Investigating curatorial voice with corpus linguistic techniques: the case of Dorothy George and applications in museological practice

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Investigating Curatorial Voice with Corpus Linguistic Techniques: the case of Dorothy George and applications in museological practice

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Abstract

We seek to demonstrate how corpus linguistic techniques can facilitate a comprehensive account of curatorial voice in a large digitised museum catalogue and hence leverage its value as a resource for generating new knowledge about: curatorial practice; the historical and cultural contexts of curation; and, the content of collections. We worked with 1.1 million words written by the historian M. Dorothy George between 1930 and 1954 to describe 9330 late-Georgian satirical prints. George’s curatorial descriptions were analysed in terms of their typical informational content and with regards to the extent George included interpretation and evaluation in her descriptions. We discuss how results from such analyses can provide a basis for addressing questions about George’s curatorial voice and, more generally, suggest how this approach could benefit museological practice around the production of descriptions and the re-purposing of legacy catalogues for digital access and analysis of collections.

Key words

Curation, catalogues, corpus linguistics, British Museum, Dorothy George
1. Introduction

This paper concerns curatorial voice, the authorial voice of institutions and the contemporary role of legacy museum catalogue descriptions in indexing and understanding collections. Extensive digital and digitised sets of curatorial descriptions are increasingly available. The starting assumption for this paper is that these have the potential to be valuable resources for generating new knowledge about curatorial practice, the historical and cultural contexts of curation, and the content of collections at the level of individual items and at a macro level. However, digital and digitised catalogues have not yet been recognised as a form of ‘big data’ such that new and different kinds of questions can be asked about curation and the content of collections. In response, the ‘Curatorial Voice’ project is applying computational text analysis techniques to a large digitised catalogue of curatorial descriptions. This work has two ambitions: to establish new directions in historical research – both into the content of collections and into institutional/cultural labour – and to enhance search and discovery functions that are based on legacy catalogue descriptions.

In 1995 Carol Duncan argued that ‘to control a museum means precisely to control the representation of a community and its highest values and truths’ (Duncan 1995: 8). Descriptions of objects curated by museums are one means by which a community’s values and truths are controlled. For example, in the mid-twentieth century the historian M. Dorothy George catalogued over 12,500 late-Georgian satirical prints for the British Museum. Her descriptions of these prints – most of which were published in London – made a vital contribution to research on Georgian Britain. However, George’s descriptions are far from straightforward verbal representations of visual representations. Rather, as exemplified by George’s caution and squeamishness in the face of scatological
humour, they are a product of a voice shaped by traditions, preferences, and values. Today, curatorial descriptions – including those, like George’s, made before the information age – are commonly subsumed into services that provide valuable public access to collections via textual search. However, this aggregation comes at a price, for it masks curatorial idiosyncrasy with a datafied veneer of institutional authority (Putnam 2016) at the same time as scholars like Duncan – informed by queer and post-colonial turns – have sought to decentre the authorial voice of institutions in art historical and museological discourse (Turner 2017; Greene 2016; Çelik 1996).

Thus, we identify the need to be able to elucidate and foreground curatorial voice for a given set of collection descriptions, both as a precursor to studying their curatorial voice(s) and to enhance their use for search and discovery of collection items. Analysing curatorial voice at scale requires the comprehensive articulation of curators’ choices and preferences across what are often large bodies of text produced during decades of work. The challenge here is not only the scale of the material, but also the complexity arising from the multiple facets of objects that curators may refer to, and the variety of ways in which voice can manifest, e.g. through inclusion and omission, that is what aspects of the item are referred to, and through varying degrees of description and interpretation/evaluation. We propose that the combination of corpus linguistic techniques such as word lists, keyness and sorted concordances, alongside some qualitative close reading, is a scalable approach well suited to producing comprehensive accounts of the language used in museum catalogues.

The aim of this paper is to demonstrate the value of corpus linguistic techniques for generating knowledge about curatorial voice. Section 2 describes the creation of the BMSatire Descriptions corpus comprising curatorial descriptions from Volumes 5 to 11.
of the *Catalogue of Political and Personal Satires Preserved in the Department of Prints and Drawings in the British Museum* (those volumes written by George, and hereafter referred to as the ‘*Catalogue of Political and Personal Satires*’), and outlines our approach to investigating curatorial voice. Section 3 reports a preliminary investigation of curatorial voice in this corpus with a frequency-led analysis of curatorial voice in terms of inclusion and omission (Section 3.1), and a variety of analyses focussing on the extent of interpretation/evaluation in George’s curatorial descriptions (Section 3.2). The main objective here is to identify and critique ways in which corpus linguistic analysis may contribute to a comprehensive and systematic study of curatorial voice, rather than to complete such a study. In closing, Section 4 discusses how corpus linguistic analysis can contribute to investigating curatorial voice and, more generally, how our approach may support both the production of new catalogues and the re-purposing of legacy catalogues for accessing and analysing collections.

### 2. Corpus building and approach

A corpus of George’s curatorial descriptions was made from the contents of the ‘Physical Description’ field in a selection of records that we retrieved from the British Museum’s Research Space SPARQL endpoint. A query retrieved 23,932 records relating to the *Catalogue of Personal and Political Satires*. This set of records was refined iteratively with custom scripts and then the text content of the Physical Description field in each record was taken and prepared for corpus linguistic analysis. The following two paragraphs describe the main points about the processes for selecting records and preparing the text data. More detailed documentation of the query and these processes,
along with the resulting corpus and associated datasets, are available to download (Baker and Salway 2019a).

The selection of records was refined by discarding those relating to prints that were published outwith the period covered by Volumes 5-11, i.e. 1771-1832, and by discarding records relating to prints that were acquired by the British Museum after 1929 because George started her work in 1930. These criteria were chosen to minimise the chance of including descriptions that were not written by George, at the expense of missing out on some records containing descriptions that were written by her. The selection process resulted in a set of 9330 records. The text from the ‘Physical Description’ field was taken from each of these records to form the BMSatire Descriptions corpus. Our assumption is that this field contains physical descriptions of collection items, in contrast to the Curatorial Comments field which we expect to contain George’s writing about the historical contexts of prints and which hence seems less likely to reflect curatorial voice and more likely to have been edited by later curators. Spot checking suggests that data from the ‘Physical Description’ field matches the text printed between 1935 and 1954, and that any variations are unlikely to have a significant effect on the results of corpus linguistic analysis.

