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## Guest editorial

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### What are surfaces?

“So much of life occurs at the surface that, as students of the human scene, we are obliged to pay far more attention to its character (subtlety, variety, and density) than we have done. The scholar’s neglect and suspicion of surface phenomena is a consequence of a dichotomy in western thought between surface and depth, sensory appreciation and intellectual understanding, with bias against the first of the two terms.”

Tuan (1989, page 233)

The question posed by this thematic issue is one with considerable intellectual heritage. Surfaces have held a long-standing fascination for science, social science, and humanities scholars, whether figured as material interfaces,<sup>(1)</sup> natural structures, aesthetic phenomena, geometric projections, or fetishistic distractions. Surfaces may be sculpted, calculated, smoothed, camouflaged, magnified, represented, sensed, or commodified. They may be revered for their beauty, clarity, texture, accessibility, and biodiversity, or criticised for their opacity, ugliness, or for obscuring ‘underlying’ relations and processes. Indeed, while certain disciplinary, philosophical, and scientific traditions are (or have been) concerned with understanding and apprehending surfaces, many scholars—most recently Divya Tolia-Kelly (2013)—emphasise the importance of getting beyond the surface, uncovering underlying meanings, motivations, power relations, ‘feelings’, and processes of production: pushing beyond boundaries, scratching beneath surfaces. The academic inquirer is urged to undertake sub-surface investigations, functioning as an explorer, fisherman, or miner who trawls, excavates, or pioneers new depths. As Yi-Fu Tuan argues in his 1989 essay on “Surface phenomena and aesthetic experience”, ‘depth’ is frequently revered above surface phenomena and experiences, whether by anthropologists undertaking deep ethnography, psychoanalysts helping to uncover hidden drives and deep thought-processes, or art historians looking at, into, and beyond the surfaces of paintings. Surface and depth metaphors abound throughout both academic discourses and everyday language (Thrift, 1999), but in this editorial and theme issue we want to take a step back in order to consider what surfaces actually are. What kind of ontological status are surfaces afforded? How do surfaces function as edges and interfaces delimiting the interiors and exteriors of spaces and materials, or as zones of exchange between two substances, bodies, or areas? How do we sense or apprehend surfaces? How are surfaces related to more traditional spatial concepts such as space, place, and region, as well as concepts such as representation, sensation, and materiality? In this introductory editorial we explore these and other questions through three conceptual frames—earthly surfaces; bodies and faces; and materialities, technologies, and commodities—before introducing the six papers.

### Earthly surfaces

“The object, or subject, of *Geography* is the *Earth*; especially its superficies and exterior parts.”

Varenius (1734, page 3)

<sup>(1)</sup>There are interesting differences between the uses and definitions of the words ‘interface’ and ‘surface’, for while the former refers to a surface or boundary between two forms of matter (a face of separation), the latter refers to a boundary, edge or limit of one body/matter, with only infrequent references to anything ‘beyond’ the surface. Indeed, that beyond the surface of the ‘thing’ often constitutes something of an absent presence.

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“Geography is fundamentally the regional or chorological science of the surfaces of the earth.”

Dickinson (1969, page 78)

Surfaces are commonly associated with planar phenomena or with the edges or limits of things, whether solid materials, liquids, or other molecular substances. As such they have preoccupied a broad spectrum of scientists, including astronomers, engineers, chemists, geologists, geographers, physicists, biologists, and mathematicians. In the case of geographers, they have held a persistent curiosity in examining earth surface processes, including both physical processes and phenomena shaped by human agency. Topographic descriptions, remote sensing, cartography, landscape iconography, and much more are either directly or indirectly concerned with understanding or representing the earth's surface. Tellingly, one of the first modern interdisciplinary scientific symposiums concerned with addressing human impacts on the environment, held in Princeton in June 1955, was titled *Man's Role in Changing the Face of the Earth* (Thomas, 1956). The earth's surface has been conceived topographically in terms of physical and human processes, but it has also been conceived geometrically and topologically—whether as a smooth, planar surface (Christaller, 1966; cf Martin, 2013), nonlinear topological surface (Warntz, 1966), or as being networked and topologically connected by social, economic, and political relations and modern communication technologies (Allen, 2011; Lury et al, 2012). Human geographers, regional scientists, economists, and sociologists have tended to construct the earth's surface as a rather depthless (if elevated and topographically variable) space, but academics, social commentators, and people in many different societies have also held a fascination with the vertical dimension of earth surface processes—whether reaching down below the soil, up into the atmosphere (or both, as, for example, in studies of the hydrological cycle). In recent years human geographers and historians have started to pay more attention to the verticality of social, economic, and political relations and processes, and to subterranean and aerial worlds, whether in addressing the links between empire, mining, and resource exploitation (Braun, 2000; Scott, 2008), subterranean urban infrastructures (Kaika and Swyngedouw, 2000) or aerial imaginations, visualisations, and geopolitics (Adey, 2010; Adey et al, 2013; Graham, 2004;). Vertical, horizontal, and oblique visual perspectives on surfaces became key concerns of military powers in the 20th century, while work on the history of archaeology has revealed how aerial photography transformed archaeological imaginations, visualisations, and perspectives on ancient landscapes (Hauser, 2007).

