

Applying a Knowledge Conversion Model to Cultural History: Folk Song From Oral Tradition to Digital Transformation

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Abstract: The purpose of this research project was to test the applicability of the SECI model to a cultural domain within an ethnographic context: the transmission of Scots folk song. Drawing on the archive of the School of Scottish Studies at Edinburgh University, the model was applied to five historical phases defined by changes in the use of media in song acquisition and transmission: oral tradition; externalization in print; dependence on literacy; audio media; and digitization. The findings show that the model offers a valuable analytical framework that can be widely applied in cultural as well as organizational contexts. In addition, the model may be used in a longitudinal analysis to describe non-static relationships between knowledge processes and changing contexts of media and society over time. In addition, the SECI model also emphasises the critical roles played by the community (or communities) in the transmission process, and the physical and virtual spaces in which those transmissions occur.

Keywords: SECI model, digital transformation, folk song, knowledge conversion

1. Introduction

The present paper has its origin in an interdisciplinary exchange of ideas. A well-established model in the field of knowledge management, the 'SECI' model of knowledge conversion, is applied in a novel way to an area of ethnography, namely the transmission of Scots folk song. The aim was to explore the potential of the model to provide new insights within the context of cultural activity with considerable time depth. The model provides an interesting new perspective on the subject matter, and by reconceptualizing changes over time in this area as changes in knowledge conversion processes, it also makes it possible to draw instructive parallels with ongoing processes of the digital transformation of culture more widely.

Nonaka and Takeuchi's (1995) 'SECI' model of knowledge conversion takes as its starting point Polanyi's (1966; 1974) distinction between tacit and explicit knowledge. Tacit knowledge is expressed in the practice of a skill, whereas explicit knowledge is rationalized and articulated. For Nonaka and Takeuchi, the dissemination of knowledge takes four possible paths: tacit to tacit (socialization), tacit to explicit (externalization), explicit to explicit (combination) or explicit to tacit (internalization) (1995). Those elements of tacit knowledge that can be converted into explicit knowledge can be shared, combined to create new knowledge and fed back to be internalized and shared again through the socialized route, tacit-to-tacit, in an ongoing process of knowledge production.

This model has been found useful and has been widely adopted and applied in knowledge management predominantly in organisational contexts, though there is some disagreement about how tacit knowledge should be understood, in particular whether tacit and explicit shade into each other or are distinct phenomena (see Spender, 2005, for references). Nonaka and Takeuchi have been criticized for misapplying Polanyi's (1966; 1974) concept of tacit knowledge. Tsoukas (2005) argues that they treat the tacit as if it were fully convertible into the explicit, whereas, on the contrary, there will always be a somatic element in skilful action that is not brought to consciousness, e.g. the muscular movements involved in riding a bicycle – or in the present study, the stylistic and expressive elements of singing – and so there will always be a role for practical face-to-face learning. Nonaka *et al.* (2005) take this into account, using the Japanese concept of *ba*, which can be understood as the situational context. *Ba* is a shared space in which relationships can form, leading to knowledge flow and creation, and as such can be physical, virtual or intellectual.

Clearly, if knowledge can be articulated by an observer, it can be articulated by a practitioner. In some of the examples in Nonaka *et al.* (2005) the idea that the practitioners cannot express their tacit knowledge is rather stretched. For the utility of the model, what is important is the fact that knowledge is unavailable, i.e. tacit, from the point of view of the larger entity (the company in the original application of the model), while it remains embodied in practice only. James and Lucardie (2003) argue that, depending on how it functions, tacit

knowledge, while unformalized in actuality, may in some cases be amenable to formalization. Such a process of externalization captures what can be made explicit, though some knowledge may well be lost in the conversion, and that is certainly the case with folk song.

In applying the model to traditional singing we emphasize the procedural aspect of ‘tacit’ knowledge rather than viewing it as inarticulate. Though there is much more to singing than the words, and many singers actually have to sing a song over in order to recall the words, songs do have an essential verbal component, so it seems inappropriate to regard tacit knowledge in this context as inarticulate. From the point of view of the broader culture – which in our analysis takes the place of the company in the original model – knowledge that is embodied in the private practice of singers can be said to be tacit, in that it is unavailable either to common knowledge or to the academy. Oral transmission within a family or community can be seen as socialization, taking place spontaneously and on a purely personal level. When traditional songs began to be collected and written down (externalized), some part of this knowledge became explicit. Explicit knowledge can be assembled, compared and arranged, in a process of combination. When the explicit knowledge is fed back into the practice of learning and singing songs, this can be seen as internalization.

