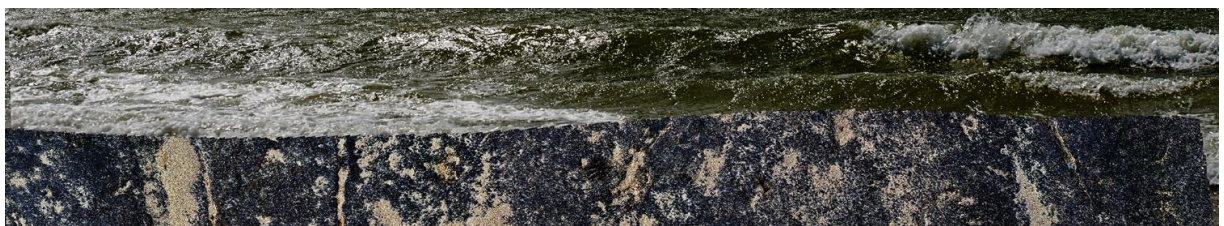




BOOK OF ABSTRACTS



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THURSDAY 10 MAY 2018

SESSION A: 11:15-12:45

A1: GEOGRAPHY, GENDER AND SCIENCE

Geography, Gender and the Animal Intelligence Debates in the Spectator, 1870-1900

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In late-Victorian Britain, the correspondence pages of the influential weekly, *The Spectator*, provided a forum for a lively discussion on animal instinct and intelligence. The anecdotal method of George J. Romanes, a leading scientific figure in the animal intelligence debates, proved popular amongst readers of the *Spectator*. By providing anecdotes, correspondents became participants in a wider scientific debate, and helped generate a particular form of amateur or 'citizen' science. Connecting to work in historical geography that has highlighted the situated and social nature of science, this paper considers the *Spectator* as a social space where scientific knowledge was produced, consumed, and circulated (Finnegan 2008). By placing science within a wider culture, it will emphasise the importance of the periodical in the creation of a social network that facilitated the making and movement of science. A key feature of this anecdotal science was its gendered character. Over the course of the nineteenth century an increasingly professionalised and institutionalised scientific culture had become associated with traditionally masculine traits. Women, stereotypically considered as emotional and therefore irrational, were increasingly excluded from science. However, in the correspondence pages of the *Spectator*, participation in the animal instinct and intelligence debates was not the sole concern of men. The newspaper provided a space for both men and women to participate in amateur science. In considering how scientific knowledge was situated within gendered parameters, this paper will argue that the anecdotal observations published from male and female readers were characterised by their adherence to, and/or rejection of, accepted traditional gender roles.

Keywords: *Gender, Geography, Animals, Science*

Illustrating and Illustrators: Charlotte Wheeler-Cuffe and the Natural History of Colonial Burma

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Natural history was one of the areas of late nineteenth-century science where women could make some significant contributions, albeit through informal and unofficial avenues. In particular, in the fields of plant illustration and plant collecting, they formed a part of the invisible army of knowledge producers, often working outside the recognised channels of the emerging discipline of botany. Isla Forsyth has observed that "The where of scientific practice at times was liberating, the colonies in particular affording women space for practicing science". For Charlotte Wheeler Cuffe the colonies did appear to be a liberating space allowing her the freedom to explore, travel and paint the natural history of Burma in ways that she may not have enjoyed at home. As Driver has noted representations of scientific exploration "privilege[s] the actions of heroic individuals in extraordinary circumstances [and] a history that tends to be dominated by the actions of European and American men, venturing forth on incredible journeys". In this paper I will investigate some of the ways in which Wheeler-Cuffe transgressed familiar gender categories during her time in colonial Burma, and negotiated her position as the wife of a colonial official and as an avid illustrator, traveller and plant-collector, in ways that both accommodated and challenged the gendered understandings of empire.

