The Visual Turn and Geography (Response to Rose 2003 Intervention)

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Introduction: The Visual Turn in Geography
To date, the role of the visual in geography has been discussed almost exclusively with regard to human geography (Rose 2003). This paper argues that visual literacy has become an important part of physical geography as well and that there has been a visual turn in geography as a whole, which has accelerated since the beginning of the twenty-first century in parallel with the use of computers in teaching and research. Visual geography is as concerned with creating images (picturing theory) as it is with interpreting them (theories of pictures) — a point not sufficiently emphasised by Rose (2003). This visual turn has taken place across most disciplines (Mitchell 1992) and is no way exclusive to geography. However, geography has an opportunity to take a leading role in harnessing the power of the visual to enhance its teaching and research.

The visual turn has accelerated in the last few years due to the explosion in the use of the Internet using fast cheap connections. Affordable software and hardware tools such as GIS and GPS have allowed the newly expanding branch of geography—geomatics—to flourish. Simple-to-use software tools, such as PowerPoint and Excel, have allowed us to produce sophisticated visual representations of our work and easily display the results to others. PowerPoint in particular has revolutionised both teaching and research presentation, making the carefully chosen juxtaposition of text and image more powerful and portable than ever before. The prospect of virtual reality and 3-D mapping will also ensure an exciting future that geography must grasp. Finally, full blown colour images are now cheap to produce and store with digital cameras, which are also built into mobile phones and laptops. The speed of image production has become virtually instant and billions of images reside on the World Wide Web (WWW). But in order to construct the most powerful images we first have to learn how to deconstruct existing images.
This is where physical geographers who have constructed images instinctively in the past can learn from their human geography colleagues who have adopted a number of methodologies from the social sciences for geographically deconstructing more conventional visual images in art, photography, film, video, advertising, marketing and television (Rose 2001). So swift is the current computer-driven visual turn in geography that Rose’s (2003) discussion on the use of slides as being one of the core elements of the visual nature of geography is rendered superfluous and seemingly already a century out of date.

This paper also implies that geographers’ natural visual literacy has been denied and urgently needs to be exploited if our students are to be employable in this visual world. Training in the use of specialist visual images within geography has been diluted. The analysis of map projections, aerial photographs, satellite images and field sketches has almost gone from geography due to huge student numbers and the consequent demise of practical work. The design and production of maps and diagrams has been left to students to work out for themselves in Excel and simple mapping packages. We need therefore to totally redesign the teaching of the production and interpretation of geographical visual images so that students are taught the core building blocks of powerful image analysis and deconstruction. Also all students, including physical geographers, need to be taught a range of the critical analytical tools of semiotics, content analysis, discourse analysis and aesthetics.

**The Visual is the Crown of Human and Physical Geography**

The so-called Cultural Turn in England, beginning in the late 1950s, can be linked back to writings such as Williams (1958) through to Hall (1980), which sparked new interpretations of cultural geography (Elkins 2003; Mitchell 2000). This should really be labelled as cultural human geography because the expression cultural physical geography did not appear until much later (Gregory 2000; Thornes and McGregor 2003).

Interestingly Gregory (2000:18) originally defined physical geography in the form of an equation and a number of levels of understanding:

\[
\text{Physical geography} = f(P, M)dt
\]

where \( f = \text{function of,} \ P = \text{process,} \ M = \text{material and} \ dt \text{ represents changes over time.} \)

- Level 1 = studying the components of the equation
- Level 2 = balancing the equation
- Level 3 = differentiating the equation
- Level 4 = applying the equation
An equation is a shorthand summary (a form of the visualisation?) of a concept, but really Gregory’s equation should be updated to help to define cultural physical geography:

\[
\text{Cultural physical geography} = f((F, P, M)) \, dt \, dx
\]

where the additional terms are \( F = \text{form} \) and \( dx \) which represents changes over space. We can add

Level 5 = appreciating/visualising the equation over time and space

Both cultural human and cultural physical geography need to visualise the models they use. For example, Rose’s (2001) model for the construction/deconstruction of images can be summarised as

\[
\text{Image construction/deconstruction} = f(S, M) \, dt \, dx
\]

where \( S \) represents the three sites of production, the image itself and audiencing, \( M \) represents the three modes of technology, composition and social. This examines what physical geographers would call the “metadata” associated with a model or the visualisation of a theory.