The selected text was processed in order to replace all text occurring in quotation marks with ‘*TRANSCRIBED*’ and all text in brackets with ‘*BRACKETED*’, see Table 1 for an example. We observed that most text in quotation marks is the transcription of words written in the prints such as speech, labels and signs. These words are not reflective of curatorial voice, however the fact that they are transcribed is, so we leave a trace of the transcription in the text rather than deleting it entirely. Text in brackets comprises a variety of things, such as cross-references to other prints, curatorial notes, as
well as further description of the scene and historical information. In fact, a lot of the bracketed text does contain valid curatorial description, however because it is mixed with other kinds of information and the text is sometimes in note form we chose to make the replacement as a convenience for subsequent corpus analysis.6

Table 1: A sample of text before and after the text preparation process.

The resulting corpus contains about 1.1 million words from the 9330 records which is a substantial amount of text data for investigating curatorial voice. In broad terms, our methodological approach was to combine automated statistical analysis – counts of words, phrases and patterns, and keyword lists – with the close reading of concordance lines, but not yet the close reading of complete descriptions and the prints they refer to.

We began working in a data-driven way by concentrating on the most frequent words in the corpus to try and characterise the typical kinds of information given in
descriptions, and by identifying negative keywords (words that occur less often in the corpus compared to a corpus of everyday language) to see what is not said, without relying on any preconceived notions about what to expect; see results in Section 3.1. Of course concentrating on the most frequent words means missing rarer phenomena and more common phenomena that manifest in a wide variety of low frequency words. Thus we also took an hypothesis-driven approach to investigate the extent of interpretation/evaluation in the corpus because this was not apparent from inspection of the most frequent words. This involved testing preconceived ideas about how curatorial interpretation/evaluation might manifest by searching for and counting instances of words, phrases and patterns that were hypothesised as indicators of interpretation/evaluation; see results in Section 3.2. Most of the corpus linguistic analysis was carried out using AntConc which is a freeware corpus analysis toolkit (Anthony 2018).

In most of the analyses presented below quantitative techniques were supported with the qualitative close reading of concordance lines, i.e. sets of text fragments around given words. In some cases we read samples of concordance lines to get an overall impression of how a word is used in the corpus, e.g. to check whether ‘hand’ is used mostly as a verb or as a noun. In other cases we scanned concordance lines to look for patterning in the words around the given word, e.g. to see if it is regularly used as part of certain phrases. Thus, for us in this paper, the reading of concordance lines both provides a check on how we interpret quantitative results and identifies phenomena for further, potentially quantitative, investigation. In several places below we identify the need for deeper reading of whole descriptions alongside the images they refer to in order to draw
on a broader context and domain knowledge to inform the interpretation of how words are being used.

3. Results

A summary of results is presented in the following two subsections. In 3.1 we show and discuss results from a frequency-led analysis intended to characterise the common kinds of words in the corpus and hence give a view on the typical kinds of information provided by George’s curatorial descriptions. This may be thought of as an analysis of curatorial voice as inclusion/omission. In 3.2 we summarise several complementary analyses of curatorial voice on a descriptive-interpretive/evaluative scale by measuring the presence of words, phrases and patterns that are hypothesised to be indicative of interpretation/evaluation. We are only able to present and discuss a small fraction of the results that were generated in these analyses, however pointers are given for the interested reader to download and examine complete results sets.

3.1 Common kinds of information, and words that are not there

Table 2 lists the 100 most frequent words in the BMSatire Descriptions corpus, in frequency order. Note that capitalised words were counted separately, and some non-alphabetic characters were included in the token definition, e.g. ‘&’ in order to count the word ‘&c’. At the very top of the list, in common with most English-language corpora, we see so-called function words such as the, a and of. However, moving down the list we soon encounter words that reflect the specialist nature of the text, including words referring to print processes – inscribed, the spatial arrangement of print content – left and right, commonly depicted entities – man, hand, head, hat and woman, and actions –
stands, says, holding and wearing. Further down the list we see parts of names – Fox, Lord and John.

Table 2: The 100 most frequent words in the BMSatire Descriptions corpus, with frequencies in brackets.

When inspecting a frequency list it is important to consider that, in general usage at least, most words are polysemous and so we should not be too hasty in making inferences about the informational content of a corpus based on a frequency list alone. For example, the words man, hand and head can all be used as verbs, as well as nouns, but given prior knowledge of the corpus here we can probably be confident that, for the most part, they are being used to refer to things depicted in prints rather than to actions. That said, we should inspect concordances before making any strong claims about how a word is used in a corpus. Take for example the word hands which is another example of a word that can be used to refer to a part of the body and to describe an action. Figure 1a shows 15 consecutive lines from the concordance for hands in the BMSatire Descriptions corpus (out of 1631 lines) which have been sorted alphabetically according to the words to the right of hands. This shows that there are some instances of hands being used to describe
an action, e.g. ‘a lawyer hands a bowl to Bute’. However this is not a fair representation of the word’s usage because it only shows lines in which *hands* is followed by the word *a*, so it is more likely that *hands* is being used as a verb. It is not feasible to check all the 100s or 1000s of concordance lines for each of the most frequent words in a corpus but a reasonable sense of typical usage can be gleaned by generating a sorted concordance and then displaying every nth word. For example, Figure 1b shows every 50th line from the concordance for *hands*, sorted according to words to the left of *hands*. The fact that each line here shows *hands* being used as a noun seems a reasonable basis to conclude that this is its typical usage in the BMSatire Descriptions corpus.

