-to-face interactions—crucial for becoming competent members of these traditional communities—for those who are seeking to enter the tradition.

This position paper's main focus will be on the ethical implications of un-blackboxing tradition. While surveillance and data gathering have long been a concern for socio-technical scholars, surveillance in the arts has been unexplored. Surveillance of art brings with it a new set of concerns. Rather than concerns about how data such as past grocery purchases, credit card transactions, web search queries, or social media behaviors may harm or benefit us, we are concerned with how our creativity, artistic ethos, ownership, and power relations may be effected. What does it mean when the creative processes involved in maintaining tradition becomes so publicly visible? And, what does it mean when creative processes are no longer lost to history?

## Fieldsite & Background

The tradition I will be discussing is Irish traditional (trad) music in Dublin, Ireland. Trad players gather in sessions at pubs, festivals, house parties, and other public areas to play tunes together. Field work in Dublin consisted of over two years of participant observations. Pub sessions in Dublin and learner sessions were regularly attended (at least once a week). Learner sessions are primarily for adult beginners and allow the use of sheet music or other learning aides. Detailed field notes were taken, and, when allowed/appropriate, photos and audio were also captured. I also conducted 20 semi-structured interviews with professional Irish traditional musicians in Dublin. My methods in part draw inspiration from Fine's (1998) immersive ethnography of amateur mushroom hunters and academic mycologists.

Briefly, a trad session is a gathering of musicians in a public space to play Irish music together. Musicians play sets of tunes in a session. A set is two or three tunes played in succession without a pause. Tunes in a set usually have the same meter/rhythm (e.g., jig, hornpipe, or reel). Each tune in a set is repeated three times in a row. In turn, most tunes have an A and B part, both of which are repeated twice. The musician who starts a tune is usually expected to lead (i.e., choose) what tunes follow one after another (thus forming a set). For a fuller description, both Foy and Adams (2008) and Benford et al. (2012) provide a good introduction to trad session etiquette. Benford et al. (2012) note that Irish sessions have a "moral order": they have an implied hierarchy (a session leader who starts many of the tune sets), frown upon overt use of paper artifacts, and have a shared repertoire. My own observations found that it is sometimes considered rude to start too many sets on your own or to play obscure tunes that no one else can play. Additionally, accompanists such as guitarists and bodhrán (an Irish drum) players must be careful not to overwhelm the

melodic nature of the session.

My current work (Su, 2013) shows that music making in Irish traditional music is a social, collaborative, and collocated process. In my analysis I draw from the *aesthetics of reception* (Jauss and Benzinger, 1970; Iser, 1972), a theory of literary criticism that states: a "literary work" (the art) is neither the text (the musical notes) nor the realization of the text accomplished by the reader (the trad musician). Rather, the literary work is only brought into existence in a *virtual space* where the reader's background and the background within which the text appears merge. Using this lens, I show how trad musicians need to be cognizant of this process between text and reader when learning, knowing, and retaining tunes. Importantly, the *representation* of "tunes" is never concrete; each reading of a tune offers new possibilities for interpretation. Adept musicians are aware that to form a tune that is aesthetically worthwhile, they must intelligently amalgamate various representations (e.g., audio recordings, YouTube clips, transcriptions, etc.) together.

Crucially, the tune is to be played in a session. Thus, each reading is situated locally in a session with its whole history of reading practices. Tunes must be sensitively contextualized with the session. Tunes are a collaborative (Benford et al., 2012) and individual accomplishment. Musicians do not simply sit at home to practice tunes to be "performed" in a session (indeed, seasoned trad musicians rarely practice at home to play in sessions); rather, the session is precisely where practice happens.

The issue for novice musicians then becomes: how might they attain this intuitive grasp of practicing tunes? In other words, how can they understand the process of the aesthetics of reception so inherent in trad music? With the developer of Tunepal (Duggan and O'Shea, 2011)—a sort of Shazam (www.shazam.com) for trad music—we are taking a first step to explore how we might open up this process of playing tunes in the tradition.

## TuneTracker: Surveilling Tradition

*TuneTracker* is a system to surveil tradition. We are planning to deploy the system in one of the most respected pubs in Dublin for trad music. This system will be permanently and continuously running inside the pub. Tunes and their variations that are recognized in the pub's sessions will be publicly displayed in the pub and also online on a website. Our interface will allow users to engage with and comprehend an archive of music-making practices. As each tune name is displayed, its history of reading will also be shown. For example, when was this tune played before, how often is this tune played in this session, how often is this tune played in other sessions (not the current one), what tunes are often played before or after this tune, etc. Engagement with the interface happens in two spaces: locally in the pub itself and externally via the Internet. While continuing my participation in the session, this "social experiment" will allow me to see how the history of tradition (reception) might help or hinder both novice and professional trad musicians.