The levels of understanding of both Gregory’s and Rose’s models suggest that we can envisage a bottom up approach for the construction of images (Level 1–Level 5) whereas we need a top down approach (Level 5–Level 1) when we deconstruct an image.

An example of the bottom up approach would be the production of a TV weather forecast map/image. What could be more geographical? Firstly we have to observe the raw data of elements such as temperature and pressure around the world. Millions of individual observations are processed each day. Secondly we assimilate the observations and initialise/balance our numerical prediction models. Thirdly we differentiate the models to produce the future (eg 24 hr forecast) time and space values of temperature and pressure etc. Fourthly we apply the results to produce predictions of weather around the globe, and finally we visualise this into the weather forecast images we see on TV and the Internet. Hundreds of these images are created every day around the world. How do we define the quality and power of these images? How do we differentiate between those images that are produced by respectable (?) national weather services and those produced in 5 min by an Internet company? We have to verify the images by comparing their predictions with what actually happens. Our confidence may then grow with one supplier and diminish with another. The basic truth and power of the weather forecasting images could be uncovered by applying Rose’s deconstruction model from the top down using a form of content analysis. But we would need more than one day’s images to be certain of our findings.

Imagine that we find an old weather forecast image without a date that we had cut out of a newspaper and lost beneath a pile of books.
How easily could we interpret this single image? Why did we cut it out? Was it a particularly good or bad forecast? Was it an example of a new style of presentation? Was there a particular weather disaster? With time and patience we could answer most of these questions and working from the top down get back to Level 1 on Gregory’s scale and discover the original weather observations that were used to make the forecast.

Such an analysis would open up another fascinating set of questions relating to the design and audiencing of weather forecasting images, as studies have shown that our retention of useful information from a TV weather forecast is small (Thornes 1992). How can we improve the design in order to improve the audience’s retention? Also many people struggle to identify where they live on the forecast map—what signifiers can be used to make it easier for them. Are the existing symbols used on the forecast map effective signifiers? Is it clear what time scale the forecast relates to or is it an average forecast for a number of hours?

The visual image of the weather forecast is the front end of a huge global scientific production. Like many visual images the general public do not need to understand how the image is derived, but as geographers we should be concerned with improving the presentation of the image using semiotics and discourse analysis.

Aesthetic Denial in Geography

Visual images today are a core component of both human and physical geography and yet their importance has always been neglected or denied within the discipline. Balm (2001) laments that the claimed visuality in geography is a myth as geographers have always been in aesthetic denial. He argues that this myth is deep rooted in geography because “aesthetic subjectivity is always unscientific” (Wright 1947), despite the fact that visual methodology represents a way of knowing as well as simply seeing (Daniels 1985; Rose 2001; Ruskin 1843). This is unfortunate as the use of images in geography is rarely just involved with aesthetic subjectivity and is equally likely to be involved with visualising scientific objectivity. For example, John Constable’s cloud studies (1820–22) represent an objective pictorial weather diary for a number of accurately dated hours (Thornes 1999)—as well as representing visual “ecstasy” (Clark 1973:275). Balm is also concerned that visual images are often seen as a sample of one and are therefore open to misinterpretation. Monet’s London Series (1899–1901) contains 95 images of London “Peasoupers” and is therefore a much more objective source of evidence about the extent of the air pollution in London at the turn of the twentieth century than any other source (Thornes and Metherell 2004).