Keywords: *natural history, empire, gender, Burma*

"An Astronomical Pilgrimage" - Miss Kathleen Williams and the geographies of the 1932 eclipse expeditions to Canada

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Recent studies in the history of astronomical expeditions have begun to illuminate the roles of intermediaries, interpreters and native assistants who made important contributions to this science during the nineteenth century and earlier. The early twentieth century however remains a period in which the conduct of astronomical expeditions and the people who took part in them has seen less study. The contribution of women in particular has also been underrepresented with very few studies dedicated to highlighting how women operated in the field during astronomical expeditions. This paper will seek to add to our understanding of how women contributed to such work by looking at the eclipse expeditions to Canada in August 1932 organised by the assistant secretary of the Royal Astronomical Society, Miss Kathleen Williams. Not only did these expeditions take in a solar eclipse, they also acted as a form of scientific tourism, offering those who took part the opportunity to visit some of north

America's more prestigious astronomical institutions and landmarks prior to the eclipse. This paper will analyse the organisation and conduct of the expeditions, including the choice of viewing location, tour itineraries and the methods used in transporting the eclipse parties around north America. It will draw on research in historical geography to explore how geographical themes including mobilities, the ways in which women participated in and shaped such expeditions and matters of astronomical science were all intertwined in the early twentieth century.

Keywords: *Astronomical Expeditions, women, north America, historical geography*

Masculinity and Tropical Space Science in the life and works of Arthur C Clarke

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Arthur C Clarke (1918-2008) was one of the leading science fiction writers and science popularisers of the twentieth century, and a noted advocate of the science of outer space. While born and raised in the UK, he emigrated in 1956 to Sri Lanka (then Ceylon) to pursue his interests in underwater diving, which was seen by Clarke as a proxy to spaceflight, experiencing Ceylon / Sri Lanka through the lens of British imperialism and associated cultures of 'tropicality'. This paper explores Clarke's role as an advocate of space science, looking at both fictional and factual accounts, while considering the intertwined aspects of masculinity and tropicality that became a feature of Clarke's writing from the 1950s onwards. Drawing on material from the newly-available Clarke archive at the Smithsonian Institution, the paper reveals fresh insights into the life and works of this influential figure in scientific culture.

Keywords: *Outer space, tropicality, masculinity*

Gender, lecture culture and science in the nineteenth century

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The relationship between science and gender during the nineteenth century has often been framed in terms of the increasing exclusion of female participation as a result of the professionalisation of scientific expertise. This narrative has become more difficult to sustain in light of revisionist accounts of the piecemeal and contested nature of the professionalisation of science right up to the century's end. Scientific expertise and the scientific self were nevertheless often constructed in masculinist terms. This impulse was particularly apparent when science was presented to a mass audience through the medium of the popular lecture. This paper will examine the lecture performances of three celebrity scientists - John Tyndall, Thomas Henry Huxley and Henry Drummond - to uncover the ways in which the spoken word functioned as a critical site for reinforcing and for contesting the gendered character of scientific authority in the Anglophone world during the late nineteenth century.

Keywords: *Science, gender, lectures, nineteenth century*

Man May Fall, For He Has Risen: Comparing the genderisation and racialisation of degeneration theory in Scottish and Ulster psychiatric practice 1890-1915.

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Literature on the rise of degeneration theory as a popular conceptual framework in the late 19th/early 20th century has noted the increasing biological connotations of the term degeneration in this period. Moreover, it has been noted that as the theory travelled across national boundaries, it took on different connotations and interpretations according to national tradition. By making the categories of gender and race central, this paper hopes to illuminate the way degeneration theory also transformed as it travelled within British boundaries. As the medical superintendent of the Belfast District Lunatic Asylum between 1897 and 1917, William Graham influenced psychiatric practice, informed the general public of the newest ideas on mental diseases, and wrote articles which promoted the 'Ulsterman' and the 'Irish Celt' as racial categories. These gendered categories are compared to those present in the work of Scottish psychiatrist Thomas Clouston, medical superintendent at the Royal Edinburgh Asylum between 1873 and 1908. The paper shows that, due to the almost exclusive emphasis on the masculine, Scottish race in Clouston's work, Graham needed to translate degeneration theory into an existing racial discourse, which would extend its use to the Ulstermen and the Irish. Through his gendering of races, Clouston closed off certain avenues of psychiatric research in Edinburgh, and enunciated strict gender roles. By applying a new racial framework, however, Graham opened these up again.