2. Research approach

Folk song is a particularly interesting area in which to study changing knowledge conversion processes over an extended period of time, as its content is amenable to encoding in various media: writing and print, sound and video recording, and now digitization. We shall consider five loosely delineated historical phases defined by changes in the use of media in song acquisition and transmission. These phases emerge sequentially, but older phases can and do continue to coexist with newer ones. The SECI model is applied to each phase and we discuss the key knowledge processes and how they have changed. In using the model in this way, it must be borne in mind that it is designed to describe knowledge conversion processes within organizational contexts. Even on that scale, more than one set of processes can be going on simultaneously. On the much larger scale of a population engaged in a widespread cultural activity such as traditional singing, this is of course also the case. The concept of situational context (or *ba* space) will be useful in characterizing important differences within a given time period.

The folk song tradition of Lowland Scotland is rich and extensive, and has been well documented. We shall refer to ‘Scots folk song’ below for convenience, but this should be taken to include songs in English, i.e. the folk song tradition of the Lowlands and Northern Isles (as opposed to the Gaelic language tradition of the Highlands and Western Isles). By folk song we mean songs considered old or traditional (including songs composed in a traditional idiom), sung informally or amongst people consciously identifying with a body of song considered old or traditional. With changing tastes and the advent of recorded music, the tradition has passed from naïve singers performing informally, to Folk Revival singers (referred to here as ‘folksingers’) performing for self-selected audiences. However, as we shall show, this is only one recent change in a history that can be characterized in terms of changing processes of knowledge conversion.

The main collection of Scots folk song recordings is that of the School of Scottish Studies (hereafter SoSS) of the University of Edinburgh, made from the 1950s onwards. The recordings of singers often include information about how the song was learned, and sometimes more extensive comments on that process. This material is a major source of our understanding of the tradition, and the singers, in the twentieth century, through the published work of the SoSS staff and others, in the SoSS’s own journal *Tocher* and elsewhere. The sound archive has now largely been digitized and re-catalogued, and at the time of writing is in process of being made available online by the Tobar an Dualchais/Kist o Riches (hereafter TaD) project. The present analysis is part of an ongoing study of over 2000 tracks containing information about song transmission (out of more than 10,500 digitized Scots song tracks). The SECI model was applied to the self-reported practices of folk song transmission documented in this sample. Where we quote directly from SoSS tapes below, we refer to the original catalogue numbers, so for instance SA1974.150.2 is a track numbered 2 on a tape numbered 150 and recorded by the SoSS in 1974.

The broad outline of how the folk song tradition has been passed on at different periods is uncontroversial, but it must be admitted that it is based on the work of folk song collectors working unsystematically with specific singers whom they had often sought out as notable tradition bearers. Nevertheless, these individuals are historical witnesses to the singing tradition as they experienced it, and as such we will on occasion quote

them directly below, drawing both on the published literature and directly on the digitized archive. Please note that quotations from recordings are given in the original Scots dialect. However, the quoted material is not in particularly broad Scots, and should be intelligible to the English reader.

In any discussion of folk song transmission, the medium of transmission is of central interest, especially the contrast between oral transmission directly from singer to hearer, and transmission via written (and later sound) media. Oral transmission has usually been regarded as more authentically ‘traditional’, and folksingers will often emphasize even now that they acquired a song in this way. The history of literacy in the population is therefore of some relevance, since literacy is a prerequisite for written transmission. High levels of non-literacy, even into the second half of the twentieth century, are characteristic of the (formerly) itinerant group known in Scotland as Travellers. The SoSS found this community to be a rich source of traditional material, and recorded extensively from them.

3. Analysis

Phase I: oral tradition

Although the term ‘oral tradition’ is used in the folk song literature, this is within the context of a society that possesses literacy as far back as folk song can be traced (Atkinson, 2011, p.145). However, if we take as a starting point the Middle Ages, the majority of people were non-literate, and so we can take it that the only knowledge conversion process for singing amongst the common people was socialization, that is tacit-to-tacit learning (Figure 1). Songs were learned by ear and memorized. Though this process is criterial for an oral culture, it remains a possibility in later periods also.

<p>socialization</p> <p>face-to-face, one-to-one or one-to-few oral transmission</p>	<p>externalization</p>
<p>internalization</p>	<p>combination</p>

Figure 1: SECI model of folk song transmission prior to mass literacy

Singing, along with storytelling, and other traditional pastimes such as asking riddles, would have been the main source of entertainment both in domestic settings and in gathering places such as public houses. Olson (2007a) quotes a number of nineteenth and early twentieth century descriptions of singing by the fireside in farm kitchens, on small farms where the farmer and the farm servants still met as social equals, which are suggestive of how people would have entertained themselves in earlier times, as are the accounts, and recordings, in the SoSS archives of Travellers’ evenings around the campfire.