Figure 1a: 15 consecutive lines from the complete concordance of ‘hands’, with lines sorted alphabetically according to words to the right of ‘hands’.
Duenna a portly woman at left with wide open mouth and pointed. His successor *BRACKETED* stands in back view, legs astride, other in angry controversy. One *BRACKETED* stands with legs astride, inscribed *TRANSPIRED*. Charles X hands excitedly towards him, both which is out at elbows, holds a large bone in both hands above his head is primed *TRANSPIRED*. A man *BRACKETED* is decorated with the royal arms. One standing behind holds in both hands a smoking receptacle. The third *BRACKETED* kneels supporting FoX, straddling across a puddle, stoops to collect mud in both hands, looking at Hastings. Behind him a little ragged chimney-sweep sits on the roof. A stout man *BRACKETED* turns the press, using both hands and a knee and leaning back to pull at the lever. The design is engraved, *TRANSPIRED*. A young man stands with both hands in his breeches pockets, a brudgeon under his right arm. He *BRACKETED*, in place of *TRANSPIRED*, and another with two clasped hands and the word *TRANSPIRED* *BRACKETED*. The last two are above one of a set of four dancing a reel with crossed hands, saying, *TRANSPIRED*. A SERVANT OF ALL WORK. *BRACKETED* Brou, in a gaberdine, to profile to the right, stoops with extended profile to the left, towards Perdita *BRACKETED*, who clasps her hands ecstatically. Lady Worsley sits on the right. In the centre gall with a twisted grimace of sour calculation: he says: *TRANSPIRED* his hands are clasped round Burford's neck. Behind the pair, on the edge of profile to the right with bent back before an altar, his hands together: his unpowdered hair is cropped. From his pocket projec fat John Bul, holding his odglet between his legs, claps his hands delightedly, shouting. *TRANSPIRED*. Behind him stands a Jew *. On a wire. Below it is engraved *TRANSPIRED*. Wheeler, clasping his hands, says, *TRANSPIRED*. A watchman stands behind him holding his the design. The Prince of Wales stands, looking down decisively, his hands tied behind him by a rope held by Pitt, who is see to Irving capers a lank-haired fellow in old-fashioned dress, his hands together, his eyes raised sanctimoniously. In his coat-pocket is to a sheet printed in two columns. John Bull, on his hands and knees, blows into the sails of a fleet of men-of-war and unlimly, seated on a close-stool, his chin supported on his hands, his face is contorted and he clutches *TRANSPIRED*, one of th e paper: *TRANSPIRED*. He holds up two fingers. Lansdowne puts his say: *TRANSPIRED*; *TRANSPIRED* and. *TRANSPIRED* The Quaker, his hands folded, answers: *TRANSPIRED*. A Quaker stands by an open grav deeper little man who crouches on the ground, holding up his hands in alarm, his hat and stick beside him. His sister, see fat Dutchman in bopping breeches smoking a pipe, stands with his hands behind his back. He sings: *TRANSPIRED* Behind Büchler the Tzar sleeves are pinned to his coat, showing that he has lost hands as well as legs, and he has a patch over one the right and left of this sit jointly two corpulent persons, hands on hips. Between them, a hand on the head of each, left, slightly smiling, two fingers extended, as if about to shake supplication. Spain and France are in flight towards the left, their hands outstretched. The upper part of the Temple has undergone a chang . Two of the figures are puppets, with strings attached to their hands and legs; a man full-face, holding his hat, stands stiffly on

Figure 1b: Every 50th line from the concordance of 'hands', with lines sorted alphabetically according to words to the left of 'hands'.

In an attempt to give an overall view of the informational content of the corpus, Table 3 groups the 300 most frequent words according to the kind of information they provide. The main distinction is between ‘content descriptors’ i.e. words used to refer to and describe the entities and actions depicted in the prints, and ‘meta/special words’ i.e. words from the special language of curation. We separated a set of function words although there is a fuzzy boundary with the prepositions that we included in the ‘meta/special’ set, and we identified a small set of polysemous words that do not have a clear predominate usage in corpus. The decisions about where to place each word were made, to a great extent, based on intuition but sorted concordances were skimmed to check cases where there was thought to be potential multiple meanings. The sum of frequencies of the top 300 words is 727,157 out of a total of 1,129,475, so they alone account for approximately
64% of the corpus. Thus, we might tentatively assume that Table 3 gives a reasonable impression of the kinds of information typically provided by George’s descriptions.

Overall, the content descriptors give the impression that George concentrated on the physical who and what of the prints with concrete rather than abstract nouns and verbs, corresponding with a rather literal and generic kind of description, although there is some naming of specific individuals. With regards to the differences in frequency between the content descriptors, e.g. between man and woman, we expect these are a consequence both of what is depicted in the prints and of George’s choices about what to describe and what to omit. However any such claims could only be substantiated with a thorough examination of the prints themselves and so text analysis can only provide a starting point for such an investigation.

Within the meta/special words there are many prepositions which could be taken to reflect George’s preoccupation with conjuring the prints in the reader’s mind by specifying the spatial relationships between the principal entities, and, at the same time, guiding the reader’s eye around the print. Here, we note that George’s catalogue was intended for use outside of the British Museum print room where readers would not have had access to the prints she described. This suggests that curatorial descriptions made before and after the availability of collections in microfilm or digitised form may need to be thought about differently, particularly where descriptions from both periods are used together in collection search and discovery.

