

Reading Tools

This is the script used for a dialogue that was performed by Stéfan Sinclair and Geoffrey Rockwell with the title “Reading Tools, or Text Analysis Tools as Objects of Interpretation” as a session on “Representation and Analysis” at Digital Humanities 2007 at the University of Illinois, Urbana-Champaign in June of 2007. Slides with tool screen shots and images from the Chilton lab were shown during the dialogue.

Sinclair: Why do we care so much for the opinions of other humanists? Why do we care so much whether they use computing in the humanities?

Rockwell: Let me tell you an old story. There was once a titan who invented an interpretative technology for his colleagues. No, ... he wasn't chained to a rock to have his liver chewed out daily. ... Instead he did the smart thing and brought it to his dean, convinced the technology would free his colleagues from having to interpret texts and let them get back to the real work of thinking.

Sinclair: I imagine his dean told him that in the academy those who develop tools are not the best judges of their inventions and that he had to get his technology reviewed as if it were a book.

Rockwell: Exactly, and the dean said, “And in this instance, you who are the father of a text technology, from a paternal love of your own children have been led to attribute to them a quality which they cannot have; for this discovery of yours will create forgetfulness in the learners' souls, because they will not study the old ways; they will trust to the external tools and not interpret for themselves. The technology which you have discovered is an aid not to interpretation, but to online publishing.”

Sinclair: Yes, Geoffrey, you can easily tell jokes about the academy, paraphrasing Socrates, but we aren't outside the city walls of Athens, but in the middle of Urbana at a conference. We have a problem of audience – we are slavishly trying to please the other – that undigitized humanist – why don't we build just for ourselves?

Rockwell: I guess, the point of the story is that our colleagues are always right, and right by definition in this case. They, like you and me, see themselves as the philosopher-chairs who review the opinions of others and they see our tools as opinions – opinions about how to interpret a text. Further, they suspect that these opinions are deceptive, like Greeks in a Trojan virus pretending to be a gift. Why should they let them into Urbana, sorry, I mean Troy.

Sinclair: But the tools developed by digital humanists are gifts. They are free and open.

Rockwell: Think about what it means for them to accept such a gift. What would they lose? What interpretations would they have to agree to?

Sinclair: But a tool is not an opinion or an interpretation itself. It is a site for possible interpretations. Tools are an *Ouvoire de Litterature Potentielle* - a laboratory setting for play with texts.

To push the play theory, they are the playing fields that make possible different games of interpretation.

Rockwell: Well that is where we differ. I would define a text technology as an implementation of a hermeneutic. It is a script that expresses an opinion about how to interpret other texts – a theory of interpretation, if you will. We can read tools like any other theory of interpretation.

Sinclair: And just how would you read a tool? What are you going to read, the instructions, the labels, or the results? Wouldn't you miss the point just as you would miss the point of a game if you read the instructions for tennis but didn't play it?

Rockwell: Don't be so literal. How do we do bibliographers analyze the most common text technology around - a book? They describe its physical characteristics, they discuss its history, and critique it. Likewise we can take a tool apart and describe its functionality

in pseudocode; we can look at its history of production and use, and we can try to understand how it implements a theory of interpretation.

Sinclair: That would be how to read a tool as text. But what if I am right, and tools are playgrounds that structure scenes for interpretation? To use a musical analogy, tools are instruments, they aren't read but played. To understand the tool we have to understand the performance possible.

Rockwell: I think we need some examples. Lets pick some tools – you choose – I'll read them my way and you can not read them your way. What would be a good example to start?

Sinclair: Sure, but to do this right we need to compare the scenery. Grant me a hypothesis about the development of tools – that there are three epochs of text tools, the mainframe, the personal computer and the web. We can do some archaeology here and recover older sites. Take for example one of the first sites of text technology, the Atlas Computer Laboratory at Chilton where the Ferranti Atlas, one of the first computers to use paged memory was used by Churchouse, Susan Hockey and others to study language and literature.

Rockwell: This was where COCOA was developed, first in the Atlas machine language and then in Fortran, right?

