VisualPage: Towards Large Scale Analysis of Nineteenth-Century Print Culture

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Agenda

• Background
• System architecture
• Why Victorian poetry?
• Preliminary Data Analysis
• Future Work
“Should we be worrying that our scholarship might be anecdotally correct but comprehensively wrong? Is 1 or 10 or 100 or 1000 books an adequate sample to know the Victorians?”

Dan Cohen, “Searching for the Victorians”
Big Humanities

• Big Data: data so large that it is difficult to process using traditional computational methods
  Frames the problem in mechanical terms

• Big Humanities: data so large it is difficult to process using traditional humanities methods
  craft a distinctive interpretive voice by developing deeply internalized understanding of object of study
Big Humanities: Two Criteria

• All the data
  – not close reading of a few key sources

• Does not fit in (human) memory
  – Need special purpose analytical tools
“... text documents, while coded bibliographically and semantically, are all marked graphically” (138)

Jerome McGann, Radiant Textuality
What can we do with digital images?

- Extract text from them
- Link text to them
- Add metadata about them

Show them to a human

But can a computer see them?
A computer can read poetry. 
But can we teach it to see poetry?

What should it look for: feature extraction
How can it find meaning: pattern analysis
How should it tell us: interactive visualization
Why is this useful: understanding users

Proof of concept phase: funded by NEH Office of Digital Humanities Start Up Grant

Start up data set: 300 single author books of poetry published in England between 1860-1880
directions
• Scalability of data  Volume
• Scalability of analysis  Veracity
• Extensibility of the architecture  Velocity
• User Interactions  Variety
• Value
why Victorian poetry?
“... text documents, while coded bibliographically and semantically, are all marked graphically” (138)

“A page of printed or scripted text should thus be understood as a certain kind of graphic interface” (199)

Jerome McGann, Radiant Textuality
Judging by my vague impressions of the place, thus far, it is the exact opposite of Limmeridge.

The house is situated on a dead flat, and seems to be shut in—almost suffocated, to my north-country notions, by trees. I have seen nobody, but the man-servant who opened the door to me, and the housekeeper, a very civil person who showed me the way to my own room, and got me my tea. I have a nice little boudoir and bedroom, at the end of a long passage on the first floor. The servants and some of the spare rooms are on the second floor; and all the living rooms are on the ground floor. I have not seen one of them yet, and I know nothing about the house, except that one wing of it is said to be five hundred years old, that it had a moat round it once, and that it gets its name of Blackwater from a lake in the park.

Eleven o'clock has just struck, in a ghostly and solemn manner, from a turret over the centre of the house, which I saw when I came in. A large dog has been woke, apparently by the sound of the bell, and is howling and yawning drearily, somewhere round a corner. I hear echoing footsteps in the passages below, and the iron thumping of bolts and bars at the house door. The servants are evidently going to bed. Shall I follow their example?

No: I am not half sleepy enough. Sleepy, did I say? I feel as if I should never close my eyes again. The bare anticipation of seeing that dear face and hearing that well-known voice to-morrow, keeps me in

---

Gone were but the Winter,
Come were but the Spring,
I would go to a covert
Where the birds sing;

Where in the whitethorn
Singeth a thrush,
And a robin sings
In the holly-bush.

Full of fresh scents
Are the budding boughs
Arching high over
A cool green house:
“... we see before we read and ... the recognition thus produced predisposes us to reading according to specific graphic codes before we engage with the language of the text.”

Johanna Drucker, *SpecLab: Digital Aesthetics and Projects in Speculative Computing*
JUNE ROSES

No lower, no lower, along the lane!
For the place it was here I know,
Where over the far meadow’s bloomy wane
You rose waves to and fro,
I remember the curve of the flexile spray
And the way these roses grow.

How they float on the maze of the verdure lush,
And ruffle to feel the breeze,
Where they lie full-blown with a delicate flush!
Do you love them most, or these
Opening coy with a crimson blush,
Hiding golden hearts for the bees?

Do you mind how you bade me call you a rose?
But the spray swam over my head
With a stress of air, ‘one would say that it knows,
‘As you breathed the word it fled;
‘With the sister blooms it would fain repose
‘Till the gentle leaves be shed!’
St. John.

I.
Nothing has come to the night except the moon:
I see her now; the black and heavy clouds
Rustle in foam before her, tossed and strewn,
As when at first God's word the clammy crowds,
Half mist, half water, and all ghost; upfroze,
And bared for man the nether firmament.
Between the sea and sky, what time the rent

II.
Clouds like a garment parted from it, and close
The dark fogs sauntered earthwards; now as soon
Yon clouds part upwards, downwards; and outflows
Vast amber, and the night in happy boon
Is happy now, solemn and clear and cold;
And full of happy love, broods love—possessed
O'er the dark world, like dove upon her nest.
HE MAY WHO CAN.

We are wise, the world is old,
Antic changes shift and hold,
Boys will swear and maids will weep,
Weep and smile again.