Surfaces *matter*, and in many senses it is their function as limits of matter and as spaces of material exchange which draws the attention of scholars. The structures of many earthly things become visible when they surface or are surfaced, and the history of geography, geology, and the earth sciences is littered with examples where scholars are urged to directly engage with surface processes and materials. That said, questions of proximity, distance, and perspective are important. A range of technologies—from photography, radar, and satellite technologies, to electron microscopes and excavating and drilling technologies—have enabled scientists and commercial agencies to apprehend and sense surfaces either close-up or at a distance, following seams, magnifying surface structures, and calculating areas and volumes of earthly matter (Dyce, 2013; Schickore, 2007; Warner Marien, 2002). Surface structures, textures, and processes appear different at multiple scales or when remotely sensed using particular technologies, but we must not overlook the ability of earthly materialities, surfaces, textures, luminosity, and colour (as well as topography) to create a sense of wonder and excitement (as well as complacency and boredom) for the everyday observer—whether resident, traveller, or tourist.

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Earthly materialities lie at the heart of much research in geography (both now and in the past) but, despite suggestions that the cultural turn of the 1990s led to a focus on representations at the expense of material cultures (Jackson, 2000), some of the most formative and influential work on landscape from this time focused on the material qualities of both physical landscapes and landscape representations. Take, for example, Stephen Daniels and Denis Cosgrove's introduction to *The Iconography of Landscape*, where they state that:

“A landscape is a cultural image, a pictorial way of representing, structuring or symbolising surroundings. This is not to say that landscapes are immaterial. They may be represented in a variety of materials and on many surfaces—in paint on canvas, in writing on paper, in earth, stone, water and vegetation on the ground. A landscape park is more palpable but no more real, nor less imaginary, than a landscape painting or poem” Daniels and Cosgrove (1988, page 1).

Drawing upon Erwin Panofsky's writings on iconography and iconology—which were underpinned by “stratigraphic metaphor[s]” inferring that meanings were buried underneath the surface imagery of artworks (Daniels and Cosgrove, 1988, page 6)—they brought geographic analyses of physical landscapes (back) into contact with histories of landscape representation (notably landscape art and gardening), in which visual representations and knowledges of material substance had always been closely entwined. Indeed, recent moves to advance nonrepresentational theories may appear to urge geographers to move beyond studies of surface representations (Thrift, 2008), examining our atmospheric attunements (Stewart, 2011), weather worlds (Ingold, 2011), and vibrating materialities and affects (Bissell, 2010), but rather than moving beyond earthly surfaces, such studies force us to rethink surfaces as multiple, embodied, and practised material productions (see, for example, Lorimer, 2012; Wylie, 2002). What's more, studies of representations of landscape surfaces have tended to focus on particular aspects of landscape representation and aesthetics, leaving conceptual formulations of, for example, texture, colour, and tone relatively underexamined (although see, for example, Blaszczyk, 2012; Matless and Revill, 1995; Paton, 2013; Robinson, 2013; Tuan, 1977).

### **Bodies and faces**

“The face is a surface: facial traits, lines, wrinkles; long face, square face, triangular face; the face is a map, even when it is applied to and wraps a volume, even when it surrounds and borders cavities that are now no more than holes.”

