

Examining the 'flexible museum': exhibition process, a project approach, and the creative element

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Abstract

Flexibility - considered broadly as adaptability and responsiveness to external forces - is a highly valued trait in late-modern life. As it reaches into new settings, there is scope to examine the diverse meanings, forms, and effects that it takes on. Using Kelvingrove Art Gallery and Museum (Glasgow) as a case-study, this paper explores how a 'flexible museum' is produced and sustained. By recounting ethnographic observation of the making of a small display on Charles Darwin, it identifies how flexibility is variously made manifest not only as frequent material change, but also through new work-procedures and improvisatory practice. More broadly, and as situated within the landscape of museological reform, insight into the experiences and perceived effects of change on the everyday practice and sense of professional self of museum staff is provided.

Key words: Kelvingrove, flexibility, staff, creativity

Claims that museums are experiencing a period, like no other in their modern history, of radical reform characterize contemporary museological practice, policy, and theorizing. A language of 'transition' (Hein 2000), 'reinvention' (Anderson 2004), and 'renewal' (Janes 2009) clearly has global reach. Undoubtedly, over the past two decades, many of the certainties through which museums have traditionally operated, including notions of knowledge, representation, truth and value, have been increasingly unsettled by those within and outside these institutions. As has been well recounted by the existing literature, new critical museum and heritage studies, as well as shifting political, economic, and social contexts, have challenged the conceptual foundations of this institutional form.¹ This has led to 'an unremitting questioning about whom they are for and what their role should be' (Macdonald 1996: 1). Against a world purportedly in flux, or what has been described as 'turbulent and unpredictable times' (Sandell and Janes 2007: 18), an openness to change is widely considered key to ensuring the museum's future survival.

An emphasis on change is bolstered by the promotion, in *many* areas of late-modern life, of economic success and social well-being as hinging on the ability for continual reinvention. Flexibility - considered broadly as adaptability and responsiveness to external forces (Martin 1994, Sennett 1998, Eriksen 2005) - has become a desired and valued end in itself. Along with allied attributes of 'creativity', 'innovation', 'speed' and 'risk-taking', it is considered to be the 'highest achievable good' (Osborne 2003: 508) for organizations and individuals alike. While prominent, as driven by the neoliberal agenda for the 'restructuring of labor, capital, and information' (Freeman 2007: 252), in the worlds of the new economies, business management and organizational reform,² the trope of flexibility is said to dominate spheres of contemporary life as diverse as 'families' (Stacey 1990), 'bodies' (Martin 1994), 'citizenship' (Ong 1999), 'welfare' (Sennett 2003), 'justice' (Goldstein 2005) and, I would like to add to this list, 'museums'. Ethnographer Emily Martin (1994: 149-150) puts it thus: 'The intense desirability - even the seductiveness - of the ability to be flexible and adaptive while in constant change is registered by the simultaneous appearance of this cluster of attributes in an exceedingly wide variety of domains'.

While the 'seductiveness' of flexibility may have wide scope, it is important to recognize the potential for this term to take on diverse meanings, forms and effects as it is taken up in new settings. Scholars have noted the ambiguous, even 'highly amorphous' (Pollert 1991) nature of the term, leading some to suggest that it is better understood to be 'a container that can be filled with meaning as necessary' (Salomonsson 2006[2005]: 119). This paves the way to consider flexibility less as a 'unity' and more as a 'multiplicity'.

In this paper, I take up this challenge by empirically examining and analytically engaging with the concept of flexibility in the context of the museum. What logics inform flexibility, and what does it do in (and to) the museum? Where and how is it made to happen? What perceived possibilities does it open up or constraints might it bring? To explore such questions, I focus on the case of Kelvingrove Art Gallery and Museum in Glasgow. From 2003 until 2006, this museum underwent a major refurbishment of its building, redisplay of its collections, and reorganization of its staff structures (known as 'The Kelvingrove New Century Project'). A core ambition for the refurbishment was to create a 'flexible museum' (O'Neill 2007) by building in the capacity for the ongoing renewal of displays. Or, what were variously described to me during fieldwork undertaken at the museum, and on which I base this paper, as being 'redisplays', 'changeovers', or 'story rotations'.³

By charting one of the very first redisplays to occur - a small display about Charles Darwin - I discuss how I came to perceive flexibility as being made variously manifest in the 'new' Kelvingrove. Not only as frequent material change ('flexible displays'), but also through new work-systems and improvisatory practice: what, locally, were referred to as being the 'project approach' and the 'creative element'. Based on my observations, I argue that the logics informing these articulations of flexibility offer different perspectives on the exhibition process itself. To support this claim, I evoke in my concluding reflections anthropologists Tim Ingold and Elizabeth Hallam's (2007) conceptualization of creativity as 'improvisation' (rather than the dominant 'innovation'), as well as Richard Sennett's (2008) notion of 'craftsmanship'. Shared between these scholars is an emphasis on the processual and generative aspects of skilled practice that this paper, which is characterized by themes of professional identity, agency and meaning-making likewise explores. Thus, beyond the specificities of this case, my discussion offers valuable insight, as situated within the broader landscape of museological reform, into the experiences and perceived effects of change on the everyday practice and sense of professional self of museum staff. It also provides a richly detailed account of institutional practices predominantly absent from official project documentation.