Songs are for an April breast,
Feathers for a gleaming crest,
They may wake that need no sleep,
Sing, that feel no pain.

In the race youth's limbs are fleetest,
And a boy's mouth kisses sweetest;
Rusty-tooth and iron-grey,
Mope beside thy fire.

O DEEP unlovely brooklet, moaning slow
Thro' moorish fen in utter loneliness!
The partridge cowers beside thy loamy flow
In pulseful tremor, when with sudden press
The huntsman fluskers thro' the rustled heather.
In March thy sallow-buds from vermeil shells
Break satin-tinted, downy as the feather
Of moss-chat that among the purplish bells
Breasts into fresh new life her three unborn.

The plover hovers o'er thee, uttering clear
And mournful—strange, his human cry forlorn:
While wearily, alone, and void of cheer
Thou guid'st thy nameless waters from the fen,
To sleep unsunned in an untrampled glen.

A CHILL IN SUMMER.

I WENT upon a meadow bright with gold
Of buttercups, which glistened on the green
Of summer grass, veiled with a filmy sheen
Of gossamer, whereby a river rolled
His shrunkan waters by a city old,
Leaving large space of poisonous ooze between
The herbage and his waves, which were not clean,
And in the air there was a touch of cold.

Then my thoughts troubled me, I knew not why;
But everything seemed still, and nought at rest.
The sun grew dim, the faint wind seemed to sigh,
The pale blue seemed to shiver as unblest,
White fleecy clouds came scudding up the sky,
And turned to ashen darkness in the west.

---

**THE STAINED CHURCH WINDOW.**

Then how brief seems life’s short story,
Yet who knows what joys these knew?
Ages’ sleep in hours I ponder,
On a grave beneath a yew.

---

**THE STAINED CHURCH WINDOW.**

Ow brightly glow’d the Autumn sun,
Through that great window pane,
Streaming down on the altar like
A rainbow-rill of rain.
The Apostles in their niches,
And martyr’d saints grew bright,
As radiant shone each garment
In that celestial light.

I look’d up to the window, as
The choir softly sang,
And a flood of rainbow colours
Stream’d through the panes along;

---

**SYMBOLIC GREETING.**

"Tis music of the sky
When thus we sing and cry;
It is to bask in smiles all joy above,
To float through domes of air,
To leave the earth, and dare
Enjoy the waves of deepest rest and love;
The breath of that eternal Day
Where Joy, and morning air, and Love for ever stay.

---

**SYMBOLIC GREETING.**

What harmonies gracious exist all around
To bind those who love men together!
These wreaths of Elysium can daily be found
Like bloom that we call on the heather—

In feelings so similar, language as well,
In phrases so quaint used by all,
In looks and in gestures which each heart can tell,
In homely things pleasant we call,

In fashions of dress closely followed by each
In the sense of what’s right and fair,
In customs which all so familiarly teach,
The common surpasses the rare,
discovery

• Similarities and differences between sets of printed materials
• Historical changes in printed materials
• Influence and imitation in the design of printed materials
THE STAINED CHURCH WINDOW.

Then how brief seems life’s short story,
Yet who knows what joys these knew?
Ages’ sleep in hours I ponder;
On a grave beneath a yew.

THE STAINED CHURCH WINDOW.

Now brightly glow’d the Autumn sun,
Through that great window pane,
Bursting down on the altar like
A rainbow-call of rain.
The Apostles in their niches,
And martyrs’ saints grew bright,
As radiant atoms each garment
In that celestial light.

LOOK’d up to the window as
The choir softly sang,
And a flood of rainbow colours
Stream’d through the panes along;

SCHOLAR AND CARPENTER.

While ripening corn grew thick and deep
And here and there men stood to reap,
One morn I put my heart to sleep
And to the lanes I took my way.
The goldfinch on a thistle-head
Stood scattering seedlets while she fed;
The wrens their pretty gossip spread
Or joined a random roundelay.

On hanging cobwebs shows the dew,
And thick the way-side cresses grew;
The feeding bee had much to do,
So fast did honey-drops exude;
She sucked and murmured, and was gone,
And lit on other blooms again,
The while I learned a lesson on
The source and sense of quietude.

The Vintner.

NOW are old,
The two who wander there,
Drinking clear draughts of sacred mountain wine,
No yet the Evening’s brow is lighted over all
To the sun gleam of gold
This place and this, touched by Night’s shadowy spell.
And yet a life,
Beyond the glow of youth, hath gained their eyes
Upward with martyr-souls to the skies;
Such as purchase was kindled by the sight
Of Canaan’s land, crowned on Vigna’s bright height,
In life who never with his saints might go,
But who beheld it, and was satisfied;
Rejoiced the goodly land—gave thanks, and—ried.

April.