Deleuze and Guattari (1988, page 170)

The earliest uses of the word surface in English can be traced back to references, originating in middle French, to the visible outer surfaces of the human body (OED, 2012). Indeed, bodily surfaces (face, skin, retina, ear drum, vocal chords, taste buds) may be taken to be *the* key interfaces and means through which we encounter, engage with, and experience the world, and through which we express and present ourselves. It is not so surprising, therefore, that bodily surfaces and embodied spaces have received widespread attention from social scientists, particularly in relation to constructions of identity and difference (Ahmed and Stacey, 2001; Longhurst, 2001; Nast and Pile, 1998; Paterson, 2007; Probyn, 1996). Despite the emergence of DNA testing technologies, representations, images, and measurements of bodily surfaces still provide the key means by which police, judicial, and political authorities attempt to record and verify the identities of individual subjects—using photography, fingerprinting technologies, iris-recognition, CCTV, and other methods. The face, in particular, is a key sur-face for strategies of biopolitical control (Edkins, 2013), and faces and questions of faciality have been important topics of concern for a number of poststructuralist thinkers, notably Deleuze and Guattari (1988, pages 167–191). Faces may be read like landscapes or maps, while the topographies of bodies are frequently aligned with the undulations of

landscapes—as surfaces that are represented, desired, and controlled. Feminist scholars have been at the forefront of much of this work. Writing in *Feminism and Geography* Gillian Rose argued notably that landscape and nature are persistently objectified and feminised by a masculine gaze, with David Stoddart describing early French representations of Tahiti in which women present an “enticing and inviting land to be explored, mapped, penetrated and known” (Rose, 1993, page 94). Here, woman is landscape, a surface and boundary as well as an embodied subject and material object, but perhaps—as Catherine Nash suggests—we should inject a note of caution here, as female artists have also expressed a desire for looking at and representing landscapes/bodies, reclaiming and feminising the (masculine) gaze (Nash, 1996). As Nash showed through her writing and curatorial work on Irish contemporary art, many women artists have actively explored the intersection of landscapes and bodies, as can be seen in Pauline Cummins’s audiovisual installations on Aran Islands knitting traditions, or Kathy Prendergast’s diverse artistic explorations of the intersection of the body and geography:

“Her famous *Body Map Series* combined the traditions of anatomical and cartographic drawing to map the connections between discourses of colonial exploration and masculine capture and control of the female body. Yet they also seemed to suggest a resistant and evasive pleasure in a personal geography that could never be fully contained” (Nash, 1997, page 9).

Body, landscape, and map become aligned as territorialised and colonised surfaces of knowledge, power, and desire, providing lines of critique and resistance for scholars adopting a range of positions, from feminism and postcolonialism to poststructuralism (Deleuze and Guattari, 1988; Probyn, 1996). Feminist scholars have challenged the idea of bodies as contained by flat, smooth or ‘sealed’ surfaces which demarcate a clear interior and exterior, as, for example, in work on leaky bodies (Longhurst, 2001). There are clear resonances, here, with poststructuralist attempts to rethink conventional notions of the psyche as limited by the bounds of the body (Rose, 1996), as well as Deleuzian, Foucauldian, and Leibnizian conceptualisations of interiors as pleats or enfoldings of an outside (Deleuze, 1988; 1993; Wylie, 2006).

#### **Materialities, technologies, commodities**

“We have to get behind the surface appearances, unmask the fetishism of commodities in the market place and build a general theory of how commodities are produced, traded and consumed in order to better appreciate the technical conditions and social relations which put our daily bread upon the table.”

Harvey (1989, pages 8–9)

Relational approaches to bodies and subjectivities can lead us to question the definitive and edge-like qualities of surfaces (notably their impermeability), as well as conventional ontologies and epistemologies which assume that surfaces and interfaces exist where different materialities are juxtaposed. Relational and processual philosophies may circumvent, rethink, or deny the presence of such surface structures, highlighting the networked, fluid, turbulent, or topological relations which exist in the material world, weaving together all manner of things (Cresswell and Martin, 2012; Merriman, 2012; Serres, 2000), but there is no denying that there has been a close and powerful alignment of Western notions of objectivity, democracy, and agency with capitalist constructions of commodities, exchange, and property ownership, granting aesthetic power to a range of surfaces—from fences and walls demarcating the edges of properties and the shiny logos on aluminium drinks cans, to the imposing façades of mansions, or the shimmering water of an open-air swimming pool. Surfaces work in many different ways, and they require effort—scholarly, activist, or otherwise—to look beyond them, to try to demystify their fetishistic qualities and unpick their aesthetic effects.