Keywords: *Degeneration, Race, Psychiatry, Gender*

A2: ART AND GEOGRAPHY 1: EMBODIED GEOGRAPHIES OF THE NATION I

Artistic Proclamations

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This paper reviews the place of the Proclamation of the Republic in some of the arts-commemoration projects for 1916. Andrew Duggan curated a set of lens-based visual arts works as Proclamation and this has toured and been developed in a number of places, including Paris, New York and Dublin. In the General Post Office in Dublin, the focus of the 1916 Rising and the place from which the Patrick Pearse declaimed the Proclamation, choreographer Liz Roche curated a set of dance works entitled, Embodied. Several of these referenced very directly the Proclamation as a text or an event. This paper is based on interviews with the artists and curators involved as well as my own reflections from attending these performances. The nature of the Proclamation as a normative text raises questions about the representational and affective dimensions of artistic commemoration. In this paper I look at this tension and relate these artworks to contemporary political debate about equality, republicanism and the political unity of the island of Ireland. I also ask how distinctive has been the position given to the Proclamation in the commemorations of 2016 compared to earlier anniversaries.

Keywords: *Art, Memory, Dance*

Waiting 'For the City to Remember': Archive and Repertoire in ANU Productions and CoisCéim Dance Theatre's 'These Rooms'

Karen Till, Department of Geography, Maynooth University. Email: karen.till@mu.ie

The 1916 Easter Rising in Dublin was officially remembered for the heroic feats and martyrdom of the men responsible for declaring Irish independence from British rule. Among the artistic projects that challenged this 'canon of history' was ANU Productions and CoisCéim Dance Theatre's 'These Rooms' (<http://theserooms.ie>). This intimate performance was inspired by the largely forgotten history of the murder of 16 civilian men and boys by British soldiers during the Easter Rising. It sought to 'reconsider how Irish acts of rebellion have shifted cultural thinking at home and abroad' (ANU, 2015) through the body memory of 38 ordinary Dublin women, as set in multiples pasts and presents. Rather than equate the historical as 'traumatic' or use abject female bodies to depict violence, 'These Rooms' called attention to the inability of a city to remember its own inhabitants amidst the forgetful excesses of national commemoration and neoliberalism. Audience members moved through experiential environments, and watched and participated in performances of this 'retelling' of events near the historical location of the violence. By (re)animating the possible ways civilians dealt with (and ignored) the legacies of colonial violence in their homes and the city in 1916, 1966 and 2016, the artists created scenarios that moved between the material objectivity of the archive and the body memory of the repertoire (Taylor 2003) so as to invite audiences to bear witness to violence, grief and mourning in a (post)colonial wounded city.

Keywords: *memory, archive, Dublin, art and geography*

Féile Fáilte: Dancing Out of Place

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"The Casement Project danced with the queer body of British knight, Irish rebel and international humanitarian Roger Casement, to imagine a national body that welcomes the stranger from beyond the border, as well as the one already inside. Responding to the centenary commemorations of the 1916 Easter Rising in Ireland, and to its context in the First World War, choreographer Fearghus Ó Conchúir mobilised the resources of state commemoration in two jurisdictions to focus attention on embodiment as a legacy and a resource, and on dance as an important source of knowledge because of its engagement with the formation and organization of bodies. This essay focuses in particular on Féile Fáilte, a day-long festival of dance on Banna Strand, organized as part of The Casement Project, and on the public and media reactions to that event. Using Rancière's concept of the distribution of the sensible and Butler's recent ideas on the politics of assembly, the essay examines an ongoing contest about what bodies are allowed to appear where.