The Kelvingrove New Century Project

Within the United Kingdom, the large-scale and spectacular museum redevelopment project is emblematic of the contemporary emphasis (and is a particular variant) on museological reform. Driven by patronage from core-funding agencies, including most prominently the Heritage Lottery Fund (HLF), the reshaping of existing institutions has been explicitly harnessed to agendas of social inclusion and economic regeneration. While outside of the scope of this paper to discuss more fully, these agendas refer to the reshaping of museums as spaces that promote social change. The inclusion agenda, for instance, seeks to address social inequalities and injustices through 'work with schools and communities, events programmes, research and advocacy' as well as using exhibitions 'to communicate to audiences specific ideas predicated upon concepts of equality and human rights' (Sandell 2005: 185). More specifically, priorities of lifelong learning, increased access, and tackling social exclusion have characterized HLF-funded building and refurbishment projects in the United Kingdom. These projects have been especially prominent - indicative of the entanglement of museums in engendering the so-called 'new urbanism' - in locations experiencing decline from the loss of heavy-industry and manufacturing.

The Kelvingrove refurbishment, while responding to the material exigencies of the ageing building (which was first opened to the public in 1901), clearly extended civic ambitions for using culture in a process of symbolic and economic regeneration of post-industrial Glasgow (Maever 2000, Gold and Gold 2005). Of equal significance was a drive for increased public

accountability. The overall aim for reassembling Kelvingrove was democratic in its mission, as has been set out extensively by key proponent of the change, the (then) head of Glasgow Museums, Mark O'Neill. Recounting his vision for a 'new' Kelvingrove, or what he calls a new 'epistemology' (2006a, 2006b), 'philosophy' (2006b), or 'framework' (2007), O'Neill's aims for the refurbishment clearly built on his previous project work and belief in the social agency of museums. The goal of enhancing 'emotional, intellectual, aesthetic and physical access' to the building and its collections (Glasgow Museums 2001: 30) was thus shaped by a complex mix of individual visions for change, municipal politics, and broader funding priorities.

Having (at the time) been awarded the largest ever heritage grant for a capital project in Scotland from the HLF for nearly £13 million (with a total project cost of £27.9 million) its scope was unprecedented in the history of this institution. A century's worth of industrial grime was lifted from interior stonework, new technologies integrated for security and environmental systems, gallery floor space increased, visitor amenities such as a restaurant and shops built, and the number of objects on display doubled. A core ideal for the 'new' Kelvingrove was the concept of 'flexible displays' (Fitzgerald 2005, O'Neill 2007). Kelvingrove was not to be changed once-and-for-all, but would continually be remade through frequent material change. It was intended that the conceptual division between 'temporary' and 'permanent' exhibitions would be broken down by integrating displays that would be responsive (O'Neill 2006b: 103-104). Pragmatically, this entailed developing a system of 'modular' display fittings and fixtures, and a complete overhaul of existing organizing principles. Past taxonomic and chronological groupings were replaced by a themed and interdisciplinary approach to juxtapose objects from across the museum's encyclopaedic collections. Guided by the principle of 'telling stories', the new displays were intended to be self-contained and non-sequential; thus enabling changes to be made to labels, individual objects, or entire displays without disrupting narratives within galleries. It was planned that eight story-displays would be completely replaced every year, or have key messages and objects changed; around 50 per cent of the display space was intended to be altered over a six-year period after reopening (Fitzgerald 2005: 139).

A flexible museum?