Singing also passed the time while engaged in repetitive work, or while minding children or animals. Douglas tells us of Dick Cowan from Liddesdale, born 1892: “As a tailoring apprentice, he learned songs from his boss who sang as he worked” (1992, p.20); and she quotes Jim Wallace from Fife, born 1928, talking about his father (a farm worker?) singing: “People used tae sing quite a lot. In thae days, they didn’t need much excuse tae sing. Even the old man – there wasn’t a note o’ music in him – but he was aye gaun about hummin away tae hissell” (p.92). Bell Duncan, recorded as an elderly woman by James Madison Carpenter, had an enormous repertoire of memorized songs learned in childhood. She “seems to have sung mainly in private domestic contexts, ‘while working at the water mill, the spinning wheel [and] the loom’” (Bishop, 2004, p.397, quoting an unpublished Carpenter MS). Thus we have a glimpse of an oral culture in which singing was habitual and commonplace, even in private.

Phase II: externalization in print

In the eighteenth century there was an interest in recovering the older traditions, which were perceived as being in danger of being lost (Campbell, 2007). We now have, then, a process of externalization, as traditional song lyrics were written down and knowledge of them made explicit by collectors; and a process of combination, as they were edited and published.

Naïve traditional singers could, as individuals, be quite isolated from the externalized knowledge held in printed collections. For instance, Charlotte Higgins, born 1895, patiently learned ‘The Road and the Miles to Dundee’ and ‘Lord Gregory’ from an old lady whose memory was failing (SA1962.068). Charles Fiddes Reid from Aberdeenshire, born 1907, advertised in a newspaper for the words of ‘The Laird o Esslemont’ (SA1980.104), which his mother had sung. In some sense everybody was now within a national culture that included this externalized knowledge, but they could not necessarily access it at will from within their own situational context.

The medium of print entailed a major loss of information, as the song lyrics were detached from their tunes. The songs that were most sought after by early collectors such as Bishop Percy and Sir Walter Scott were the long narrative ballads. The externalization of the ballads in printed collections recast them for those outside the folk tradition as poems, and set up a separate situational context isolated from the song tradition (Figure 2). In 1963 Hamish Henderson was still trying to persuade the BBC to present ballads in sung rather than recited form (Henderson and Finlay, 2004: 44).

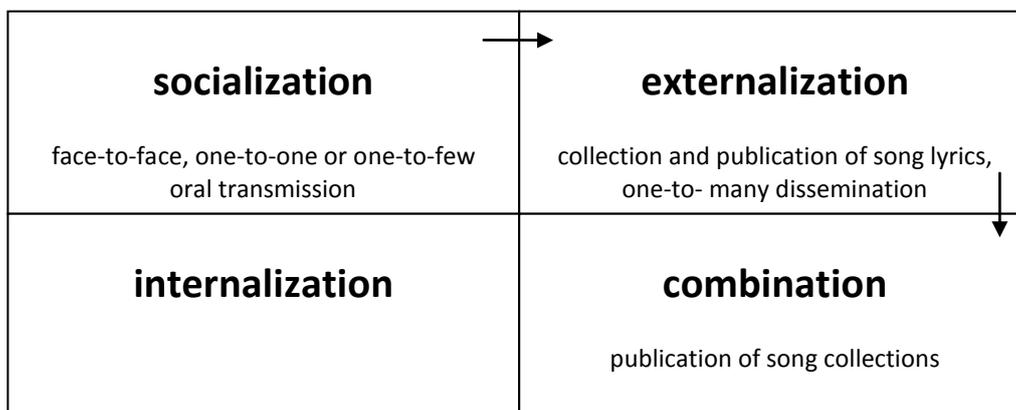


Figure 2: SECI model of folk song transmission as poetry

Nevertheless songs could pass through print and become internalized again in oral tradition (Figure 3). The texts of songs published in collections such as Scott’s *Minstrelsy of the Scottish Border* (Henderson, 1931) appear to have influenced the lyrics that were sung and subsequently collected again, e.g. Scott’s version of ‘Jock o’ Hazeldean’ replaced the traditional one in popular currency. Also, from the late eighteenth century on, broadsides and chapbooks with the lyrics of songs old and new were sold by hawkers who provided the tune by singing it for the purchaser (Morris, 2007).