Keywords: *Choreography, Commemoration, Embodiment, Nation*

Direct Provision Centres

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Direct Provision Centres are the primary focus of my research. The 'new' category of institutions that are 'deprived of singular identity or relations' where the undefined incarceration is the only existence. The identity of asylum seekers is unknown; 'their identity is reduced to having no known identity.' Direct provision centres are 'non-places' where asylum seekers establish their new identity through the process of negotiating belonging in a current locality. Direct Provision Centres are disciplinary and exclusionary forms of spatial and social closure that separate and conceal asylum seekers from mainstream society and ultimately prevent their long term integration or inclusion. They are, as Steve Loyal argues drawing on Erving Goffman, 'total institutions, forcing houses for changing persons, each is a natural experiment on what can it be done to the self.' When the Irish state initiated the Direct Provision Scheme, it deliberately constructed a space where institutional racism could be readily instantiated, explicitly through, for example, the threat of transfer to a different accommodation Centre or for deportation. In this sense, Direct Provision Centres are, in the words of Emmanuel Levinas, 'the absence of everything... the place where the bottom has dropped out of everything, an atmospheric density, a plenitude of the void, or the murmur of silence.'

Keywords: *detention, confinement, trauma, archive, deportation*

'Archaeologies of the Future: Landscapes of the 'New Ireland' in Gerard Donovan's Country of the Grand'

Nessa Cronin, NUI Galway. Email: nessa.cronin@nuigalway.ie

How have the central tenets, or founding 'myths', that helped shape the early decades of the Irish Free State changed in contemporary, post-Celtic Tiger Ireland? Have they been transmuted into other forms of cultural identity, or, as Declan Kiberd has recently argued, have they been jettisoned entirely from national discourse with nothing set in turn to replace them (Kiberd, 2009)? This paper investigates what Kiberd describes as the 'core values' of national culture in Ireland in writing produced during and after the Celtic Tiger period, with a particular focus on the treatment of the landscape of Ireland during this time. The debates surrounding the destruction and re-construction of the Irish historical, mythological and political landscape in relation to the building of the M3 motorway near Tara will form the contemporary socio-political backdrop which informs the discussion here. Through an investigation of the short stories of Gerard Donovan and the critical writings of Colm Tóibín and Declan Kiberd, this essay examines the literary representations of a key Irish trope, the relationship to land, at a time when that relationship was severely contested as seen with concerns relating to urban planning, rural dwelling and national heritage in this period. It is argued that Donovan's Country of the Grand offers a way to critically understand the pre-history of the Ireland of the 'collapse', while simultaneously attempting to envisage the other public legacies of Ireland 'after' Tara.

Keywords: *Landscape, Celtic Tiger, Literature*

A3: GEOGRAPHIES OF ELECTIONS: CULTURE, PLACE AND POLITICS

What now for "Civil War Politics"?: Assessing the Impacts of Changing Urban Turnout Geographies

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The extent of political change in Ireland across the past decade has been historically unprecedented. The old "Civil War Politics" model has been weakened, especially following the rise of anti-establishment parties/groupings in the period between the onset of the Recession in 2008 and the 2016 General Election. Building on an earlier article in Electoral Studies (Kavanagh, 2015), the paper will tease out the extent to which these changes have shaped by changing voter turnout geographies in Ireland, but particularly in Dublin City.

Keywords: *voter turnout, electoral geography, "Civil War Politics", Dublin*

Gender, place and politics: Candidate selection in Northern Ireland elections

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Candidate selection is a principle function of political parties in an election. This process can be a useful tool in indicating where power lies within a political party and acts in distinguishing political parties from other political organisations. (Sartori, 1976) Northern Ireland is an interesting case study for candidate

selection with a rich history which is used as a tool in candidate selection and campaigning methods in elections by many of their political parties. Northern Ireland has eighteen politically and electorally active constituencies which use different electoral systems in various elections. It is the aim of this paper to illustrate the trends of candidate selection through the two voting systems, First Past the Post and PR-STV, in Northern Ireland, focusing on Westminster and Northern Irish Assembly Elections. By looking at the processes of candidate selection, it is hoped to identify if there are any trends within political parties when selecting candidates on the basis of age, gender and experience and does this impact the place/displacement of candidates, party headquarters and party members, in an election or in a political party. It will also be examined if the use of First Past the Post or PR-STV voting systems have an impact on the candidates selected for an election and their place in a political party.

Keywords: *Place, Gender, Politics*

Landscapes of Political Change: Is Rural Electoral Disengagement a Cause for Concern?