Beyond this pragmatic description, it is important to consider what logics inform flexibility and what, exactly, it is intended to do. Creating a flexible museum embraces values of openness, fluidity, and multiplicity. A desire to renew displays more frequently suggests a loss of faith in overarching narratives and eternal truths or, as it was put by project planners, a move to abandon 'the (impossible) ideal of comprehensiveness' (O'Neill 2006a: 44). Of course, this is not to imply that the flexible museum does not seek to express narratives, but that it does so by drawing on new kinds of ordering categories. Those rooted less in chronology and traditional subject-disciplines and more in the social, experiential and emotional. Resonating with broader museological trends, such statements recognize the partial and evolving nature of knowledge, and seek to reconfigure the grounds of authority on which museum messages have traditionally been established, including notions of objectivity and fixity. It also speaks of an ambition to reassemble the temporal frame of the museum, and to allow for topicality by acting more quickly on shifting visitor expectations and interests. The flexible museum concept was embraced by project planners for facilitating a closer and more responsive relationship to the public. As one member of the refurbishment team has written: 'Understanding the public and creating displays and facilities that respond and are responsive to different audiences, as well as developments in research, is thus vital in defining the new museum' (Fitzgerald 2005: 134). Not only would flexibility *define* the new museum, but it must also be considered key to *producing* newness within this context. Novelty must continually be remade, and changing displays is one way to sustain a museum as new. This technique, however, is not without debate. Some commentators hold that only large-scale change is actually perceived by visitors.⁴ In any case, creating a flexible museum can be considered to be guided by the dynamics of 'accountability' and 'innovation' (Barry et al. 2008).

Although the refurbished museum was intended to embody, what Thomas Eriksen (2006[2001]) has characterized as being, a 'contagious' desire for 'speed' and 'acceleration' in late-modern life (here expressed as more frequent material change), when I began my fieldwork

I encountered amongst staff a sentiment that the museum was in a state of stasis. Display changeovers had not yet regularly occurred, and staff were evidently grappling with the conundrum of how best to make this desired flexibility *actually* happen (expressed through a desire for 'strategic planning' to steer future change). A key concern was to establish the basis for deciding which displays to replace, and general agreement emerged between those responsible for exhibition-planning that choices should be guided by visitor interest and conservation requirements (for example, rotating light-sensitive material) - thus prioritizing the needs of objects and visitors. Without such criteria, staff clearly perceived the risk that selection would be driven on an ad hoc basis (or 'by whoever shouts the loudest').

On the one hand, making such criteria explicit can be interpreted as intended to ensure against the potential for institutional creep to pre-refurbishment principles of display. However, it can also be understood as locally expressing a criticism that has been made more generally of flexibility. This, as Sharon Macdonald (2002: 85) likewise found in her ethnographic work at the Science Museum (London), is the opinion that flexibility can become 'a process careering away with little sense of any hand at the steering wheel'. Or, as Karin Salomonsson (2006[2005]: 119) puts it, 'difficulty in steering and planning the actual work in a company'. The idea of flexible displays, while clearly embraced by staff for the potential to reshape the museum to become a more responsive and fluid entity, also seemed to hold scope for a (perceived) loss of direction.

The classification wall: 'a conflict of ideas'

Against this background, the Darwin redisplay (a small exhibition on the life and work of the scientist) was one of the very first to occur in the 'new' Kelvingrove. Proposed by two curators of Natural History, it replaced a display known locally as 'the classification wall' illustrating the topic of biodiversity in the Environment Discovery Centre (EDC).

When explaining why they wanted to redisplay specimens in the classification wall the curators described it as being 'a conflict of ideas' or 'a half-way house'. One research manager related how the initial curatorial hope was to have 'a total mix of objects with no attempt to classify them'. However, the resulting display was not what they had initially envisaged because it encouraged visitors to begin ordering objects. Graphic panels invited visitors to look for similarities across the diverse specimens in terms of, what may be considered, surface appearances: an ordering system based on observation and comparison of outwardly related characteristics. This included shape ('wiggly shapes - can you find the things that are shaped like snakes?'), colour ('how many red things can you see?'), and texture ('can you see anything spiky and bumpy? Or smooth and shiny? Imagine how they feel?'). Such perceptions highlight two very different approaches to displaying the concept of biodiversity. Stephen Asma (2001: 177) has discussed these as representing biodiversity as being either 'order' or 'disorder'. He contrasts contemporary displays that 'see nature as a sprawling, uncontrollable spectacle' with those that want 'patrons to appreciate the *order* of nature' by stressing taxonomy and giving visual form to underlying principles. The classification wall was evidently not considered by the curators to have successfully constructed nature as either.