We also see what we suspect are an unusually high number of capitalised function words and prepositions, e.g. He, She, His, Two, Behind and Below. We suspect that this is a result of George tending to write short atomized sentences and/or wanting to make certain information (such as position and clothing) more salient by giving it its own
sentence, e.g. ‘The guard is Lady Conyngham: she stands up, blowing her horn. She wears
a guard's greatcoat and satchel over her dress and holds a blunderbuss.’ rather than ‘The
guard is Lady Conyngham who is wearing a guard's greatcoat and satchel over her dress
and holds a blunderbuss: she stands up, blowing her horn.’ This is another example of
how a simple corpus linguistic analysis may suggest a new line for further investigation.
On a separate point, it should be noted that the high frequency of words such as I and if
probably indicate that a certain amount of transcribed text (speech, labels and signs)
remains in the corpus: our process for inserting ‘*TRANSCRIBED*’ relied on pairs of
quotation marks which are not always present in the text we selected. In the original
volumes, transcribed text is formatted in italics and pairs of quotation marks were added
inconsistently to de-italicised text as descriptions were entered into the British Museum
internal database, later to be used as the basis for the British Museum’s Collections Online
service (Griffiths 2010).
Table 3: The 300 most frequent words in the BM Satire Descriptions corpus, tentatively grouped by informational content: top 100 shown in bold; 101-200 shown in normal type; 201-300 shown in italics.
Looking at the most frequent words tells us about what is most commonly written in a corpus but curatorial voice is also characterised by what words are not used. Thus we used a different corpus linguistic technique – keyness – to identify a set of words that are used unusually infrequently in the corpus, in comparison with a reference corpus. Keyness is computed as a measure of how much more or less frequently a word occurs in one corpus relative to another, and as a measure of the statistical significance of that difference. Table 4 shows a list of negative keywords, i.e. words occurring unusually infrequently in the BMSatire Descriptions corpus compared with, in this case, the British National Corpus (BNC). Note, the BNC was intended to be representative of British English across a wide variety of written and spoken sources from the late twentieth century, thus the keyness results will partially be due to linguistic change since the time that George was writing and general differences between written and spoken language. That caveat aside, it is notable that George tends not to use past or future tenses (was, had, were, said, will), personal pronouns (I, you), modals (would, could), causality (because) and informal language (it’s and don’t). In part this suggests a systematic difference between George’s curatorial voice and that of, for example, the contemporaneous curatorial work of Arthur Popham in the 1950 catalogue *Italian drawings in the Department of Prints and Drawings in the British Museum: the fourteenth and fifteenth centuries*. This is a work which focuses on attribution and provenance and in its description of objects it more often switches between different tenses, makes causal connections and uses modals to hedge statements.
Table 4: A set of 100 negative keywords extracted from the BMSatire Descriptions corpus, i.e. words occurring unusually infrequently compared with the British National Corpus.

3.2 Curatorial Interpretation/Evaluation

The frequency-led approach in Section 3.1 gave the impression that the descriptions mostly refer to observable physical entities and their appearances and actions, and do so in relatively generic and objective terms. In this subsection we report five complementary corpus analyses that elucidate ways in which George also does interpretation and evaluation in places. Broadly speaking, for these analyses we work in a top-down manner, such that we start with an assumption about how an aspect of interpretation/evaluation is realised in words and then count those words. This approach allows us to observe phenomena that were missed by the frequency-led approach.

We recognise that knowledge is situated and that the notions of description and interpretation/evaluation are used by different people in different ways, so we do not attempt to make any hard and fast definitions here. However, for the analyses reported below, we found it helpful to conceive of statements as being more or less ‘descriptive’ and ‘interpretive/evaluative’. At the description end of the scale are statements that could be considered objective and are less likely to be controversial: the writing and comprehension of such statements have minimal reliance on contextual information and
specialist knowledge. Moving towards the interpretation/evaluation end of the scale, the writing and comprehension of statements about the contents of an image rely increasingly on contextual information and specialist knowledge, and hence tend to become more a matter of opinion. For example, at the descriptive end of the scale we would find a statement about observable entities and actions in generic terms, such as ‘a woman runs down a street’. Naming the woman and the street would require some contextual information and/or specialist knowledge, so a statement such as ‘Mary Smith runs down Oxford Street’ would be placed along the scale, towards interpretation/evaluation. Further along still would be a statement like ‘a woman dashes down a street’ which suggests more urgency to the woman’s action, and hints at a story in which her action is motivated by, say, the wish to catch something or the need to escape from something. At this end of the scale actions could be interpreted differently depending on the viewer’s understanding of the story and the character. Also at this end of the scale would be statements that make value judgments that are influenced by cultural norms, and perhaps personal prejudices, for example ‘the extremely overweight man sits down’.

This characterisation of description and interpretation/evaluation aligns with the definition of ‘Content - description’ in Spectrum 5.0 and with Panofsky’s separation of description and interpretation in the iconographic method. In Spectrum 5.0 ‘Content - description’ is defined as: ‘A general description of a depiction in an object, or description of an object without making interpretation’ (Collections Trust 2017) which suggests that a description comprises statements that refer to an object’s self-evident content or visual appearance. In Spectrum, interpretation arises from the use of collections and can be used to improve catalogue records such that interpretation could be taken to mean both
assertions on the meaning of an object and value judgements made about things depicted in an object. Previously, and contemporaneously to the production of the *Catalogue of Political and Personal Satires*, Erwin Panofsky’s iconographic method found favour among scholars and curators who studied art and other objects with symbolic significance. Like the Spectrum standard, the iconographic method sought to separate description and interpretation. Subsequently, drawing on Panofsky, Shatford proposed three distinct levels for analysing the subject of images in order to index visual content: pre-iconographic – a generic description of entities and actions; iconographic – where specific people, places, etc. are named; and, iconological – the meanings conveyed by the image (Shatford 1986).

So how can we go about identifying instances of interpretation/evaluation in a corpus? Consider again the examples given above: ‘a woman runs down a street’ and ‘a woman dashes down a street’. The shift towards interpretation arises from referring to the same action in a different way by considering the character’s mental state (emotions, needs, desires) and how this fits within an unfolding narrative. This kind of shift was accounted for by the narratologist Alan Palmer in his conceptualisation of a ‘Thought-Action Continuum’, exemplified by the difference between the statements ‘a person stands behind a curtain’ and ‘a person hides behind a curtain’ (Palmer 2004). Palmer and Salway (2015) analysed audio description – a verbal account of visual information provided for partially-sighted and blind audiences – in terms of the thought-action continuum by looking at how action descriptions were modified with extra words around verbs, and at how troponyms of generic verbs were used. This approach was our starting point in order
to look for instances of interpretation/evaluation in the BMSatire Descriptions corpus, as reported in Sections 3.2.1 and 3.2.2.

3.2.1 Modifying action descriptions

In order to look for ways in which action descriptions may be modified to add interpretation/evaluation, we inspected sorted concordances for three of the most frequent verbs in the corpus – walks, looks and says. The overall impression was that most instances of action descriptions, at least for the selected verbs, are not modified and remain purely descriptive. However there were some signs of interpretation/evaluation.