William Durkan, David Sheils and Adrian Kavanagh, Maynooth University. Email: william.durkan@mu.ie

Voter turnout may be applied as a useful measure of the health of any given democracy in a select locality. (Lijphart, 1997). Spaces of political disengagement are often a sign of deeper social and political concerns within a given community, and may often be a precursor to spaces of dramatic political change. (Kavanagh, 2015). Both internationally (Nie, Powell & Prewitt, 1969), and in the Irish context (Kavanagh, 2004), existing literature identifies a strong urban/rural geographical divide in voter participation rates. Traditionally in the Republic of Ireland, rural areas have above average voter turnout, with urban centres often displaying some of the lowest participation rates for General Elections. (Kavanagh, 2004). This trend has been prominent in recent Irish General Elections, however, this trend is now less pronounced than in previous analyses, and has continued to decline in the period up to, and including, the 2016 General Election. Rural decline in electoral participation can be viewed as a serious concern for the quality of democracy, and equality of representation, in small rural communities throughout Ireland. This has a number of potentially damaging social and political consequences. This paper will examine the potential political and structural causal factors of such trends, the associated negative implications, should observed trends continue, and also outline policy relevant solutions to better examine and address this issue.

Keywords: *Voter Turnout, Political Disengagement, Landscapes of Political Change*

A4: REGIONAL CLIMATES

Deriving Lamb Weather Types suited to regional climate studies: A case study on the synoptic origins of precipitation over Ireland

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The Lamb weather type (LWT) categorisation system is one of the best known procedures for summarising the synoptic circulations that regulate daily weather. Traditionally it is applied to daily sea level pressure, centred on a domain over the British Isles (BI), which is classed into one of 27 types (or 7 main types). The available register of LWTBI extends to the mid-19th century and has provided a valuable context for understanding the reasons for temporal and spatial variations in recorded weather elements, especially precipitation. Much of what is known of the synoptic origins of precipitation in Ireland has been based on the LWTBI, although it lies in the western part of this domain. While the original classification was based on manual assessment of weather maps, numerical methods can now be employed to objectively classify a pressure field into a LWT. As a result, it is possible to redefine the region of interest. In this study we applied the objective method to a new domain centred on Ireland (LWTIR). The paper compares the catalogue of LWT created for the new domain with that available for the original domain; while the overall synoptic climatology does not change, the sequence of LWT classes differs considerably. As a result, the interpretation of the synoptic origins of precipitation over Ireland is modified and this directs research to new areas of enquiry. This new LWT register that is focused on Ireland provides a more useful context for studying Irish climate and demonstrates the value of the objective method.

Keywords: *LWT, precipitation, synoptic*

Estimation of surface energy fluxes from single-level synoptic observations over Ireland: A preliminary evaluation of empirical land surface parameterization schemes.
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Estimation of surface radiation components and energy flux densities within the atmospheric boundary layer are crucial to understanding the physical processes that influence the weather and climate at a local/regional scale, for hydrological and agricultural applications. Measurements of these fluxes are limited in space and time over Ireland due to poor observational network and high cost of instrumental requirements. Although, most of the synoptic observations taken at single level at the various Met Éireann stations could provide insight in the variations of weather and climate conditions at local scale, there are still few contributions to the knowledge of the amount of energy available to warm/cool the surface and evaporate surface water, and consequently modify the hydrological cycle. Oak Park flux energy observations over a short grass in Carlow provide an opportunity to evaluate, adapt and build on some of the existing land surface parameterization schemes using single level routine weather observations for surface energy balance estimation. Therefore, this study for the first time in Ireland presents the preliminary investigation of the ability of these empirical schemes to quantifying the surface energy balance from single level weather data.