While this ambivalence was levelled at the displays' *content*, describing it as a 'conflict of ideas' may also be a response to the experiences of its *production*. During the refurbishment, an 'interdisciplinary' (O'Neill 2007) model of working was put into practice - or what was frequently described to me as being the 'project approach'. Teamwork, of course, is another key way of understanding what is meant by flexibility (Sennett 1998). Motivated by a desire to break down supposedly static, inward-looking, and hierarchical work systems, team models have been promoted as cutting across internal boundaries to create dynamic and adaptive organizations. Certainly, curators were encouraged to collaborate across traditional disciplinary-boundaries to make links between the collections, and the expertise of new personnel (including learning and access staff) was brought more explicitly into the process. This new model was supported by concrete practices and techniques of reconfiguring work systems including, for example, the interdepartmental editing of display text. While embraced by many for opening up new perspectives on the collections and encouraging more participatory approaches to knowledge-production, the project approach (and the formalized procedures required to facilitate these work systems on a project of this scale) was also felt to have resulted in

ambivalent experiences. Picking up on Eriksen's (2005) critique of flexibility, these ambivalences were expressive of the paradox that its gain in one domain can result (often unexpectedly) in its reduction in another: here a drive for organizational flexibility through new work systems was experienced, by some staff, as constraining individual flexibility.

By describing the classification wall to be a 'conflict of ideas' it is possible, then, that traces of uncertainties accompanying its production were inscribed into the display and discernable to curatorial staff. The chance to dismantle the classification wall and to redisplay specimens posed an exciting opportunity for the curators to address concerns they held about the display of science in the EDC. It was also a moment through which they would explore the limits of newly assembled work systems and reconfigured professional relationships. In particular, curatorial staff valued the adaptive, improvisatory practice that emerged during the Darwin redisplay through dialogue between team-members, a hands-on encounter with the materiality of objects, and a shared ambition to allow plans to evolve in practice. Although focusing predominantly on the curatorial perspective (with whom I was based), these sentiments are not irreducible to them and were common to the design, conservation, and technical staff involved.

The inception of Darwin: becoming a 'formal project'

That the curators were exploring the limits of newly assembled work systems and professional relationships was certainly indicated when I began observing the redisplay process. Background research had been undertaken and display themes developed, object lists drafted, and text was being written. Initially, I was anxious that I had missed the beginnings of the exhibition work. However, by retrospectively charting it, not seeing these activities seemed significant in itself. It was evident that early planning had been of an informal nature not subject to centralized procedures ('it was a free flow of ideas' explained one curator). These activities had been invisible then not only to me, but also to the exhibitions committee - a group of representatives from communications, collections, research, design, and learning and access teams.

Given that this was one of the first redisplays, one curator recounted uncertainty around procedures for initiating it. They explained that they had not realized that the committee expected, as they would for larger in-house or loaned temporary-exhibitions, the presentation of a written 'exhibitions initiation document' (or proposal). This was a standardized form asking questions about 'location and dates', 'content', 'targets and aims', 'development', 'resourcing' and 'consultation'. Yet, despite their ambivalence, they were more certain about what the consequences of having a proposal accepted were. It would classify the redisplay as a 'formal project', therefore providing the status and institutional backing to begin assembling staff, entities and resources needed to build the display.

The proposal submitted to the committee was clearly written with the intent of gaining this support. It outlined how the display would present the life and work of Darwin, as well as introduce visitors to his theory of evolution. Curatorial intent resonated with a language - or 'interpretative registers' (Gieryn 2002: 44) - familiar to the committee: a language concerned with 'commitments', 'parameters' and 'strategy'. Aims were set out as being guided by an efficient use of the museum's resources ('many of the specimens and mounts along with shelving in the case will be reused thus keeping costs and effort down'), as well as the needs of objects and visitors ('it will replace some light-sensitive butterfly/moth specimens'). Entities that were prioritized as driving future change in the 'new' museum.

The curators also described how they hoped to build into the redisplay more written information than was present in the existing classification wall, which did not have individual specimen labels. They reasoned (from their reading of visitor comment cards and anecdotal evidence) that visitors wanted details including the common and scientific name of specimens, accession number, location, and date; thus articulating a vision of visitors as an information-seeking public. This argument may or may not have been representative of the broader view, and my intent is not to set out preferred modes of public accountability. Certainly, while framed in terms of visitor advocacy, a desire for increased information may also be understood to stem from the curators' own sense of professional self and indicates an entanglement of personal-institutional goals. Managing and communicating knowledge (here understood as information

about the collections) is core to their identity - as was expressed by one curator through the sentiment 'the defining thing about being a curator is a love of information'. Recognizing the potential for 'information love' to evoke notions of didactic communication - or a one-way flow of information to passive recipients - the desire to include more information was clearly intertwined with new commitments to 'visitor-centred' pedagogical frameworks (O'Neill 2007). The curators' emphasized how visitors would be encouraged through the selection of objects and wording in the display text to become active partners in the process of creating meaning. For instance, they would be invited to mimic Darwin's scientific practice to 'look', 'compare' and 'contrast' specimens to 'develop their own ideas'. Science would be presented as an accessible and non-technical domain.