The most striking case was the use of adverbs; see some examples in Table 5a. The use of these adverbs suggests that George has interpreted something about the mental states of the people depicted in the prints. Less frequent but still noticeable was the use of the pattern ‘with + ABSTRACT_NOUN’ as in ‘looks with much satisfaction’; see Table 5b for examples.

| Henry Grey in gown and bands walks amorously with a meretricious-looking Susanna |
| Wellington, wearing a top-hat, walks dejectedly |
| Princess Elizabeth walks possessively with her husband |
| She looks alluringly at the spectator |
| The prostrate Pope looks angrily over his shoulder at Napoleon |
| J.B. looks distrustfully at Peel |
| The Duke looks down disconsolately |
| Richard looks furtively out at the wolves |
| who says apprehensively: *TRANSCRIBED*

Table 5a: Examples of verbs being modified with -ly adverbs to add interpretation of characters’ mental states to the action description.
Having identified an apparent pattern through manual inspection of concordance lines, i.e. the use of -ly adverbs to modify common verbs, we then made a more systematic analysis by filtering the frequency word list to include only the 1009 words ending -ly. The 100 most frequent -ly words are shown in Table 6 in which we highlight those that we think are likely being used to interpret something about somebody’s actions or to make an evaluative judgement such as about somebody’s appearance. The highlighted words have a total frequency of 2940 which spread across 9330 descriptions seems to be quite significant regarding the overall tone of George’s curatorial descriptions, especially because we may expect many more instances to be found among the other 909 -ly words that occur between 1-25 times each. We speculate that some adverbs were used by George to give some sense of the story playing out in a print, e.g. ‘walks dejectedly’ suggests a character’s disappointment with a recent event, and others were used evaluatively, e.g. fashionably and ruffianly could be shorthand for expressing a view about social status.
Table 6: The 100 most frequent words ending -ly, with interpretive/evaluative words highlighted and with word frequency in brackets.

3.2.2 Lexical choices: troponyms

As well as modifying a verb with an adverb, it is also possible to add an interpretation to an action description by using a troponym, e.g. writing ‘she saunters’ rather than ‘she walks’ makes an interpretation of a character’s mood or mental state. We used WordNet to make a list of troponyms for say, look and walk and then collated their frequencies; see Table 7. The results show much higher frequencies for the generic verbs than for their troponyms, especially since it is questionable whether shout and scream should be taken as troponyms of say. This analysis seems to confirm the overall impression that George preferred an informally controlled language using mostly generic nouns and verbs, with adverbs added when necessary.
Table 7: Frequencies of some common verbs and their troponyms: the frequencies combine all forms of each verb.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Troponyms</th>
</tr>
</thead>
<tbody>
<tr>
<td>say</td>
<td>shout (637), exclaim (431), scream (112), cry (107), yell (25), plead (8), proclaim (6), enjoin (2), allege (0), aver (0)</td>
</tr>
<tr>
<td>look</td>
<td>gaze (265), stare (244), gape (80), peep (60), regard (53), admire (27), ogle (26), gawk (0), gawp (0), peek (0)</td>
</tr>
<tr>
<td>walk</td>
<td>stagger (122), stride (108), shuffle (6), strut (4), prowl (2), amble (1), lollipop (0), saunter (0), skulk (0), stroll (0), stumble (1), traipse (0)</td>
</tr>
</tbody>
</table>

There are some issues that should be noted with this kind of analysis. The chosen verbs – walk, say and look – were in our judgement the most likely of the frequent verbs to have troponyms used by George, compared with, e.g. hold, wear and sit. The selection of interpretive troponyms from WordNet also involved our judgment, i.e. we did not select every semantically related verb. Such judgements can be prejudiced by prior assumptions and ideally more time would be spent identifying potential troponyms for more verbs. Furthermore, the frequency counts for troponyms combine the counts for all the observed forms of the verb, e.g. gaze, gazes, gazed and gazing which increases the chance of including the counts of words being used in other ways. Concordances were used to make a quick check that each word was being used as a verb, e.g. cries as a verb rather than as a noun. However for the more frequent words it was not feasible to make an accurate count so some of the troponym counts will be higher than they should be.

3.2.3 Lexical choices: synonymous pairs

It is not just with verbs that a curator has choices to make about using words with related meanings. Within the set of adjectives found in the 300 most frequent words (Table 3)
there are two pairs that have roughly similar meanings but that suggest a different regard for their subjects – fat and stout, and old and elderly. So we might ask how and why George used these alternative forms and whether it has something to do with her making evaluative judgments.

A quick skim of concordances for the four words suggested some variation according to the gender of the person being described. To look into this further we needed a baseline of how much more often men and women are mentioned in the corpus. The frequency of man is 4500 and the frequency of woman is 1937, so man occurs about 2.3 times more frequently than woman. Thus, if George were using fat and stout interchangeably to describe men and women then we should expect to see ‘fat man’ and ‘stout man’ occurring about 2.3 times more often than ‘fat woman’ and ‘stout woman’ respectively. In fact we observe that ‘fat man’ (82) only occurs about 1.1 times more often as ‘fat woman’ (73): in other words, George is using fat with man about half as often proportionately as she uses it with woman.

These numbers are laid out in Table 8, along with the equivalent numbers for stout, old and elderly. This gives the impression that George has a systematic preference for describing men as stout and elderly, and women as fat and old. A little further investigation suggested that there may be a class basis for George’s preferences, supported by the frequencies for these words being used with lady, i.e. as with man there is a preference for stout and elderly: ‘fat lady’ (16), ‘stout lady’ (25), ‘old lady’ (5), ‘elderly lady’ (14). Further, although the numbers are small, when describing body size and age together, George seems to prefer using fat with old, and stout with elderly: ‘fat old’ (14), ‘stout old’ (2), ‘fat elderly’ (13), ‘stout elderly’ (20). Altogether this analysis suggests an evaluative aspect to George’s descriptions whereby she accorded more
respect to middle/upper class characters, perhaps reproducing her own views, the prevailing views of the 1930s-1950s British professional class, and/or the prevailing views in late-Georgian London.