Sinclair: Yes, and we can trace a genealogy from COCOA through Susan to the development of the Oxford Concordance Program, and from OCP to Micro OCP, and from Micro OCP to TACT and then to HyperPo and TACT. I think, in COCOA there is an interesting alternative to our founding Busa story that hasn't been told and which follows the technology. Anyway, COCOA – which I believe stands for "word COunt and COncordance on Atlas" makes a good first tool to look at from the mainframe epoch. How do you read it?

Rockwell: OK, ... how would I read COCOA? Well first I would note what D B Russell says was the motivation for COCOA in a 1965 report. Russell lists motivations for developing it:

1. First, Crude retrieval,
2. Second, studying the usage of words in Philology,
3. Third, Creating concordances which are themselves aids
4. (and fourth, and I quote) “Word-counts and concordances provide useful tools for quantifying literary style in attempts at establishing authorship.”

I think COCOA implements what I would call a word-centric theory of interpretation that sees the tool as an aide to creating new texts, be they concordances or stylistic descriptions. COCOA didn't aide reading directly, I don't think it was interactive. It produced aides and these aides were, in the large scheme of things, very specific. COCOA makes possible certain only limited types of new texts or new interpretations – it made possible, as its name suggests, new interpretations where words are retrieved, counted and concorded. In effect the tool suggests that what is important to interpretation is the careful study of the use of words.

Sinclair: That may be true, though I think you have to also think about the role of the COCOA markup language, but ... when I look at the web site they have on the Atlas Laboratory what I see is an extraordinary record of people working, playing and celebrating together. If you look at all the photographs on the site of staff in the common room, of staff sports teams, of staff parties and, yes, of the celebration marking the end of the Atlas, what strikes me is the social character of what happened at the site. The lab brought together an extraordinary collection of people across disciplines to an industrial facility, who were experimenting with a new instrument trying to see what they could perform with it. It seems to me there was a level of interdisciplinary cross-fertilization that we don't see today. When people complain about solitary scholarship being the traditional way of doing things, they forget these labs of the 60s. In this setting COCOA was a performance on the Atlas. The important point is how they were doing research in teams that cross boundaries. They had fun!

Rockwell: They may have had fun, but they aspired to the same things we do, they wanted their colleagues to care. Churchouse in a 1972 report asks:

1. Why is it that there are still many areas where the potential of computers has not been recognised?
2. Are these unenlightened people missing anything worthwhile?
3. If so what should be done to enlighten them?

Maybe they had a great social life at Chilton, but they were still trying to find convincing ways to interpret the world.

Sinclair: Lets jump forward to 1989 and TACT. You were at the 1989 ACH/ALLC conference weren't you?

Rockwell: Yes, though I missed Northrop Frye, who is quoted in *Using TACT* as saying at the conference, "Critical schools, like philosophical ones, are better thought of as programming models. The importance of the computer is in bringing them down to manageable scope, so that their essential assumptions can be worked through in a reasonable time before they modulate into or merge with something else." I take that suggest that he saw the value of technology in the ways it forced us to formalize our interpretative assumptions, and formalize them before they drifted conveniently. Which may be why our colleagues don't care – who would want to be forced to formalize the ineffable?

Sinclair: And that was the first joint ACH – ALLC conference.

Rockwell: Yes, my memory is that Ted Nelson dropped in and announced that any day we would have Xanadu franchises in our neighborhood where we could sign up for an account and join the docuverse. This was right after he signed up with Autodesk.

Sinclair: So read TACT for me.

Rockwell: Well, first of all it clearly set up a division between two interpretative tasks, Text Preparation and Text Interaction. Anyone who uses TACT knows how much time you spend preparing and indexing the text. As Willard has observed, you almost learn more trying to tag your text for Makebase than actually studying it with Usebase. Second, and just as important, it presented itself as an interactive reading tool. In Usebase you read the text by asking questions in the form of queries or by selecting words. Then you can see the text reconfigured in different ways. TACT, like ARRAS and Word Cruncher, implemented a new idea about the form of the text. An idea of a dynamic text – which was, incidentally the name of the conference. This dynamic text wove the words into a new configuration which supported some types of reading better than others.