Through this close (yet necessarily brief) reading of the proposal, traces of a skilled negotiation undertaken by the curators as they translated the redisplay into a 'formal project' are evident. Valued elements of curatorial identity (including a 'love' of information) are entangled with new institutional commitments to non-didactic frameworks. The proposal demonstrates, as Gieryn (2002: 42) has noted in his analysis of the design process, how 'an evolving artefact is shaped to fit the wants and needs of those who must be on board to move it off the drawing board'.

Producing Darwin: 'the creative element'

Having moved the display off the drawing board and into the EDC, the curators were pleased with the end result, feeling it translated their ideas and expectations well. As one explained:

We didn't have to have countless meetings about background ideas. We just figured out what was best for getting our message across - and that message had been approved by the exhibitions committee - and the simplified message we wanted to get across was easy to work with [...] there weren't countless meetings to figure things out, there weren't countless forms to be filled in, there weren't countless managers to get approval from to get it done and so it just happened a lot quicker, a lot simpler, and the end result was a lot better, in my opinion. (Interview 5 June 2009)

The small scale of the redisplay, in contrast to working on the extensive refurbishment, inevitably resulted in sentiments of a less dispersed 'authorship' (Macdonald 2002: 94). It was also only partly visible to processes that may have brought increased bureaucratic procedure ('countless forms', 'countless meetings'). However, underpinning a sense of professional agency, I suggest, was what one research manager described as being 'the creative element'.

Throughout the redisplay, staff reflected upon and narrated the process (partly to me but more significantly to themselves). In doing so, they articulated specific notions of 'the creative element'. They especially marvelled about how 'easy' and 'fast' it was to feed ideas into the developing plans. One meeting in the storerooms particularly brought this to my attention. A curator announced to the assembled team (myself, the other curator, designer, conservator and external mount-maker) that he was going to 'make a new plan, on the spot!'. He told us that he had decided to switch two monkey specimens on the approved object list with two that had caught his eye that were in a better condition for display. After the meeting, the two curators chatted about how 'straightforward' it had been to make the switch in comparison to working on the refurbishment. During the refurbishment, there was limited opportunity for curatorial staff to work directly with the external designers. This relationship, I was told by various in-house staff, was mediated through 'middle men' including managers, intermittent on-site group meetings with the visiting design contact, and electronic communication ('email conversations'). For one research manager, this 'resistance' to curators working directly with designers (while understandable due to time constraints and the scale of the project) 'was crazy because that's *the creative element*'. It may or may not have been 'crazy', but it is surely reflective of the nature of working relationships that involve a mix of permanent and contracted personnel. His comments reflect broader trends in the worlds of 'mobile or nomadic employees', where direct interpersonal communication has increasingly come to be replaced by 'electronic proximity' (Schwarz 2003: 107).

In contrast, working side-by-side with other staff, and directly with objects in storage, was valued by the curators as it enabled them to work in a collaborative and spontaneous way. The 'creative element' must, therefore, also be considered to be an understanding of what it means to be flexible: flexibility here is adaptable, improvisatory practice. This mode of flexibility was especially valued for its *effects* - as suggested by the curators' emphasis on improvisational practice facilitating a display that translated representation into reality well. Of course, what constitutes 'better' should not be taken as self-evident, and it carries particular assumptions about content, museum publics and, ultimately, a sense of professional self. Several 'end results' stood out for the curators including small details that were communicative of specific textual and visual meanings. It is to a brief discussion of these outcomes that I now turn, and in doing so I continue the broader argument of this paper that not only were specific museum messages embedded in the redisplay, but traces of curatorial explorations into the limits of newly assembled professional relationships and work systems.

Textual meaning-making

One outcome that the curators considered 'better' were the 'words and meanings' included in the final display text of object labels, graphic panels, and a cartoon illustrating Darwin's life. Throughout the text-editing process the curators were concerned that specific words ('proper terminology') be retained for precision ('technical accuracy'). Rather than abandoning specialist language, which might not be immediately familiar to audiences, they hoped to explain terms within the text. This included the scientific names of specimens, classificatory terminology (e.g. 'family', 'species'), and concepts associated with Darwin's theory of evolution (e.g. 'evolution by natural selection', 'struggle for existence'). Input via email on draft text was given by a geology curator, natural history research manager, a curator of learning and access, and an editor from the communications department. Constructive dialogue reflected how different specialist language, knowledge and interest fed into this process, thereby demonstrating, as Macdonald (2002) shows in her analysis, how science is not 'pre-packaged' but actively co-constructed.