Geographers are constantly involved in constructing images as well as deconstructing those of others and as such have much to gain from
studying the aesthetics of visual images as well as visual methodologies. Rose (2003) agrees with Gregory (1994), Smith (2000) and Sui (2000) that geography is a visual discipline:

> With the exception of anthropology, geography is unique in the social sciences in the way it has relied and continues to rely on certain kinds of visualities and visual images to construct its knowledges. (Rose 2003:212)

She states that geographers are only just beginning to understand the importance of the visual and associated questions of power, performance and space. However her analysis of the use of slides by geographers to critically illustrate an example of geography's visualities is confusing, dated and counter productive—merely substantiating the myth that visuality is trivial in geography. If the visual turn is to be grasped by geography we need to understand the power of aesthetics and learn to use it to our advantage.

**The Power of PowerPoint**

Rose quotes a recent study (McKendrick and Bowden 1999) which found that all geographers they sampled in a survey about teaching methods used slides. I am sure that this probably was the case in the late 1990s, but today (2004) it is more much likely that geographers use a form of “PowerPoint” presentation. PowerPoint is much more versatile than traditional slides and allows everything from still and moving images to video, text, equations and sound. Two or three or more images can be compared in one slide—images can be downloaded from the Internet, photographed on a digital camera, scanned from books, created in software, “grabbed” from a video and zoomed in or out. Crang denies making a Luddite plea but regrets the loss of the possibility of two screens to now end up with PowerPoint’s “singular, focal point of all attention” (2003:239). Of course this is not the case as one can still show high-quality photographic slides alongside a PowerPoint presentation if required. Crang (2003) also discusses the showing of a slide of Vermeer’s “Geographer”—but fails to mention that usually such slides of works of art are a pale shadow of the original art work—with the colours totally distorted and faded with use. Of course PowerPoint images may be just as bad if small digital files are copied from the Internet— but can be much better if high resolution digital images are obtained on CD for example. The storage of large images in PowerPoint is no longer a problem for display, although it can still restrict the posting of the presentation on the Internet. The strengths and weaknesses are summarised in Table 1 in a tentative SWOT analysis.

PowerPoint undoubtedly represents a significant example of the recent “Visual Turn” both within and without geography—representing...
all the visual aids of the 20th century (blackboards, whiteboards, maps, epidiascopes, globes, slides and overheads) in one package for the twenty-first century. Matless (2003), like Crang (2003), is also wary of the use of PowerPoint but admits that he is still an observer rather than a user. In terms of power and audience, PowerPoint represents a new paradigm that still awaits a critical review but scores immediately in the ease of producing copies of the presentation for the audience either to take away with them (on paper or CD) or to access themselves from the Internet.

Putting together a PowerPoint presentation is in itself a form of visual creativity and the lecturer has to be critically aware of the strengths and weaknesses of this form of performance. Surprisingly, discussions of visuality and geography have said little about the training and empowerment of geographers in the critical use and creation of visual images to promote their own ideas, knowledge and feelings. It is just as important to train geographers how to construct powerful images themselves as to teach them how to deconstruct the images of others. Indeed the knowledge of how to deconstruct an image is essential if one is going to learn how to construct an effective image. The use of computer software such as PowerPoint combined with the widespread use of digital cameras (still and moving images with sound), scanners and image editing software (for example Photoshop), TV programmes stored on hard discs and the availability of billions of geographical images on the Internet, and GISs has led to a burst of visual creativity in geography. Do we still need “artists in residence” such as in the “Visualising Geography” project (Driver 2003; Ryan 2003) to inspire us. In my third year module on “Geography and the Visual Arts” I initially get the students to deconstruct a geographical image of their choice (1000 words) which is marked and a feedback form is returned to them. They then construct their own portfolio of a linked series of around 10 images (most use a digital camera and edit the images as required) which are both displayed in an exhibition of all their works and then submitted together with