Keywords: surface energy fluxes, surface parameterization, agriculture

A preliminary assessment and evaluation of rainfall radar data and surface gauge measurements for a selected case study event

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Rainfall is a complex stochastic process and exhibits a high spatiotemporal variability. The traditional means of obtaining measurement of rainfall is with rainfall gauge stations, however the distribution of rainfall gauges and availability of sub-daily or sub-hourly records are limited in Ireland. In contrast, meteorological rainfall radar provides high spatiotemporal rainfall information, however, the data must undergo significant post-processing in order to provide a robust estimate of precipitation received at the surface. Met Éireann, the Irish meteorological service, currently operate two rainfall radars, located at Shannon and Dublin airports. Additional radar stations covering Ireland are located in Northern Ireland, at Castor bay, and Wales, at Crug-y-Gorllwyn, and are operated by the United Kingdom Meteorological Office. In addition to the two rainfall radar stations, Met Éireann also operates a network of 20 rain gauges that provide measurements of rainfall every minute and thus provide comparable measurements for use in evaluating the rainfall radar data. The availability of high spatiotemporal resolution coverages of rainfall is important for several fields of study (e.g. agro-meteorology). This presentation will introduce a methodology that will be employed to derive high resolution rainfall estimates, during a winter cold front event in the island of Ireland.

Keywords: radar, rainfall, high resolution

Simulation of soil carbon efflux from an arable soil using the ECOSSE model

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Globally, it is estimated that ~ 1500 Pg C of organic carbon is stored in the top meter of terrestrial soils. This represents the largest terrestrial pool of carbon. Appropriate management of soils, to maintain or increase the soil carbon pool, represents a significant climate change mitigation opportunity. To achieve this, appropriate tools and models are required in order to more accurately estimate soil carbon fluxes with a view to informing and developing more effective land use management strategies. Central to this is the evaluation of models currently in use to estimate soil carbon emissions. In the present study, we evaluate the ECOSSE (Estimating Carbon in Organic Soils – Sequestration and Emissions) model which has its origins in both SUNDIAL and RothC and has been widely used globally to model soil CO₂ fluxes across different locations and land-use types on both organic and mineral soils. In contrast to previous studies, the model was found to poorly represent observed soil respiration at the study site, an arable cropland on mineral soil located in south-east Ireland. To isolate potential sources of error, the model was decomposed into its component rate equations or modifiers. This investigation highlighted a deficiency in the model simulated soil water, resulting in significant inhibition of the model simulated CO₂ flux relative to the observed data. When measured values of soil water at the site were employed, the model simulated soil respiration improved significantly (r^2 of 0.775 vs 0.154). This highlighted model deficiency remains to be evaluated at other sites; however, the research highlights

the need for a more comprehensive evaluation of soil carbon models prior to their use in informing policy, particularly models which are employed at larger scales and for climate change projections.

Keywords: *Soil, Carbon, ECOSSE, flux*

Efficacy of weather types to generate of runoff and sediment yield in the Mediterranean basin