Several months into the process, the curators sent the editor a draft of text accompanying a cartoon illustration of Darwin's life and work. The editor replied by email:

[...] I really enjoyed reading it, and look forward to seeing [...] [the] illustrations - I'm sure it's going to be a great display. I've suggested some changes on the assumption that the target audience is families, and you can see these on the attached file. Some of the amendments are just house style matters, some are attempts to make one or two sentences simpler. The one main change I've suggested is shortening some of the quotes [...] drawing[s] will convey the sense of some of the words - for example Darwin being gleeful at going on the Beagle or different sizes of tortoises - and although the existing quotes don't look long within the text file, they may seem so once they are put within the drawings.

The editor suggested changes to wording including, for example, an amendment to the curators' phrase accompanying an illustration of Darwin learning about Galapagos tortoise variety:

He saw that islands each had their own *unique and distinctive types* of animals.

Instead the editor proposed:

Darwin saw that each of the Galapagos Islands had their own *different types* of animals - some of them found nowhere else in the world.

A curator soon replied with an alternative:

Darwin saw that *different races* of the *same animal* were found on neighbouring Galapagos islands.

The change was sent to a learning and access curator who suggested:

Darwin *observed* that each island had its own *unique species* of animals.

Reason - children understand the word "observed/observation" as close study

and understanding. Species is a word they should learn to understand in the context of biology/natural history.

But how you actually want to say it is up to you!

The curator responded:

Thanks for that.

It is not a *species*. It is a level below that; before varieties of a species have evolved far enough apart to be classified as separate species. Technically we are talking about *island races*. We could [use] types or varieties and be technically accurate.

Would you prefer 'types' or 'varieties'?

The curator emphasizes that (according to Darwin's theory) tortoises on neighbouring islands are related through shared ancestry even if they might look different; they are not 'different types of animal' as per the editor's suggestion. Rather, one species of tortoise ('the same animal') has adapted to island environments over time to result in distinct sub-species ('island races'). At this point all agreed that 'types' would be preferable:

Darwin *observed* that each island had its own *unique types* of animals.⁵

Stepping back from these details, specific word choice brings different (yet not mutually exclusive) ambitions for these different 'communities of practice' (Wenger 1998). The learning and access curator desired words that would be understood by the imagined visitors; scientific exactitude was important to the natural history curators; and the editor was concerned with issues of style and clarity. These might seem like minute details to foreground. Yet, it was this level of nuance, perceived as indicative of the ability to integrate different voices, goals, and approaches into the final display, which concerned the curators given their previous experiences of the refurbishment. One curator (not based at Kelvingrove) expressed very succinctly a more pervasive sentiment encountered amongst curatorial staff: 'Word by word meaning was lost or changed'. The minute was overwhelmed by a more expansive project. It is not surprising, then, to observe negotiation around the retention of *specific words* during the editing process. Words considered crucial for embedding into the display particular scientific concepts, terminology, and (it could be argued) representation of the work of scientists.

Visual meaning-making

In her ethnographic analysis, Mary Bouquet (2001: 195) describes the process of transforming exhibition concepts into design to be a 'three dimensional, visual process of meaning making'. In the same vein, the team clearly understood making Darwin to be a process of 'translating' ideas into a 'composite artefact' that would take on particular representational powers (Bouquet 2001: 195-196).

Working directly with other staff, and encountering objects in storage, was again considered crucial by the curators to the process of beginning to 'visualize' the display. A series of meetings were held between the curators, an in-house designer, and the natural history conservator to draft a set of blueprints. One of the curators brought hand-drawn sketches of their ideas for the layout and, through collaborative discussion as well as viewing, handling and measuring objects in the storerooms, the designer translated these into a set of electronic two-dimensional plans. Direct experience of the materiality of objects provided a sense of volume, shape, weight, and fragility integral for working out positioning and mounting systems.

The meetings were also an opportunity to 'potter' (as one curator put it) or transform objects for display. Staff wanted to ensure that objects would be presented in the very best light possible. Akin to the 'tinkering' work shown by scholars to be characteristic of scientific practice (Sismondo 2004: 87-90), staff attempted to reshape and tidy up what was at hand ('working with the legacy of what we've got'). An armadillo, which had a crack on one side of its face, was to

be orientated so that the crack would not be seen. Loose and disordered beetles in a display box would be re-pinned and labelled. Condition reports describe how feathers and fur were brushed, eyes polished and scratches repaired on animal specimens. Staff's understandings of transforming objects did not always map directly onto 'display standards' introduced during the refurbishment. For instance, a pair of stuffed boxing hares was positioned on a specially built mount covered with dirt, heather, and (faux) frost. Although the aesthetic of the mount was different from the modular approach, the conservator explained how (inspired by hilltop walks) he wanted to construct a 'naturalistic' mount that would mimic this environment. It was also perceived to be useful for visually communicating information about the hares' habitat: information that may not be able to be included within the text due to word limits newly introduced during the refurbishment.