To quote from *Using TACT*,

“You can adopt two strategies in computer text analysis: deductive and inductive. The first imposes on the text an external structure deduced from prior knowledge and embodied sometimes in tags or metawords and other times in groups or query files.”

In other words, in the tagging on the one hand, and in the queries on the other we add interpretation formally from which yet other interpretations can be induced.

Sinclair: Now I see the Dynamic Text as a conference not, a theory of interpretation. You talk fondly of the people there and not there. You talk about sitting at the exhibition next to Willhelm Ott, he showing TuStep and you showing hypertext tools. Isn't there another division that happens with TACT, a division of the site of computer assisted text analysis and a return to privileging solitary research.

Rockwell: What do you mean? The conference was public and social.

Sinclair: What I mean is that TACT on a personal computer made it possible for humanists to return into their caves to do their research. It encoded a very traditional way of working where you do research alone and share it in public. It isn't TACT's fault, this is really about what we lost with personal computers. We lost the conviviality of the lab where interdisciplinary teams work closely together trading techniques.

Rockwell: But we gained access. The labs never supported more than an elite and lucky few. Labs and Centres also make statements about power – who has the funding and who doesn't. The personal computer democratized text analysis. Anyone could do it on a small craft scale in their office. For that matter, when you read *Using TACT*, one of the things that stands out is how it talks about teaching with TACT – it was now possible to share the reading with students too.

Sinclair: Which leads me to what might be the third epoch, the social network text. What HyperPo and TAPoR are leading up to is a way of weaving the democratic access of personal computer with the social collaboration made possible with the web. I think the third epochal site will be something like Flickr for texts and analysis.

Rockwell: You've shown me the prototypes. Users would have accounts where they can upload texts. They can create albums or corpora out of their texts. But how is that more than the ability TAPoR gives users with a public collection of texts online through the MyLinks features?

Sinclair: Publishing a text online with tools for its study isn't social text analysis. It is the most primitive way of collaborating and is essentially a broadcast model where one person makes things available to others. Social text analysis would let people comment on the texts of other people. It would let people create collections from the public texts of others. And, it would let people transform texts and save the results as comments for further comments.

Rockwell: But this would hide the tools. The point of TAPoR was to support reflection on methods as implemented through tools. If we give people access to a breadth of tools that generate different results it asks them to play with methods and think about them.

Sinclair: And we know from our usability methods that our colleagues found the tool focus confusing. They want to interpret texts, not admire tools. We changed the interface to make TAPoR more text centric.

Rockwell: And I wonder sometimes about the virtue of adapting interface to the lowest common humanist. Perhaps we should have stuck to our tools and kept the focus on tools and methods.

Sinclair: But you care if people use the portal. Without users you won't get informed discussion of method. A social interface would let people share their interpretations, including those assisted by text analysis. You have to support the breadth of ways people interpret each other's work in a setting that supports the fundamentally social character of interpretation.

Rockwell: You see ... I would say that how you imagine text analysis 2.0 is itself a theory of interpretation, inspired by OuLiPo – interpretation as a game performed by networks of people before a public. I can read your prototypes as a hermeneutic of the Ouvoire online – or the online lab.

Sinclair: And I can interpret your reading of tools as interpretations as a social act. If they can be treated like new interpretations then they can be valued as theory in the academy just like any other academic act. If tools are texts then they are to be read by others and in different social settings. A reading is both a social activity, even when done alone, and the outcome of a reading.

Rockwell: So ... why do we care about the others in this social setting? Why do we care that our tools are used?

Sinclair: Because that is what we do as academics – we care for others in different ways through teaching and through sharing our research. Would we publish if we didn't think what we said would be a welcome gesture that someone else might respond to?

Rockwell: Which answers your original question with a theory of academic agency through technology. It seems to me we need to ask not why, but how do we care?

The End