# Ethics in the Surveillance of Art

The use of the word surveil is deliberate. TuneTracker promises to implement data collection of trad practices to an unprecedented scale of quantity and granularity. With such data, there are a number of exciting possibilities for statistical analyses: cross-correlation (e.g., what tunes go well together, what kinds of tunes are in fashion, why sessions favor certain tunes) and predictive power (e.g., I can guess with X% confidence what the next tune played in this session will be). The ability to forget is nullified (Blanchette and Johnson, 2002; Bannon, 2006). Certainly, this is not to claim that recording or data collection of tradition has not been done. Ethnomusicologists and avid amateurs have always made field recordings (initially, TuneTracker will not store recordings of audio, merely the name of the recognized tune and the transcription that best matches it). However, to have TuneTracker running constantly without the need for human intervention (to start the record button) is a different scale of surveillance. In addition, TuneTracker promises instantaneous feedback—viewers who are collocated can see the tune names as tunes are being played, building up a history of tunes played thus far at the session now and in the past, and Internet viewers can browse through these historical archives of tune practices.

Though a nascent step, we have identified four possible areas of investigation with regards to the ethics of surveilling art:

**Creativity**  How might the creation and maintenance of the tradition be effected by TuneTracker? For example, will musicians in the session (perhaps the higher-ups in the implied hierarchy of the session) suddenly be conscious that they often play the same tunes? Will they worry about becoming stale and change their habits, defying expectations? How does being aware that you are being monitored effect the selection of tunes and tune genres? Will the history of tune practices threaten to also standardize the session (creating a self-fulfilling prophecy)?

**Artistic Ethos**  How might the artistic ethos of Irish trad music be violated by surveillance? Studies (Su, 2013; Benford et al., 2012) have shown that musicians frown on artifacts that are obviously (i.e., publicly discernible) aides to help musicians play tunes (e.g., sheet music or crib notes). Will TuneTracker fade in the background or will it remain overt, drawing attention away from musicians and towards the public display? Additionally, surveillance, we might imagine, puts pressure on a session to adequately represent tradition. We might imagine session players actively trying to curve the playing of modern tunes or increasing the amount of tunes from the local region (e.g., Sligo or Donegal tunes). Finally, what about the "mystery" of oral tradition? Perhaps musicians would like to keep the transmission of tunes ambiguous.

**Ownership**  In the past, travellers and other communities who relied on music to make money kept their repertoire of tunes secret, only carefully disclosing them in performances. John Doherty, a famous Donegal fiddle player was known to travel from town to town, playing tunes as well as selling his tin wares.

However, he was often hesitant to have people record him playing, lest others copy him. His playing was his own and his livelihood. While sessions are a collaborative phenomena, the issue of ownership may arise. Might sessions be worried that other sessions would duplicate their repertoire?

**Power Asymmetry and Obfuscation**  Data gathering technologies often redistribute power, creating new political dynamics. Users often become unaware of what happens to information about them and what happens to users because of that information (Brunton and Nissenbaum, 2011). Does having TuneTracker track tunes in Dublin give it undue influence over the tradition that it normally would not have? Traditionally, musicians might stop by a pub in Dublin, pick up a few tunes and bring them back to their local sessions. Now that musicians have unprecedented real-time access to changing repertoires, they may be influenced by certain sessions due to perceived notions of authenticity (i.e., sessions in Ireland vs UK vs Japan). In addition, will musicians perhaps seek to rebel against TuneTracker? For example, they may seek to obfuscate TuneTracker, playing tunes merely to "test" TuneTracker's abilities, or to misinform the Internet of the session's tunes.

# Conclusion: Creating a Mobile, Collocated Tradition

While the ethics of TuneTracker may threaten tradition, I believe it has the potential to make the Irish tradition itself more mobile. While sessions are by their nature collocated activities (one learns tunes to play them with others), the tunes themselves are mobile representations of music. Radio and records have been a large and immense factor for the dissemination of tunes (Sommers Smith, 2001). For example, the common sets of tunes played today often originate from recordings by emigrants; they recorded tunes in the US and the records were listened to back in Ireland. However, the difference here is that these recordings represent individuals at exact moments of time (though obviously these individuals have been influenced by the sessions they have attended and the styles of their hometowns). In contrast, TuneTracker encapsulates the practices of sessions (groups) on a longitudinal basis. It is hoped that this system will allow us to bridge amateurs and professionals by lowering the barriers in joining and enjoying tunes.

Yet, there are some potentially serious ramifications in surveilling. This position paper seeks to engender discussion on the ethical implications in creating a system that surveils the traditional arts whose activities center about collocated face-to-face interactions on mobile tunes. I argue that surveillance or data gathering in the art context demands a different set of questions from previously discussed domains such as finance, web searches, computer monitoring, and shopping behaviors. Asking about creativity, artistic ethos, ownership, and power asymmetries may allow us to glean how we can design systems to respect collocated groups and support group activities that revolve around phenomena that are inherently difficult to represent (tunes and music making).

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