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Marxist scholars have been at the forefront of calls for scholars to try and scratch beneath the surface, tracing the links between commodities and conditions of production, but this does not mean that surfaces are *necessarily* problematic, illusory, or opaque. Surfaces and interfaces can be productive, enlivening, and enchanting spaces, where diverse materialities meet to produce physical and aesthetic mixtures, fluidities, turbulence, and movement; whether we are talking about the meeting of paint and canvas, sea water and air, rubber and tarmac, ink and paper, or concrete and soil. Physicists, engineers, designers, architects, physical geographers, and others have focused a lot of energy on understanding the complex processes occurring at the interface of such materials and surfaces, and human geographers are increasingly rediscovering such surface phenomena as friction and turbulence—whether literally or metaphorically (Cresswell, 2013; Cresswell and Martin, 2012). Material surfaces are valued in many different ways, whether for their durability, strength, appearance, rarity, or cost of production. Concrete, gold, aluminium, glass, and diamond have all become caught up in distinctive cultural, economic, political, and aesthetic regimes, which have in part emerged from distinctive material relations with these substances and their surface properties, not to mention their distinctive histories of discovery, engagement, visualisation, and commodification. An array of different technologies have been utilised in surface explorations and representations, and many of these have fundamentally altered the way we think about and understand the world, from the use of linear perspective to represent three-dimensional landscapes on flat surfaces (Cosgrove, 1985; Panofsky, 1997), and promotions of photography as a technology for capturing events, to the use of x-ray, sonar, radar, and satellite technologies for looking beneath the surfaces of bodies, oceans, or earth surfaces.

### **The papers**

The six individual papers in this theme issue provide conceptually diverse and empirically specific responses to the central question posed: ‘What are surfaces?’ Cumulatively, and in varying combination, the papers also serve to advance an emergent field of critical, surficial thought. For Craig Martin (2013) surfaces exist first as logistical accomplishments, and are to be understood as physical phenomena crucial to the reshaped global geographies of commercial shipping and freight transport. Martin’s concern is with the advent of an intermodal, logistical system based on the standardisation of heavy-duty, corrugated metal boxes; otherwise known as the shipping container. This object, in which so many ordinary spatial interdependencies are invested, is arguably as close to a universal, surficial fix as global powers have got. The containers’ vital statistics and carrying capacities scale up to a planetary surface where integration is paramount, between materialities (of land and sea), mobilities (nautical and terrestrial), and sovereignties (political and legal). By these means, the specificities of earthly surfaces have been transformed into a commerce-driven sameness of sorts. Isla Forsyth (2013) unpicks historical events where the technological apparatus for holding power and control over surficial space takes comparably expansive, if very different, volumetric expression. During World War II the shifting appearance of desert landscapes in North Africa and the Middle East posed an identical challenge for opposing occupying forces. Overflying spotter planes endangered battlefield installations and forces personnel. Camouflage techniques were the military’s tactical response to the enemy ‘eye in the sky’, prompting infrastructural redesign for the purposes of concealment, confusion, and protection. Forsyth considers the experimental work of British camoufleurs, fusing knowledge of surface ecology and optical geometry so as to render familiar forms unrecognisable. The visual signature of camouflage was not just left on foreign soil. James Robinson (2013) considers how the war of surfaces and senses operated on the British Home Front, focusing on specific efforts by civil camoufleurs to alter the look of nocturnal landscapes, and so limit the damage done by bombing raids. Targeted aerial attacks under cover of darkness were misguided

through an applied aesthetic, sensitive to textural surfaces, tonal ranges, the shadowy play of moonlight, and the reflective properties of water. The pairing of visual culture with violent geographies may be discomfiting, but it is one in which surfaces have proved vital.