| Strengths: supports a versatile range of visual images; easy to use, copy, edit and update; global compatibility—can be carried on a key ring style memory stick; allows lecturer to face the audience all the time; does not require a darkened room. |
| Weaknesses: reduces some lectures to bullet points; image reproductions from the Internet of low resolution; LCD projector does not work with your laptop—some ICT skills required. |
| Opportunities: better quality images at higher resolution; ability to interact with images; 3-D modeling and rotation, audience can participate |
| Threats: audience don’t go to lecture (or don’t concentrate) as PowerPoint presentation is on the Internet; forget to back-up presentation and presentation lost. |
a 1000 word critical commentary. A selection of images are then placed on a specially created gallery web site for the world to view. PowerPoint is used as a very effective electronic portfolio. The creativity of most of the students is outstanding and without doubt geographers naturally seem to possess an innate ability to visualise, which is rarely explored. Indeed this innate visual skill is usually ignored to avoid the public belief that geographers spend their time colouring in maps! Creating powerful images that represent the findings of our research in a geographical way which allows us to communicate with the general public, the media, journal editors and referees, research council referees, colleagues in other disciplines and the commercial world is of paramount importance.

I do not want to dwell on the techniques of visual presentations (which apply to most subjects, not just geography). PowerPoint has meant that Geographers can no longer lay claim to the unique use of “slides” in the social sciences—as all disciplines have come to terms with this new form of visual aid. Indeed the use of photographic slides may be unique today only in terms of being old fashioned and out of date!

So what kind of visual images are important to geographers? Harvey argues that we should be wary of the emerging importance of visual images in postmodern culture as “there has emerged an attachment to surface rather than roots” (1989:61). However, it is precisely the need to unpack the potential superficial nature of images that makes them of such importance and interest to geographers. We must also be critically aware that when we construct images we do not attempt to distort the truth whilst maximising impact.

Conclusions
Visual literacy is an important new skill that geography as a whole needs to embrace for both constructing and deconstructing images. The creation and interpretation of visual images has always been important to geography and is what makes geography unique. It is an exciting time to propose that visual literacy is a common goal of both human and physical geography and that it may act as a common denominator across geography. Common techniques and methodologies are required to both critically understand and to create powerful visual images across the whole discipline of geography.

References


Rose G (2003) On the need to ask how, exactly, is geography “visual”? *Antipode* 35(2):212–221


The visual turn and geography (response to Rose 2003 intervention). JE Thornes. Antipode 36 (5), 787-794, 2004. 81. 2004. Images of exercising: Exploring the links between exercise imagery use, autonomous and controlled motivation to exercise, and exercise intention and behavior. DM Stanley, J Cumming, M Standage, JL Duda. Psychology of Sport and Exercise 13 (2), 133-141, 2012. JE Thornes, S Randalls. Geografiska Annaler: Series A, Physical Geography 89 (4), 273-285, 2007. 56. 2007. Place is one of the most fundamental concepts in human geography. It is also one of the most problematic. Place, or small-scale regional space, features as a subdivision within the Classical tripartite division of cosmography (the earth in relation to other planetary bodies), geography (the earth as a whole) and chorography (parts of the earth or regional geography). At the same time, as new forms of mathematically-oriented spatial science were advanced, humanistic geographers turned increasingly to ideas concerning the sense of place. Responses inherent in place. From the later 1980s, geographers concerned with notions of place. The rise of humanitarian intervention during the 1990s seemed to signal the beginning of this change. This author favours a constructivist take on sovereignty which maintains that it is constantly undergoing change and transformation and can be defined in terms of the interactions and practices of states (Biersteker & Weber 1996: 10). Lake (2003 & 2007) seeks to problematise the notion that relations between states are conducted on an equal footing. The response of the international community to (some) instances of mass human rights violations during the 1990s demonstrated that state sovereignty was no longer sacrosanct and that leaders no longer had a free hand to act with impunity on their own territory.