The creative element as intervention: 'eyeballing'

The outcome of this tinkering was a set of blueprints. Although the end goal was to fix these plans, it was recognized that flexibility (as adaptable, improvisatory practice) would also be required. This was demonstrated once dismantling of the classification wall and installation of the new display began. I observed staff undertake a practice of 'eyeballing' (as it was locally called): a process redolent of the 'golden hands' (Fujimura 1987), 'physical intuition' (Traweek 1988), or 'wizardry' (Star 1989) involved in scientific work.

Constructing the display was not simply a matter of following the blueprints, but involved skilled and situated reasoning. There was a sense amongst the team of needing to see how different elements would 'fit' together as they were assembled on the gallery floor. As lights, objects, shelves, and so forth were brought together, plans were transformed in light of unexpected outcomes requiring small changes to be made: objects were repositioned after they appeared too high, seemed 'lost' in the overall display, were obscured by the shade cast by shelves, or did not fit into allocated spaces - thus showing how design does not always precede execution (Ingold and Hallam 2007).

By 'eyeballing', small details (like choosing a particular orientation for a specimen) were able to be integrated. Explicit considerations sometimes guided these decisions such as the fictive visitor's line of sight. Predominantly, however, they were shaped by an intuitive sense (or affective resonance) of what 'looked' or 'felt right'. Comments about cases having a 'nice flow', objects 'sitting well' and being able to 'hold their own', or a grouping functioning to 'offset the colour' suggested a relational dynamic between components. Trying to get these to fit together through improvisatory practice was as much a search for aesthetic harmony as it was for spatial compatibility.

The work of 'eyeballing' can be considered a tacit and embodied knowledge-practice; an expertise that is not easily communicated nor formalized because it is embedded in perceptual and manual skills, while being contingent to specific local and material circumstances. Although this knowledge practice is often invisible to bureaucratic procedures, scholars of scientific practice have drawn attention to the crucial role that familiarity with equipment, manual skills to operate, and perceptual judgment of what 'looks' or 'feels' right play in the production of scientific knowledge.

In an early yet influential analysis of tacit knowledge, Collins (1974: 167-168) observed how the construction of a working laser by physicists rested on 'non-articulated knowledge' or what he describes as being 'more than the memorization of sets of formal rules; it involves also knowing how to *do things*'. Laboratory work in this reading is more than representation - it is also 'intervention' or the manipulation of materials through skilled and situated reasoning (Sismondo 2004: 87-88).

At Kelvingrove, I likewise observed how the improvisatory practices of 'tinkering' and 'eyeballing' were considered crucial to exhibition work. Such practices enabled the team to manage the slippage between formalized representations and the messy realities of acting in a world which itself acts back. An embodied, sensory understanding of objects and an affective relationship to things - what Macdonald (2002: 64-65) has similarly described to be 'object feel' and 'object love' - were evidently considered crucial elements of tacit knowledge evoked in this practice. Conversely, a criticism I encountered of the refurbishment designers was that they had

'no sense of the object' manifesting into a lack of an 'emotional commitment' and 'emotional response' (perhaps reflecting their limited contact with the collections given that they were externally based). While ostensibly this is a typical 'container' over 'content' argument, when considered against my observations, what appear to be at stake are questions about the mechanisms for including - or procedures to integrate - different kinds of expertise, skill, and know-how. Moreover, I suggest that this provides a particular understanding of the exhibition process itself; to which I now turn in my concluding thoughts.

Conclusion: Darwin's theory of evolution and the exhibition process

In this paper, I have explored the work of museum staff seeking to maintain and sustain a 'flexible museum' by implementing ongoing material change. In doing so, I have empirically and analytically engaged with the notion of flexibility: examining how it is made to happen, considering its informing logics, and discussing what effects it is held to generate. Such reflection is surely important as the trope of flexibility reaches into new contexts, yet is often unquestioned and taken to be a desirable end in itself. By charting one of the very first redisplays to occur in the 'new' Kelvingrove, I have broadened my consideration of flexibility beyond the frequent renewal of displays to identify (what may be considered) two loosely divergent modes of flexibility. On the one hand, I flagged the 'project approach' or an emphasis on formalized arrangements of team-work. On the other, I paid attention to improvisatory practice or what was locally referred to as being 'the creative element'. The creative element mattered to the curators because it was regarded as having especially desirable *effects*. It was understood to translate well their intents into the final display. Small details, indicative of particular textual and visual meanings, were integrated which (they felt) might otherwise have been overlooked.