<table>
<thead>
<tr>
<th></th>
<th>man</th>
<th>woman</th>
<th>Ratio ( \text{man:woman} )</th>
<th>Ratio compared with BASELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASELINE</td>
<td>4500</td>
<td>1937</td>
<td>( 2.3:1 )</td>
<td>( x1 )</td>
</tr>
<tr>
<td>fat + _____</td>
<td>82</td>
<td>73</td>
<td>( 1.1:1 )</td>
<td>( x0.5 )</td>
</tr>
<tr>
<td>stout + _____</td>
<td>302</td>
<td>41</td>
<td>( 3.2:1 )</td>
<td>( x1.4 )</td>
</tr>
<tr>
<td>old + _____</td>
<td>71</td>
<td>140</td>
<td>( 0.5:1 )</td>
<td>( x0.2 )</td>
</tr>
<tr>
<td>elderly + _____</td>
<td>180</td>
<td>50</td>
<td>( 3.6:1 )</td>
<td>( x1.6 )</td>
</tr>
</tbody>
</table>

Table 8: Showing how George tended to use ‘stout’ and ‘elderly’ with ‘man’, and ‘fat’ and ‘old’ with ‘woman’.

3.2.4 Descriptive and interpretive cues

On a different tack, we note previous work that analysed the language in a corpus of art gallery captions and found that the verbs *depict* and *convey* were frequently and consistently used to signal respectively: the description of pre-iconographic and iconographic image content, and the interpretation of iconological image content (Salway and Frehen 2002). For example: ‘this work depicts two women eating seafood at the famous Parisian restaurant Prenier’ and ‘this composition conveys the claustrophobia of the interior of an omnibus’.

Using a thesaurus and researcher judgment, two sets of verbs were identified corresponding to *depict* and *convey* and then counts of their frequencies in the BMSatire Descriptions corpus were made, and concordances were skimmed in order to see how
George used them. The frequencies are shown in Table 9: here each frequency is for all observed forms, including nouns, e.g. *depict, depicts, depicting, depicted* and *depiction*. Examining the concordances for these words confirmed that they are mostly, if not entirely, cues for description and interpretation. However it is not always the case that a particular verb was used consistently by George for either description or interpretation, e.g. ‘Parted bed-curtains show Syntax asleep’ (description) and ‘The luxury of the room is shown by an arcaded wall’ (interpretation).

<table>
<thead>
<tr>
<th></th>
<th>Frequencies of synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>depict</em></td>
<td>show (870), illustrate (321), depict (181), portray (2)</td>
</tr>
<tr>
<td><em>convey</em></td>
<td>represent (718), indicate (713), express (460), suggest (206), symbolize (87), imply (49), denote (33), convey (8), connote (6), evoke (6), impart (0), transmit (0)</td>
</tr>
</tbody>
</table>

*Table 9: Frequencies of candidate cues for description and interpretation in the BMSatire Descriptions corpus.*

The total number of instances of the candidate cues listed in Table 9 is 3660 which, in a corpus of 9330 descriptions, suggests a substantial phenomenon that warrants further investigation as an important facet of curatorial voice in this and perhaps other corpora. However, the potential to use computational techniques beyond counting frequencies and retrieving concordance lines is limited by the variety of ways in which these words are used, and further investigation must rely on close reading of concordances lines, possibly with regard to entire descriptions and the corresponding prints. To give a sense of the richness and complexity here, Table 10 gives some examples to reflect the typical, but not necessarily exclusive, usage of just the most frequent form for each of the most frequent candidate cues. In some cases a word switches from being a cue for description
to a cue for interpretation, or vice versa, when part of a phrase, e.g. *depicted* and ‘*depicted as*’.

<table>
<thead>
<tr>
<th>Cues</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>depicted (165)</td>
<td>In the upper part is <em>depicted</em> a meeting of the General Court Fores’s shop is <em>depicted</em> with approximate correctness. The room is <em>depicted</em> in detail. The upper part of the print <em>depicts</em> topographically the English Channel.</td>
</tr>
<tr>
<td>depicted as (15)</td>
<td>Mrs Billington is <em>depicted as</em> Clara in Sheridan’s opera <em>TRANSCRIBED</em> Fox is <em>depicted as</em> a fox.</td>
</tr>
<tr>
<td>illustration (63)</td>
<td>An <em>illustration of</em> the Reform agitation and its association with the demand for reduction of taxation and abolition of sinecures</td>
</tr>
<tr>
<td>illustration to (47)</td>
<td><em>Illustration to</em> Lavater’s <em>TRANSCRIBED</em></td>
</tr>
<tr>
<td>showing (430)</td>
<td>The interior of an inn bedroom, <em>showing</em> a large four-post bed with check curtains. the lower part of an open window, <em>showing</em> a heap of money-bags</td>
</tr>
<tr>
<td>showing that (119)</td>
<td>clouds of smoke <em>showing that</em> a naval battle is in progress. With the bales is a porter’s knot, <em>showing that</em> Temple had tried to carry them</td>
</tr>
<tr>
<td>representing (330)</td>
<td>which he is showing to figures <em>representing</em> Britannia, Hibernia, Scotia, and America. a fleet of men-of-war <em>representing</em> British sea-power a skeleton, <em>representing</em> Death</td>
</tr>
<tr>
<td>indicated (375)</td>
<td>A mountainous landscape is <em>indicated</em>. A window and a door are <em>indicated</em>. The heads of a cheering crowd are <em>indicated</em>.</td>
</tr>
<tr>
<td>indicated by (131)</td>
<td>The haste of Tom’s exit is <em>indicated by</em> one stockinged foot. its speed is <em>indicated by</em> the petticoats of Mrs. Fitzherbert</td>
</tr>
<tr>
<td>suggesting (68)</td>
<td>On the right are books and an overthrown stool <em>suggesting</em> a struggle with closed eyes <em>suggesting</em> death rather than sleep. The second attendant wears a hat, <em>suggesting</em> that she is a milliner.</td>
</tr>
<tr>
<td>expression (428)</td>
<td>His <em>expression</em> is one of perplexed anxiety.</td>
</tr>
<tr>
<td>a/an <em>expression</em> (206)</td>
<td>leaning back with <em>an inscrutable expression</em></td>
</tr>
<tr>
<td>an expression of (128)</td>
<td>she looks up at him with <em>an expression of</em> dignified surprise</td>
</tr>
</tbody>
</table>

Table 10: Examples of the most frequently observed cues for description and interpretation.
3.2.5 Hedging

The degree of confidence that a writer has in an assertion can be indicated using a hedge, e.g. ‘it may be the case that…’. Hedging need not only be associated with interpretation and evaluation in curatorial descriptions but we might hypothesise that it will be more likely used when a curator is going beyond what they consider to be self-evident in the object being described. In its own right hedging is interesting as an aspect of curatorial voice because it reveals the curator’s voice quite explicitly as they flag their own uncertainty. It may also be the case that hedges draw the attention of subsequent curators when a catalogue is being revised or repurposed as signs that more work is needed to move towards certainty.