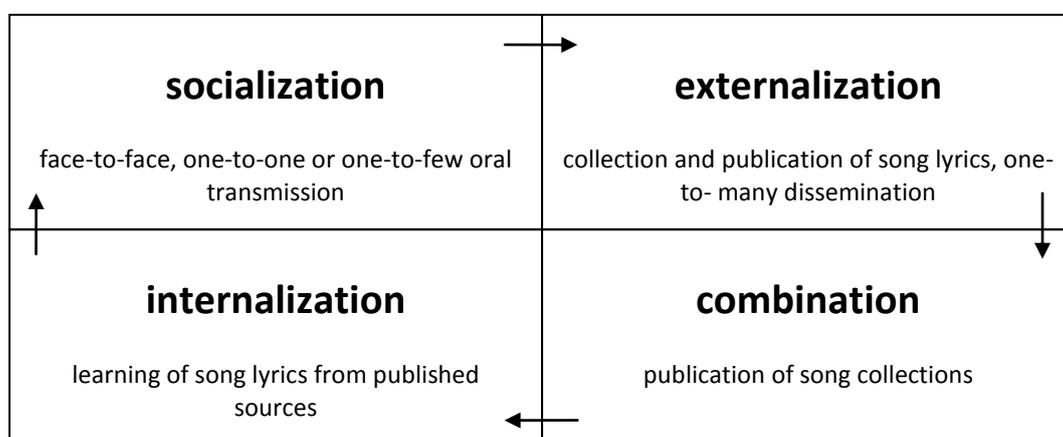


Figure 3: SECI model of folk song transmission with mass literacy

Phase III: dependence on literacy

When the SoSS began recording in the 1950s, they ‘discovered’ the Travellers. Hamish Henderson famously described recording Travellers, relaxing after a day’s work in the berry fields of Blairgowrie, as “like holding a tin-can under the Niagara Falls” (Henderson and Finlay, 2004: 102). The Travellers, moreover, still sang the big ballads. It is possible that this discovery distracted from research that might otherwise have been done amongst the general population, but certainly the perception was and is that the Travellers had retained oral traditions of singing and storytelling that had by then all but died out amongst the general population. Notable singers like Jeannie Robertson, Belle Stewart and Jimmy MacBeath (a street singer with close links to Travellers, though himself from a rural background) became the source singers of the subsequent Folk Song Revival, through live performance as well as commercial and archive recordings.

In the 1950s, when collecting for the SoSS began, many Travellers were still non-literate. They had largely evaded the compulsory schooling that was imposed by the Education (Scotland) Act of 1872, and in 1908 the Children’s Act came part-way to meet their itinerant lifestyle by requiring school attendance for only 200 half days a year. Travellers sometimes remark that people picked up songs by ear *because* they were non-literate: for instance, Jane Turriff talking about her mother and grandmother (SA1974.150.2); or Belle Stewart talking about how she learned ‘The Twa Brithers’ from her brother, Donald, who could not write (and therefore could not have supplied her with written copy) (SA1972.234.A1 & A2).

Conversely, there are many comments in the SoSS archive that point to a dependence, amongst the general population, on literacy to acquire the text of a song heard aurally. For instance, Robbie Murray (born before c. 1920?) mentions that his father did not write any songs down, as he had a very good memory, but Mr Murray wishes he had copied down the songs before his father passed away (SA1986.005.B2).

Many individuals did copy songs down. Willie Mathieson, born 1879, and Willie Mitchell, born 1904, notably played the role of amateur local historians by collecting songs in Aberdeenshire and in Kintyre respectively, in Willie Mathieson’s case from boyhood on (Henderson and Finlay, 2004). Singers’ manuscript song-books are known from at least 1858 (Buchan, 1997, pp.248-249). Campbell (2007, p.431) calls this ‘self-collection’ and notes that it is relatively common in Scotland. Bruford (1986, p.114) remarks that some singers, like Ethel Findlater from Orkney, born 1899, clearly liked to have the “psychological prop” of the written word, even if it was not really necessary. Writing things down to preserve them for future reference is of course a natural thing for a literate person to do. This is simply a manifestation at a popular level of the same impulse that prompted George Bannatyne to compile the Bannatyne Manuscript, our major source for Scots mediaeval poetry, in 1568, or prompted the anonymous seventeenth century compiler of the manuscript song collection that forms the core of Percy’s *Reliques of Ancient English Poetry* (Groom, 1996).

We might represent the knowledge conversion processes for the general population in this phase as in Figure 4, with writing now an important medium within the realm of socialization.