Implicit has been the argument that these modes of flexibility are perceived by staff as offering contrasting perspectives on the exhibition process itself. The 'project approach' promotes an understanding of this process as linear and pre-conceived where design precedes execution; an explicit and tangible form of meaning-making; and a largely cognitive activity - as was especially illustrated through a concern with setting out 'strategic planning' to guide museum redisplays. In contrast, the 'creative element' promotes an understanding of the exhibition process as nonlinear and evolving where design and execution become entangled; an implicit and intangible form of meaning-making drawing on the personal and idiosyncratic; and an affective, embodied, and sensory knowledge practice - as was demonstrated through discussion of the improvisatory practices of 'tinkering' and 'eyeballing'.

To further unpack these modes of flexibility, Darwin's theory of evolution is itself useful. Evolution by natural selection is a theory of creation or how form is made to manifest in the world. One reading, according to Tim Ingold and Elizabeth Hallam (2007: 5), is to understand life as issuing 'directly and unproblematically' from a 'pre-created design' (that is, genetic or hereditary material). By applying this reading to creativity, they argue that what it 'leaves out are the myriad tactical improvisations by which actual living organisms co-opt whatever possibilities their environments may afford to make their ways in the tangle of the world' (Ingold and Hallam 2007: 5). Hence, an alternative viewpoint is to locate the creativity of evolution, as Ingold (2007: 47) puts it, 'in the life process itself' - a generation of form 'rather than merely the revelation of pre-existing design'. This interpretation stresses the partial, incomplete and inherently fragile nature of achieving form by focusing attention on productive processes. Connecting these to my discussion, it can similarly be claimed that concern with the 'creative element' recognizes the crucial role that this mode of flexibility plays in stabilizing form. The exhibition process is not 'merely the revelation of pre-existing design' but demands the 'generative' capacities of 'improvisatory' action (Ingold and Hallam 2007: 3-6). By foregrounding such action, my intent has not been to argue for (or against) particular modes of flexibility. Indeed, observations have illustrated the partly entangled nature of these, as the successful enactment of codified systems sometimes required less normative practices and procedures.

In concluding, it is important to consider the broader value of these empirically grounded insights. Consideration of the perceived effects and experiences of museological change for the everyday practice and sense of professional self of museum staff is pertinent, and local reflection has been provided on what is understood to be both gained and lost within new work

systems. I would suggest that a particular repertoire of skilled exhibition-practice was felt to be especially at stake: a repertoire, drawing on Richard Sennett's (2008) concept, which can be characterized as being 'craftsmanship'. Broadly put, craftsmanship for Sennett (which he extends beyond the realm of the traditional artisan to the contemporary workplace) encapsulates the embodied, material and sensory aspects of meaning-making - or the connection of 'hand and head'; the enactment of wide ranging skills to undertake an 'experimental' rather than 'mechanical' practice; and the emotive element or 'pride' in 'doing things well'. While it may be tempting to assume that a desire for this kind of agency is associated with more traditional curatorial practice, the paper has pointed to the value of more nuanced readings; particularly those which acknowledge the co-existence of such forms of agency with other dynamics. In the aftermath of large-scale change, with newly-introduced priorities such as the 'flexible museum' concept, we have seen curatorial staff to be exploring reconfigured organizational constellations. In doing so, they reassemble (or negotiate and adapt in practice) a sense of professional self that is complex and multifaceted. By documenting this process, ultimately, some of their hopes and fears for change have been unearthed, and the implicit assumptions that these carry about notions of expertise, skill and knowledge foregrounded.

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Notes

- ¹ For overviews of the transition from the so-called 'old' to the 'new' museology see Starn (2005) and Macdonald (2006).
- ² Most notably discussed by Lash and Urry (1987) and Sennett (1998) in terms of 'flexible capitalism'.
- ³ From August 2008 until August 2009 I undertook ethnographic fieldwork at Kelvingrove (Morgan 2011). My research was an in-depth study of museum staff and their work practices, as situated within the broader landscape of museological reform.
- ⁴ I did not undertake visitor research as part of this study, so am unable to comment on the effectiveness of flexible displays in encouraging repeat visitation or perceptions of innovation. However, with a decrease in visitors since reopening, the Kelvingrove manager has expressed (in a recent issue of the UK *Museums Journal*) the opinion that visitors do not notice small-scale refreshes (Sharp 2012).
- ⁵ All emphasis in italics is mine. These comments are extracted from lengthier emails and comments made on an accompanying draft text document. I was copied in all on emails either directly by the senders or, in some instances, replies sent from recipients to the original senders. These were sent on 28 November 2008 and 1 December 2008.
- ⁶ Also relevant is anthropological concepts of situated practice and embodied knowing (Harris 2007, Marchand 2010).

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