Surfaces have been an expressive medium for David Paton (2013) during an ethnographic apprenticeship as sawman and stonemason in a working quarry. Through precise descriptions of labour and craft practices that are dependent on the interplay of stone, metal, water and muscle, he explains the kinds of embodied skill necessary to know granite as a material, and how a growing intimacy with surface properties has been a means to broker new conceptual affinities. By Paton's measure, a sensual appreciation of stone surfaces can be relational and durational, bridging self-existence, geological time, and the matter of place. The remapping of surficial milieus as interpersonal and visceral is a project shared by Rachel Colls and Maria Fannin (2013). They seek to trouble the ontological principle that would have surfaces as primarily constitutive of external forms and bounded states. As an alternative sphere, interior bodily surfaces are considered: through the lifeworld of the placenta. A uniquely 'relational organ', it forms internal to a woman's childbearing body during pregnancy. Once beyond the body, and accorded the label 'afterbirth', placental tissue can be 'resurfaced' through differing kinds of therapeutic, restorative, and scientific use. By first enabling a fuller physiological understanding of interior placental surfaces, Colls and Fannin then chart an expansive and transformative geography of the body, gesturing towards new ethical spaces of exchange and apprehension. Interiority and exteriority are a consideration shared with Avril Maddrell and Veronica della Dora (2013) whose paper considers the place of surfaces in affording a depth of meaning to faith-based experience. Specifically, they examine pilgrims' passage through sacred landscapes, towards sacred places, in Western and Orthodox Christian traditions. Advancing a 'surface framework' for cultural interpretation, Maddrell and della Dora explore the ways in which the divine is identified spiritually and sensorially as text, threshold, fragment, memory, and performance practices such as walking, praying, singing, meditating, and prostrating. Here, there exist threads looping back to each of the preceding papers, where surfaces are crucial to theories about the workings of the universe, variously: metaphysical, metaphorical, mythical, physical, personal, relational, and topical.

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## References

- Adey P, 2010 *Aerial Life: Spaces, Mobilities, Affects* (Wiley-Blackwell, Oxford)
- Adey P, Whitehead M, Williams A (Eds), 2013 *From Above: War, Violence and Verticality* (Hurst, London)
- Ahmed S, Stacey J (Eds), 2001 *Thinking Through the Skin* (Routledge, London)
- Allen J, 2011, "Topological twists: power's shifting geographies" *Dialogues in Human Geography* **1** 283–298
- Bissell D, 2010, "Vibrating materialities: mobility-body-technology relations" *Area* **42** 479–486
- Blaszczuk R L, 2012 *The Color Revolution* (MIT Press, London)
- Braun B, 2000, "Producing vertical territory: geology and governmentality in late Victorian Canada" *Ecumene* **7** 7–46
- Christaller W, 1966 *Central Places in Southern Germany* (Prentice-Hall, Englewood Cliffs, NJ)
- Colls R, Fannin M, 2013, "Placental surfaces and the geographies of bodily interiors" *Environment and Planning A* **45** 1087–1104
- Cosgrove D, 1985, "Prospect, perspective and the evolution of the landscape idea" *Transactions of the Institute of British Geographers, New Series* **10** 45–62