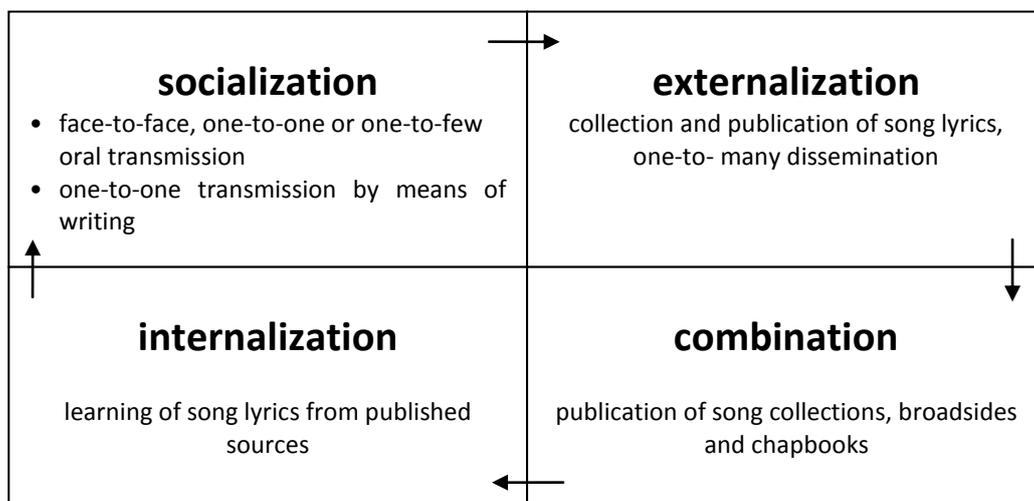


Figure 4: SECI model of folk song transmission with dependence on literacy

With reliance on writing, oral skills degenerate (Ong, 2002). The significance of this was grasped by prescient contemporaries: the Lady of Lawers prophesied in the 17th century that “the feather of the goose would drive the memory from man” (quoted in translation from the Gaelic by Cowan, 1980, p.1). That is, the capacity to commit material to memory goes unexercised and is consequently underdeveloped.

Phase IV: audio media

Audio recording and broadcast transmission were, of course, a great improvement over print in their ability to capture songs. The gramophone was in mass production by the 1920s; BBC radio broadcasts began in 1922; and television broadcasting began in Scotland in 1952. When people reminisce about life before these new media, a frequent theme is that they made their own entertainment, in fact *had* to make their own entertainment. The availability of professional entertainment on demand, within the home, removed the incentive for everybody to contribute. “Before 1914 in Orkney ... singing was the regular entertainment at weddings and harvest homes ... and could often be part of an ordinary evening visit. As in the Victorian drawing-room, everyone had a ‘party piece’ ... and many had sizable repertoires, though with the coming of the wireless and the gramophone few people continued to remember the songs they once knew” (Bruford, 1986, p.97).

The new media presented certain barriers to internalization. Despite the work of youth groups, church groups and other civic organizations, and the periodic attempts of the BBC to promote a culture of singing for pleasure, the best was the enemy of the good. “Young folk enthusiasts felt that there was no point in doing themselves what they could hear professionals doing much better” (Munro, 1996, p.35). The professionally-rendered versions of individual songs tend to eclipse other versions (Burns, 2004, p.121), and commercial popularity has a selective effect on what survives in the singing repertoire (Olson, 2007a).

However, like literacy, the new media did feed back into folk singing as a practice. The Folk Revival of the 1950s in Scotland and England began with the imitation of American ‘roots’ music and skiffle, made familiar by commercial recordings and broadcasting, and as a result native traditions were rediscovered (Munro, 1996). Through folk clubs and folk festivals, this knowledge was shared (externalized and combined). The source singers, who had inherited songs in a socialized context, were introduced to and inspired a new generation of folksingers.

For those who participate in folksinging, it is not only song content that is internalized, but also the manner of framing the performance, with an ethnographic introduction after the manner of 1940s and 1950s radio programmes (Gregory, 2004; Verrier, 2004), or a statement about who the song was learned from after the manner of a fieldwork interview. A link to the oral tradition through contact with the source singers is felt to be a badge of authenticity, but as these links became more attenuated, the distinction between Revival singers and source singers became “less meaningful with each decade” (Munro, 1996, p.51), or to put it another way, the knowledge involved had been made explicit for all parties. The source singers could not bring their whole situational context, with its reliance on tacit-to-tacit knowledge conversion, with them.

Whether or not they have had the opportunity to sit at the feet of the source singers, or even to hear them perform live, folksingers can claim an affective affinity with the tradition and gain a sense of cultural identity through elective membership of it (Atkinson, 2004; Sweers, 2004). Folk and roots music can be consumed passively just as other genres can, but the folk scene maintains an ethos of participation, and involvement with it implies “the conscious decision to engage in a certain sort of historical relationship, involving a network of people and a shared musical activity and repertoire” (McDonald, 1997, p.58). In terms of the knowledge conversion model, there is a strong motivation to internalize knowledge and to socialize it (Figure 5).

In the business world, a major change in the knowledge base can lead to a new company being formed. The separation of the Folk Revival from its traditional origins is analogous to this. The performance settings are different from the informal gatherings of traditional culture, and the folk scene has become largely a middle-class phenomenon (MacKinnon, 1993; Olson, 2007b, p.379). There has been a great deal of discussion in the literature of the issues of deracination and cultural appropriation that this raises (for instance Brocken, 2003; O’Reilly, 2004; Atkinson, 2004), and a great deal of division within the folk community about which aspects of the tradition are essential (MacKinnon, 1993; Brocken, 2003) – the corpus of songs, the line of transmission, participation as opposed to passive consumption, or the style of singing (unaccompanied or self-accompanied on the one hand, hybridized with rock music on the other). The SECI model gives us a perspective on this development. The situational context and personnel of the folk scene, as well as the knowledge conversion

processes, are different from the old milieu of oral culture, and the links with the old ‘company’ are historical, rather than constitutive. The new company has a life of its own.