As a first step towards investigating hedging in the BMSatire Descriptions corpus we compiled a set of potential hedges and collated their frequencies in the corpus, albeit in a rather ad hoc manner: (i) we used a thesaurus to get synonyms of *perhaps*; (ii) from Table 6 we noted some frequent -ly words that look like hedges; (iii) based on prior knowledge of English grammar we considered some modal verbs; and, (iv) we skimmed a list of frequent n-grams to identify hedging phrases. These candidate hedging words and phrases are shown in Table 11 with their frequencies.
Table 1: Frequencies of candidate hedging words and phrases.

<table>
<thead>
<tr>
<th>Synonyms of perhaps</th>
<th>perhaps (206), Perhaps (29), possibly (15), Possibly (3), maybe (0), Maybe (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent -ly words</td>
<td>probably (408), evidently (215), apparently (152), presumably (39), Probably (35), seemingly (31)</td>
</tr>
<tr>
<td>Modals</td>
<td>may be (98), seems (64), seem (48), seeming (8), could be (7), might be (3)</td>
</tr>
<tr>
<td>Frequent n-grams</td>
<td>appears to be (103)</td>
</tr>
</tbody>
</table>

Table 11: Frequencies of candidate hedging words and phrases.

In order to give a flavour of how George used hedges, Table 12 shows a selection of hedging examples, organised tentatively from George indicating more to less certainty. The examples show that hedging is actually used for qualifying statements about what is depicted and about attribution, as well as, if not more than, interpretive statements about symbolism and allusion. Similarly to further investigation of the descriptive and interpretive cues mentioned in 3.2.4, further investigation of these hedges, e.g. to analyse variation over the course of George’s work or variation between different kinds of prints, would rely mostly on close reading.

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The man, evidently Bute, is dressed partly in tartan.
they are evidently constables and their hangers-on
one is Burdett, one wears a cocked hat, and is probably Cochrane.
The supporters are two stags, probably an allusion to the old gibe that citizens were cuckolds.
The panorama is probably by Heath who went to Glasgow to paint panoramas
The presiding alderman appears to be Harley
A small poodle also appears to be in distress.
Little Lansdowne capers behind him, apparently dancing a Highland fling
Seago wears a caplike wig, apparently of worsted.
The pyre seems to be made of money-bags
He wears what may be intended for a fool’s cap.
The near leader may be Windham.
The ladies are perhaps dressed as shepherdesses.
Tierney squeezes a lemon into a glass, perhaps indicating his parsimony
Part of the interior of a large church, perhaps intended for Westminster Abbey.

Table 12: Examples of hedges, tentatively ordered from marking more to less certainty.
4. Discussion and concluding comments

We have shown how simple corpus linguistic techniques can be used to characterise the language of curatorial descriptions in a variety of ways. In closing we consider the potential value of such analyses for generating new knowledge about curatorial voice and for opening up new research directions, and what relevance such analyses may have for curatorial practice and for repurposing curatorial descriptions in digital search and access systems.

Section 3.1 showed how a frequency-led approach can generate a broad characterisation of the informational content of descriptions. In the case of the descriptions in the Catalogue of Political and Personal Satires the emphasis is clearly on the physical who and what of the prints, along with specifying the spatial relations between entities and the use of some technical concepts related to print production. Further there are signs that the descriptions tend to be written in the present tense with a formal style and a preference for short clear sentences. These are not surprising findings for anyone who is familiar with George’s work, or the conventions of print scholarship, however they serve to make the point that aspects of curatorial voice can be elucidated in this way, such that the approach could be usefully applied to less familiar collections. Furthermore, future work could use the BMSatire Descriptions corpus as a reference corpus for a keyness-based analysis of another catalogue, i.e. to identify words that are more or less frequent in that catalogue and hence elucidate differences in curatorial voice.

It was necessary to complement the frequency-led approach with some top-down analyses in order to identify the ways in which George included interpretation/evaluation in the Catalogue of Political and Personal Satires. The general point here is that
important phenomena will be missed by a frequency-led analysis if they manifest in many different words, none of which is very frequent on its own. Section 3.2 presented analyses which were directed by preconceived ideas about how interpretation/evaluation might manifest. The results suggested that, in particular, George used adverbs when interpreting the mental states of the characters depicted in prints, and a small set of cues sometimes flag where she addressed the iconological content of prints. Such findings provide a basis for further investigations by making it possible to automatically retrieve examples of interpretation/evaluation for close reading, and perhaps by enabling quantitative analyses, e.g. to compare the amount of interpretation/evaluation for different kinds of prints. However, top-down analyses are subject to the problem of ‘seek and ye shall find’: that is, results are in part determined by preconceived notions of how the phenomenon of interest will manifest in words. For example, in Section 3.4 we used a thesaurus to generate a set of candidate descriptive and interpretive cues to look for but later, when reading some descriptions, we noticed that George often used the phrases ‘intended as’ and ‘intended for’ as interpretive cues: these were not in the thesaurus and hence were missing from our analysis.

Broadly speaking, in our case study each of the analyses gave some insight into curatorial voice and/or suggested ideas for further investigation, even though none was conclusive on its own. We therefore believe that we have demonstrated that important aspects of curatorial voice do manifest in linguistic features that can be detected with corpus linguistic analysis. This means it is possible to leverage large catalogues for systematic empirical research into curatorial voice in ways that would not be feasible with manual methods alone. That said, it is apparent that addressing questions about curatorial voice also requires the close reading of whole descriptions, probably alongside collection
objects and consideration of historical and cultural contexts. For example, in the ‘Curatorial Voice’ project we are evaluating the use of corpus analysis to address questions about how George’s curatorial voice was shaped by historical and cultural factors, how it changed over time and how it subsequently shapes and constrains interpretation of the prints. Whilst we are encouraged by the outcomes reported in this paper, we recognise some issues that must be considered as we move forwards.