- 
- Cresswell T, 2013, "Friction", in *The Routledge Handbook of Mobilities* Eds P Adey, D Bissell, K Hannam, P Merriman, M Sheller (Routledge, London) in press
- Cresswell T, Martin C, 2012, "On turbulence: entanglements of disorder and order on a Devon Beach" *Tijdschrift voor Economische en Sociale Geografie* **103** 516–529
- Daniels S, Cosgrove D, 1988, "Introduction: iconography and landscape", in *The Iconography of Landscape* Eds D Cosgrove, S Daniels (Cambridge University Press, Cambridge) pp 1–10
- Deleuze G, 1988 *Foucault* (University of Minnesota Press, London)
- Deleuze G, 1993 *The Fold: Leibniz and the Baroque* (The Athlone Press, London)
- Deleuze G, Guattari F, 1988 *A Thousand Plateaus* (The Athlone Press, London)
- Dickinson R E, 1969 *The Makers of Modern Geography* (Routledge, London)
- Dyce M, 2013, "Canada between the photograph and the map: aerial photography, geographical vision and the state" *Journal of Historical Geography* **39** 69–84
- Edkins J, 2013, "Dismantling the face: landscape for another politics?" *Environment and Planning D: Society and Space* **31** in press
- Forsyth I, 2013, "Subversive patterning: the surficial qualities of camouflage" *Environment and Planning A* **45** 1037–1052
- Graham S, 2004, "Vertical geopolitics: Baghdad and after" *Antipode* **36** 12–23
- Harvey D, 1989 *The Urban Experience* (Johns Hopkins University Press, Baltimore, MD)
- Hauser K, 2007 *Shadow Sites: Photography, Archaeology and the British Landscape 1927–1955* (Oxford University Press, Oxford)
- Ingold T, 2011 *Being Alive: Essays on Movement, Knowledge and Description* (Routledge, London)
- Jackson P, 2000, "Rematerializing social and cultural geography" *Social and Cultural Geography* **1** 9–14
- Kaika M, Swyngedouw E, 2000, "Fetishing the modern city: the phantasmagoria of urban technological networks" *International Journal of Urban and Regional Research* **24** 120–138
- Longhurst R, 2001, *Bodies: Exploring Fluid Boundaries* (Routledge, London)
- Lorimer H, 2012, "Surfaces and slopes" *Performance Research* **17** 83–86
- Lury C, Parisi L, Terranova T, 2012, "Introduction: the becoming topological of culture" *Theory, Culture and Society* **29**(4/5) 3–35
- Maddrell A, della Dora V, 2013, "Crossing surfaces in search of the Holy: landscape and liminality in contemporary Christian pilgrimage" *Environment and Planning A* **45** 1105–1126
- Martin C, 2013, "Shipping container mobilities, seamless compatibility, and the global surface of logistical integration" *Environment and Planning A* **45** 1021–1036
- Matless D, Revill G, 1995, "A solo ecology: the erratic art of Andy Goldsworthy" *Ecumene* **2** 423–448
- Merriman P, 2012 *Mobility, Space and Culture* (Routledge, London)
- Nash C, 1996, "Reclaiming vision: looking at landscape and the body" *Gender, Place and Culture* **3** 149–169
- Nash C, 1997 *Irish Geographies: Six Contemporary Artists* (Djanogly Art Gallery, Nottingham)
- Nast H, Pile S (Eds), 1998 *Places Through the Body* (Routledge, London)
- OED, 2012, "surface, n." *OED Online* December 2012 (Oxford University Press, Oxford)  
<http://www.oed.com/view/Entry/194886?rskey=AXJTWo&result=1>
- Panofsky E, 1997 *Perspective as Symbolic Form* (Zone Books, New York)
- Paterson M, 2007 *The Senses of Touch: Haptics, Affects, Technologies* (Berg, Oxford)
- Paton D, 2013, "The quarry as sculpture: the place of making" *Environment and Planning A* **45** 1070–1086
- Probyn E, 1996 *Outside Belongings* (Routledge, London)
- Robinson J P, 2013, "'Darkened surfaces': camouflage and the nocturnal observation of Britain, 1941–45" *Environment and Planning A* **45** 1053–1069
- Rose G, 1993 *Feminism and Geography: the Limits of Geographical Knowledge* (Polity, Cambridge)
- Rose N, 1996 *Inventing Our Selves: Psychology, Power, and Personhood* (Cambridge University Press, Cambridge)
- Schickore J, 2007 *The Microscope and the Eye: A History of Reflections, 1740–1870* (Chicago University Press, Chicago, IL)
- Scott H V, 2008, "Colonialism, landscape and the subterranean" *Geography Compass* **2** 1853–1869

- 
- Serres M, 2000 *The Birth of Physics* (Clinamen Press, Manchester)
- Stewart K, 2011, "Atmospheric attunements" *Environment and Planning D: Society and Space* **29** 445–453
- Thomas W L, 1956 *Man's Role in Changing the Face of the Earth* (Chicago University Press, Chicago, IL)
- Thrift N, 1999, "Steps to an ecology of place", in *Human Geography Today* Eds D Massey, J Allen, P Sarre (Polity Press, Cambridge) pp 295–322
- Thrift N, 2008 *Non-representational Theory* (Routledge, London)
- Tolia-Kelly D, 2013, "The geographies of cultural geography III: material geographies, vibrant matters and risking surface geographies" *Progress in Human Geography* **37** 153–160
- Tuan Y-F, 1977 *Space and Place: The Perspective of Experience* (University of Minnesota Press, London)
- Tuan Y-F, 1989, "Surface phenomena and aesthetic experience" *Annals of the Association of American Geographers* **79** 233–241
- Varenus B, 1734 *A Compleat System of General Geography: Explaining the Nature and Properties of the Earth* (Stephen Austen, London)
- Warner Marien M, 2002 *Photography: A Cultural History* (Laurence King, London)
- Warntz W, 1966, "The topology of a socio-economic terrain and spatial flows" *Papers and Proceedings of the Regional Science Association* **17** 47–61
- Wylie J, 2002, "An essay on ascending Glastonbury Tor" *Geoforum* **33** 441–454
- Wylie J, 2006, "Depths and folds: on landscape and the gazing subject" *Environment and Planning D: Society and Space* **24** 519–535