OUGHT, sullen, gentle, wild,
Changeful as a wayward child;
Now with pleasure kindled glance;
Then a frowning countenance;
Now with vision backward bent
A remorseful penitent,
Mourned that sullied grace,
To the morning skies that pass;
Tearing down the garden bowers,
Trampling underneath the flowers,
Or with fitful, fond cares,
Kissing them with tenderness.
Now in tones of agony,
Bearing like the raging sea;
Now as soft as lover’s sigh
Or a mother’s lullaby.
THE STAINED CHURCH WINDOW.

How brightly glow'd the Autumn sun,
Through that great window pane,
Streaming down on the altar like
A ribbon mild of flame.

SCHOLAR AND CARPENTER.

While ripening corn grew thick and deep
And here and there men stood to reap,
One morn I put my heart to sleep
And to the lanes I took my way.

April.

Joyous, sullen, gentle, wild,
Changeful as a wayward child;
Now with pleasure-kindled glance;
Then a frowning countenance;
discovery

• Visual features of printed texts can be used to identify different poetic forms

Noel Roden, *Livingstone in Africa* (1874)
reframing

• Measuring and identifying distinctive features and/or distinctive books
• Measuring and identifying representative or typical books
• Explore the “unremarked” texts that surrounded others that we are already familiar with
HEART’S DEMESNE
TO PAUL VERLAINE

Listen, bright lady, thy deep Pansie eyes
Made never answer when my eyes did pray,
Than with those quaintest looks of blank surprise.

But my lovelonging has devised a way
To mock thy living image, from thy hair
To thy rose toes; and keep thee by alway.

My garden’s face is oh! so maidly fair,
With limbs all tapering and each hour all fresh;
There are the beauties all that flourish there.

A strange, faultless, tells me of thy flesh.
Blessed are thy rosy cheek, thy Fair thy best.
Bouquet/es strange in the Woodbine wreath.

I love to kill, when Daisy stars pop out,
And hear the music of my garden drill,
Hoffisch’s laughter and the Sunflower’s shout.

And many whisper things; I dare not tell.
defamiliarize the book
line length mean, by page

William Allingham, *Fifty Modern Poems* (Bell & Daldy, 1865)
By sun, moon, stars,  
Or a cool in the bars,  
In market or church,  
Graveyard or dance,  
When they came without search,  
Were found as by chance.  
A word, a line,  
You may say are mine;  
But the best in the songs,  
Whatever it be,  
To you, and to me,  
And to no one belongs.

THE END.
line length variation

William Allingham, *Fifty Modern Poems* (Bell & Daldy, 1865)

Matthew Arnold, *New Poems* (Macmillan, 1867)

Text: 2.3449%

**THE FLOWER CHORUS.**

Sing we then,
Roses reign,
Gloire brief,
Shots in campagna.

Roses, roses,
Summer's story,
Shadows lighting
Summer's glory.

Petals opening,
Petals flying,
Petals shifting,
Petals slipping.

Roses blowing,
Roses falling,
Roses falling,
Roses falling.

Roses old,
Roses new,
Often turning
With the sun.

---

**DEserted Château of Miroganil.**

Ah! what tradition haunts the ghostly place?
What glamour rests upon the silent stones?
What wizard's spell with evil mesh has wove
This veil of mystery over what has been?

The echoes only mock us when we ask,
And wild rocks as they saw from leafy towers,
And shadows ring the changes on the key
Of the same score that's writ by gorgeous flowers.

They breathe it over to the rising sun,
And when they glorify God's bright noon-day,
They sigh it when the setting lid shuts down—
The mournful Coronach—all has past away!

---
DREAM-Love

Here the first violets
Perhaps will not unmourn
And a dove, may be,
Return to nests here.

LIGHT LOVE

She reddens, my delight;
She ripens, reddens in my sight.

“And is she like a sunlit rose?
Am I like withered leaves?
Haste where the spiced garden blows:
But in bare Autumn ows
Will then have store of harvest sheaves?

Thou livest love, true love behind,
To seek a love as true;
Go, seek in haste; but wilt thou find?
Change now again for now;
Pluck up, enjoy—yes, trample too.

“Alas for her, poor faded rose,
Alas for her, like me,
Cast down and trampled in the snows.”

“Like thee! nay, not like thee;
DEserted CHâteau of Mihomenil.

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Wilt thou have store of harvest sheaves?
Thou livest love, true love behind,
To seek a love as true;
Go, seek in haste; but wilt thou find?
Change new again for new;
Pluck up, enjoy—yes, trample too.

"Alas for her, poor faded rose,
Alas for her, like me,
Cast down and trampled in the snows."
"Like thee I may, not like thee:

Eckley
(4.4083%)

Rossetti
(3.8516%)
start-up goals

• Finish the web interface
• Refine and extend data analysis
• Publishing complete code base
areas for further research

• How can visual analytics contribute to large scale historical understanding
• How can visual analytics combine with text analysis, topic modeling, etc
• How to expand this research to other types of printed material
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