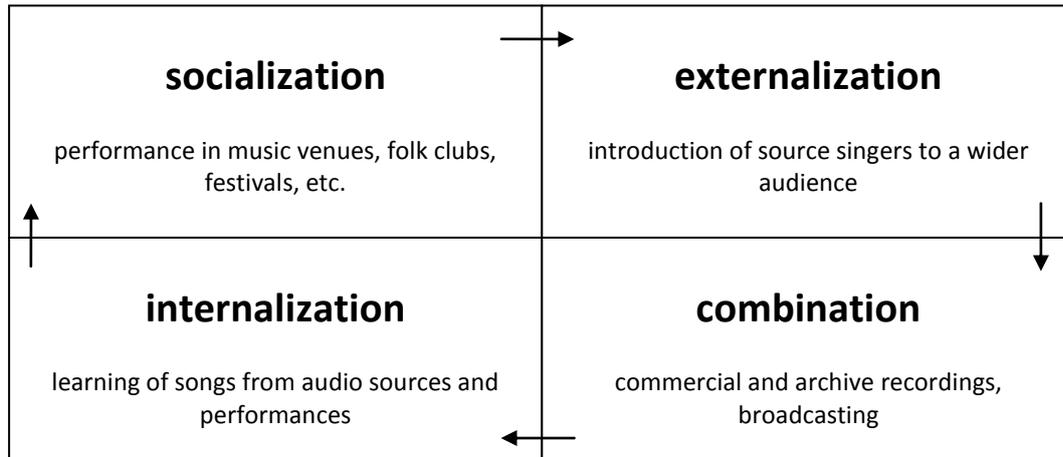


Figure 5: SECI model of folk song transmission in the Folk Revival

Phase V: digitization

It is more difficult to generalize about the uses and effects of digital media in relation to folk song (or any cultural area) than about the effects of print or audio media, partly because these are still early days, but largely because internet users can also be content producers, and can thus enter into a multitude of virtual situational contexts, some relatively private, some relatively public. Conceptualizing digital transmission in SECI terms, we immediately face the question of deciding when online interaction is tacit-to-tacit (socialization), tacit to explicit (externalization) or explicit-to-explicit (combination). In principle, everything placed publicly online is discoverable, but in practice the sheer scale of the Web means that most of the iceberg remains below the surface. The knowledge held by ‘memory institutions’ such as archives, libraries and museums is already explicit and in some sense ‘known’ to scholarship; putting it online is a process of combination, in SECI terms. When digital transmission is carried out by members of the public, however, merely uploading material, even to a site that is intended to be public, such as a blog, or a file-sharing site such as YouTube, does not necessarily bring it into public view (externalization). In this sense, at least some portion of digital transmission can be seen as tacit-to-tacit, placed in a public space, but effectively shared only within a private network. Since much of the content shared online proliferates through re-posting and linking, we characterise it in Figure 6 as ‘many to many’. Thus we can see song transmission in the digital age in terms of familiar processes being carried out in novel ways.

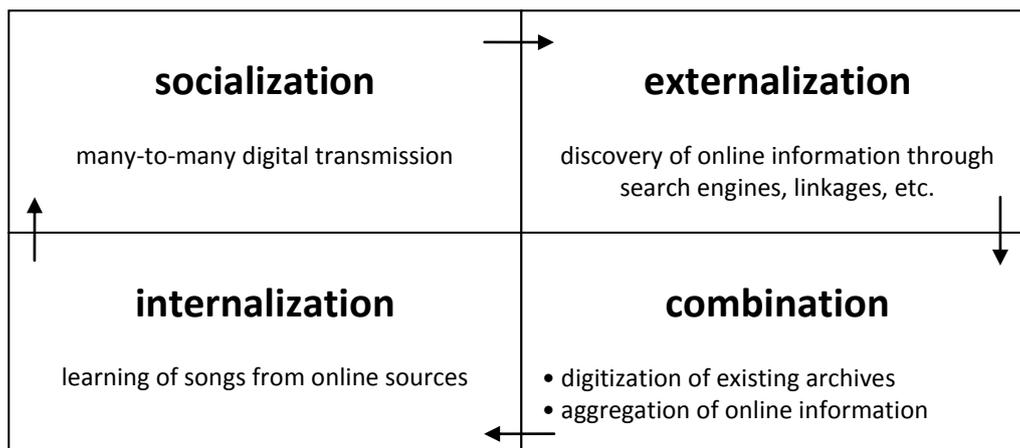


Figure 6: SECI model of folk song transmission by digital means

It is also characteristic of the internet that individuals are able to discover, combine, internalize and socialize knowledge in an ongoing process of knowledge creation. With digital access to archives like that of the SoSS, which were almost inaccessible to the general public, there is great potential for the democratization of

scholarship (cf. Arts & Humanities Research Council, 2016) and popular ownership of cultural heritage as a living practice.