Foremost is the matter of what kinds of claims we can make based on the observed linguistic results from the BMSatire Descriptions corpus. First, the impression that George’s voice is – at a surface level – clear, neutral, and confident, must be balanced against the expectations of institutional labour and of writing for an academic publisher (the Catalogue of Political and Personal Satires was published by Oxford University Press). Second, the BMSatire Descriptions corpus does not include all the text in the Catalogue of Political and Personal Satires. Although the descriptions are the most substantial part written by George, an investigation of her voice should also consider the descriptions in relation to the introductory texts, indices and transcriptions of print titles. For example, George may not have speculated on the meaning of a given print in its description because she did so in her introductory essay to the volume containing it. Third, George’s use of hedging could be due to a particular set of prints being unclear or lacking supporting documentation in the historical record. So, for example, it would not be appropriate to make claims about her use of hedging changing over time without examining corresponding examples of prints. Fourth and finally, frequency effects in the BMSatire Descriptions corpus may have less to do with George’s voice and more to do with frequency effects in the prints she was describing, e.g. the relative frequency of the words woman and man will be determined in part by the relative frequency that women
and men are depicted in prints, so again examination of prints is required before strong
claims are made. Nevertheless, we maintain that some claims based on the observed
linguistic results alone remain robust irrespective of these caveats, e.g. the statistical
analysis of George’s preferred usage of fat, stout, old and elderly (Section 3.3).

In a different direction, and more speculatively, the ‘Curatorial Voice’ project is
looking to the broader applicability of using corpus linguistic techniques to elucidate
curatorial voice(s) in a given catalogue. It seems to us that the kinds of corpus analysis
presented in this paper could be usefully applied to current and future museological
practice with regards to both the production of curatorial descriptions and to the re-
purposing of legacy descriptions for accessing and analysing collections. Given a set of
guidelines for producing curatorial descriptions, corpus techniques could be used to check
the extent to which guidelines are being followed at a macro-level, e.g. by identifying
what aspects of objects tend to be referred to or not, and by gauging the overall extent of
description versus interpretation/evaluation. Further, such analysis could form a basis for
plans to edit and enhance a catalogue by providing areas to focus on and estimates on the
person time required. It could also be that a corpus-based characterisation of the language
used in an exemplary catalogue could be used to develop or refine guidelines by
identifying that catalogue’s distinctive linguistic features.

When planning to use a legacy catalogue as the basis for accessing a collection
through text-based searches, it would be helpful to have an overview of the common
vocabulary in order to understand what search terms are likely to be effective. Thinking
beyond free-text searches, the use of corpus techniques to identify linguistic structures
such as descriptive and interpretive cues that flag iconographic and iconological content,
and spatial relations between the entities depicted in an image, might enable the automatic
generation of structured representations of image content for enhanced search and discovery.

Acknowledgements

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For their comments, reflections, and encouragement during the preparation of this paper we thank Sheila O’Connell and Sue Walker (from the Department of Prints and Drawings at the British Museum), Tim Hitchcock, Andrew Prescott, and the participants at the two Curatorial Voice workshops.

Notes

1 https://curatorialvoice.github.io/

2 We use ‘curatorial voice’ to unify a dispersed literature on the production, authority, and legacy of descriptive acts in museums and the cultural sector more broadly. Zachary Kingdon’s work on ethnographic collections (2019) is framed by the quiet archival trace of early curatorial processes. Katy Hill (2016) tells us that late nineteenth and early twentieth century object description was considered to be feminised labour. Bowker and Star (2000) describe how the motivations behind organising logics rarely survive the deployment of those organising logics. And Agostinho et al (2019) and Safiya Umoja Noble (2018) caution against combining historical data and algorithmic systems to make predications on that basis that historical data always represent the racial and gendered oppressions of their own time. For us, this literature is united by a commitment to push back against notions that object description was or is a “common sense” activity, and therefore provides a foundation from which to investigate curatorial voice.

3 In brief: word lists identify a set of the most frequent words in a corpus; keyness analysis identifies sets of words that are unusually frequent or infrequent in a corpus compared with another corpus; and, concordances provide a convenient overview of how a particular word is used in a corpus (McEnery and Hardie 2012).
For a thoughtful introduction to what scholars mean when they invoke ‘close reading’ as method, and how those traditions might be usefully combined with computational approaches to text, see Eve (2019), especially 3-11.

https://public.researchspace.org/sparql

The text strings in quotation marks and the bracketed text strings that were replaced are available in Baker and Salway (2019a).

For details of AntConc setting and the complete frequency list see frequencyList.txt in Baker and Salway (2019b).

For details of how to reproduce the concordances discussed here, and in Sections 3.2.4 and 3.2.5, see concordances.txt in Baker and Salway (2019b).

See keyness.txt in Baker and Salway (2019b) for technical details about how keyness was measured and the complete results file.

As the iconographer Ernst Gombrich was a known correspondent of M. Dorothy George and as the objects she described were feted for their iconographic potential, the iconographic method provides a further framework for thinking about the distinction between description and interpretation. But we also note that iconography was discredited for privileging the authority of knowledge found principally in the Global North (Cassidy 1993). And so drawing on the history of knowledge organisation (Turner 2017), we acknowledge that interpretation is entangled with content description.

See ly_words.txt in Baker and Salway (2019b) for the complete list of -ly words.

WordNet is an online thesaurus-like resource, https://wordnet.princeton.edu/

A further line of inquiry might look into why this difference comes about, i.e. whether as a reflection of the content of the prints and/or George’s selection of what to describe. Of course there are other ways in which women and men are referred to in the descriptions, e.g. pronouns, proper names, lady and gentleman, and gendered professional roles: whilst these would be important to account for in extended work into the representation of gender, it is not relevant for the point we are making in the current analysis.

This observation could and should be tested in further work with a measure of statistical significance.

This was a list of all word sequences between two and five words long that occurred 100 or more times in the BMSatire Descriptions corpus.
References