The simultaneity of all phases

The introduction of new digital media changes the way the four knowledge processes are realized, not the processes themselves. Figure 7 shows how the means of realization have accumulated at the present time.

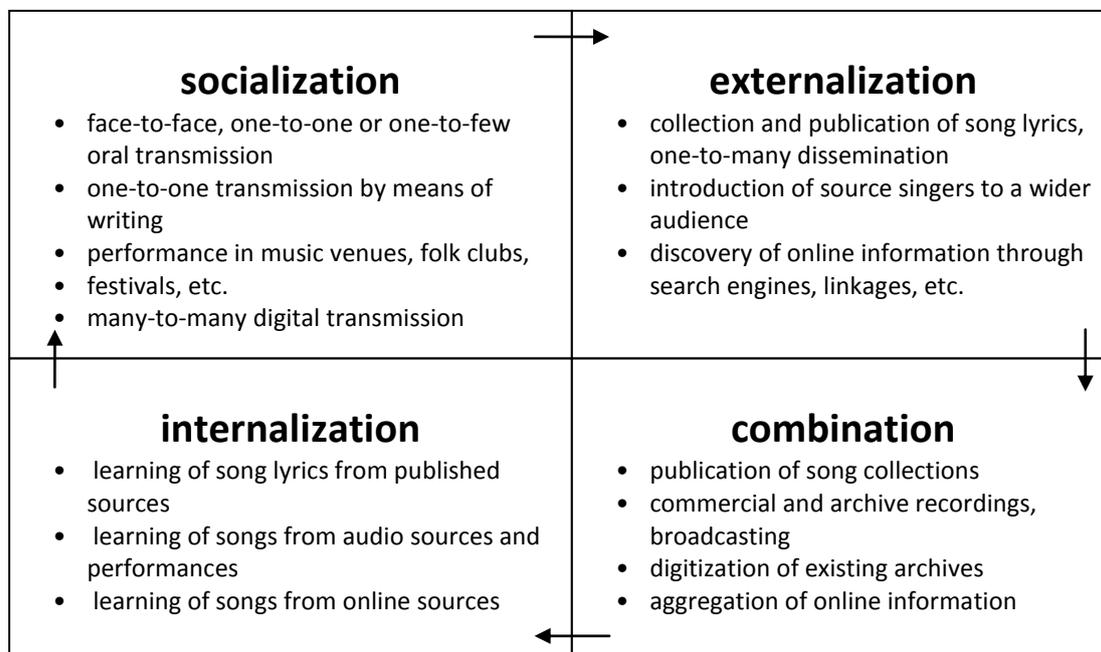


Figure 7: SECI model of folk song transmission by a variety of means over time

4. Discussion

Folk song has been through several processes of remediation, to use Bolter and Grusin’s (2000) term, that is a refashioning of older forms by new media technologies. The difficulty and expense of printing musical notation meant that when song lyrics were first collected, and for a long period afterwards, they were printed without music, and thus refashioned for some audiences as poetry. We have seen that each new medium of transmission has its own particular affordances and limitations. The superiority of writing over memory as a repository for knowledge prompted a shift from orality to literacy, and the high standards of recorded and broadcast music removed much of the incentive for people to make their own entertainment. At the same time, each new medium has served to preserve and disseminate traditional songs, and has fed back into the practice of singing.

Applying the SECI model has allowed us to describe different periods of time, defined by changing media, in terms of a small number of knowledge processes, which may be realized in any number of different ways (or not at all). At each stage, the model requires us to identify the mechanisms of socialization, externalization, combination and internalization. The changes introduced by successive media, including the most recent development, the internet, can thus be explicitly compared.

The SECI model also gives us a useful way to show how apparent opposites can co-exist in the folk song tradition, in particular oral versus written transmission, and non-literates within a literate society. What we see is an accumulation over time of ways of realizing the four basic knowledge processes, not a replacement of one by another. So, for instance, the model can accommodate the practice of literate singers who use the written word as a source and a prompt, within a tradition that also practices (and in some situational contexts might even be dominated by) face-to-face oral transmission. Moreover, as knowledge cycles round and round between tacit and explicit states, knowledge generated in one medium can find its way to individuals and situational contexts that do not have immediate access to that medium (e.g. the written word). The analogy of a singing tradition to a company with its own particular knowledge base also helps us to understand the Folk

Revival as a new ‘company’, not necessarily bound to any particular feature of its ‘parent company’, the oral tradition.

We have seen that the knowledge conversion perspective can be applied to culture as history. Moving on from the analysis of past phases, we shall now briefly consider the ongoing implications of the new knowledge environment created by digital media, for folk song and for cultural production, transmission and participation more generally, using the concept of ‘ba’ (Nonaka and Takeuchi, 1995) to shed light on this current context.

Gauntlett (2011) suggests that Web.2 (the interactive internet) has the potential to recreate the ethos of the Arts and Crafts movement, empowering individuals and communities to create and share craft work and culture. He points out that whereas in the twentieth century the production of goods and culture became dominated by professional and commercial producers, the online environment facilitates the making and sharing of creative work, provides engagement with virtual communities, and also stimulates real-world cultural practices and hands-on experiences.

The digital environment presents challenges for minority interests competing in a vast and largely unstructured information space, but also creates new opportunities for any aspect of culture to reach a wider public than ever before. This is naturally of especial interest to the institutions, such as museums, archives, libraries and galleries, that are the primary physical repositories of heritage collections. The reshaping of heritage collections, such as the digitization of the SoSS sound archive within the TaD project, aims at renewing the cultural impact of heritage (Dalbello, 2004). Dalbello (2004) and Manžuch (2010) both address the question of how online cultural heritage collections make heritage meaningful to and usable by the public. In terms of the model we are using, the challenge is to facilitate the internalization of knowledge and its socialization within a community (not necessarily a face-to-face community). Manžuch identifies two ways in which online cultural heritage collections engage user communities in order to link the past to the present: orientation towards a geographical community, and orientation towards a social issue. Gauntlett’s (2011) emphasis on creative activity is a third possibility.

Heritage institutions accordingly seek to ‘curate’ suitable situational contexts, or *ba* spaces in which relationships can form: “Cultural heritage institutions have always curated physical objects; in the twenty-first century they will also have to curate virtual communities around these objects” (Cohen, 2010, p.32). Two projects associated with TaD illustrate this type of activity in practice. Byrne’s ‘Dig where you stand’ (2012) and Wright’s work as TaD artist in residence (Wright, 2012) both combine the geographical and creative approaches. Byrne writes that the Internet “provides small, accessible and punchy platforms for marginal cultures to have a place, and in some cases thrive. ... Dig Where You Stand also has an obvious strong parallel with the concept of place-based education often used in Scandinavia and developed in the United States. Although more commonly applied to science and environmental education, it has huge relevance for traditional arts” (Byrne, 2012). Creative work of this kind moves between the digital and the physical worlds, with activity around a shared interest or body of knowledge being partly online, partly offline, in a manner that is typical of Web.2.

Where curation previously implied the organization and maintenance of collections of artifacts, the emerging practice of digital curation extends the concept to include the curation of artifacts, spaces and indeed communities (Figure 8).

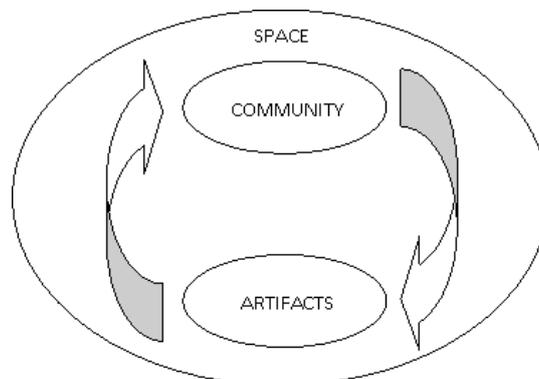


Figure 8: Reconceptualization of curation in the digital age

The concept of situational context or 'ba' space can be applied in these new circumstances, where it is important to recognize the interrelationships that exist amongst space, community and artifacts.

5. Conclusion

In this paper, we have applied a model that is well-known in the field of knowledge management, Nonaka and Takeuchi's (1995) 'SECI' model of knowledge conversion, to an area of cultural practice. While it must be acknowledged that the SECI model diverges from Polanyi's original concept of tacit knowledge (1966, 1974), this paper has shown that the model offers a valuable analytical framework that can be widely applied. We have shown that the model can be used in a longitudinal analysis, to describe non-static relationships between knowledge processes and changing contexts of media and society over time. The quality of the sources in the chosen subject area, folk song transmission in Lowland Scotland, make it possible to track changes over time in some detail. The model has potential for application in other contexts with similar characteristics, such as many fields of the applied arts, e.g. ceramics, textiles and glass-making.

The SECI model also draws attention to the critical roles played by the community (or communities) in the transmission process, and likewise to the spaces (physical and virtual) in which those transmissions occur.

Lastly, this study provides an example of multiple iterations of the SECI model within different media contexts. Across all arts and humanities disciplines (including music), there is a growing recognition of the role of digital technologies in changing the nature and modes of human interaction, and of how these new forms of interaction may lead to the production of new knowledge-based outputs. While it is impossible (and inadvisable given the pace of advancement in information and communication technologies) to suggest what the next iteration may be, this research emphasizes the need for ongoing work to develop an understanding of how such transformations may affect collections, spaces and communities.

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