Peña-Angulo, D. 1, Nadal-Romero, E. 1, 2, González-Hidalgo, J.C. 1, Albaladejo, J. 3, Andreu, V. 4, Bagarello, V. 5, Barhi, H. 6, Batalla, R. 7, 8, 9, Bernal, S. 10, Bienes, R. 11, Campo, J. 4, Campo-Bescós, M.A. 12, Canatario, A. 13, Cantón, Y. 14, Casali, J. 12, Castillo, V. 3, Cerdà, A. 15, Cheggour, A. 16, Cid, P. 17, Cortesi, N. 18, Desir, G. 19, Díaz-Pereira, E. 3, Espigares, T. 20, Estrany, J. 21, Fernández-Raga, M. 22, Ferreira, C.S.S. 23, Ferro, V. 24, Gallart, F. 25, Giménez, R. 12, Gimeno, E. 4, Gómez, J.A. 26, Gómez-Gutiérrez, A. 27, Gómez-Macpherson, H. 28, González-Pelayo, O. 29, Hueso-González, P. 30, Kairis, O. 31, Karatzas, G. 32, Keesstra, S. 33, Klotz, S. 34, Kosmas, C. 31, Lana-Renault, N. 35, Lasanta, T. 2, Latron, J. 25, Lázaro, R. 36, Le Bissonnais, Y. 37, Le Bouteiller, C. 34, Licciardello, F. 38, López-Tarazón, J.A. 7 21, 39, Lucía, A. 40, Marín, C. 1, Marqués, M.J. 41, Martínez-Fernández, J. 42, Martínez-Mena, M. 3, Martínez-Murillo, J.F. 30, Mateos, L. 28, Mathys, N. 34, Merino-Martín, L. 43, Moreno-de las Heras, M. 25, Moustakas, N. 31, Nicolau, J.M. 44, Novara, A. 5, Pampalone, V. 5, Raclot, D. 45, Rodríguez-Blanco, M.L. 46, Rodrigo-Comino, J. 30, 47, Romero-Díaz, A. 48, Roose, E. 49, Rubio, J.L. 4, Ruiz-Sinoga, J.D. 30, Schnabel, S. 27, Senciales-González, J.M. 50, Simonneaux, V. 51, Solé-Benet, A. 36, Taguas, E.V. 52, Taboada-Castro, M.M. 46, Taboada-Castro, M.T. 46, Todisco, F. 53, Úbeda, X. 54, Varouchakis, E.A. 32, Vericat, D. 7, 55, Wittenberg, L. 56, Zabaleta, A. 57, Zorn, M. 58, 1 Departamento de Geografía, Instituto Universitario de Ciencias Ambientales (IUCA), Universidad de Zaragoza, Zaragoza, Spain 2 Instituto Pirenaico de Ecología, IPE-CSIC, Zaragoza, Spain 3 Soil and water conservation research group, CEBAS-CSIC, Murcia, Spain 4 Department of Soil Degradation and Conservation. Centro de Investigaciones sobre Desertificación-CIDE (CSIC, UV. GV), Moncada, Valencia, Spain 5 University of Palermo, Department of Agricultural, Food and Forest Sciences, Viale delle Scienze, 90128 Palermo, Italy 6 INRGREF, Ariana, Tunisia 7 Fluvial Dynamics Research Group – RIUS, University of Lleida, Lleida, Catalonia, Spain 8 Catalan Institute for Water Research, Girona, Catalonia, Spain 9 Faculty of Forest Sciences and Natural Resources, Austral University of Chile, Valdivia, Chile 10 Integrative Freshwater Ecology Group, Centre d'Estudis Avançats de Blanes (CEAB-CSIC), Accés a la Cala St. Francesc 14, 17300, Blanes, Girona, Spain. 11 Departamento Investigación Aplicada y Extensión Agraria. Instituto Madrileño de Investigación y Desarrollo Rural, Agrario y Alimentario (IMIDRA), Madrid, Spain 12 Department of Projects and Rural Engineering, ISFOOD Institute, Public University of Navarre, Pamplona, Spain 13 Polytechnic Institute of Castelo Branco, School of Agriculture, Castelo Branco, Portugal, GEOBIOTEC – Center for GeoBioSciences, GeoTechnologies and GeoEngineering, UBI, Covilhã, Portugal 14 Department of Agronomy (Soil Science Area). University of Almeria. Engineering High School. Office 1.48. Carretera de Sacramento sn. La Cañada de San Urbano 04120. Almeria, Spain 15 Soil erosion and Degradation Research Group, Department of Geography. University of Valencia, 46010 Valencia, Spain 16 Université Cadi Ayyad, Faculte des Sciences Semlalia, 40000 Marrakech, Morocco 17 Maize Genetics and Genomics Lab, Laboratorio Nacional de Genómica para la Biodiversidad, Centro de Investigación y de Estudios Avanzados del IPN (LANGEBIO - CINVESTAV) Irapuato, Mexico 18 Centro Nacional de Supercomputación, Department of Earth Sciences, Barcelona, Spain 19 Departamento de Ciencias de la Tierra, Universidad de Zaragoza, Zaragoza, Spain 20 Departamento de Ciencias de la Vida, Unidad de Ecología, Universidad de Alcalá, 28805 Alcalá de Henares (Madrid), Spain 21 Mediterranean Ecogeomorphological and Hydrological Connectivity Research Team (MEDhyCON), Department of Geography, University of the Balearic Islands, 07122 Palma, Spain 22 Department of Applied Physics University of León, Leon, Spain 23 Research Centre for Natural Resources, Environment and Society (CERNAS), College of Agriculture, Polytechnic Institute of Coimbra, 3045-601 Coimbra, Portugal 24 University of Palermo, Department of Earth and Marine Science, Via Archirafi 20, 90123 Palermo, Italy 25 Surface Hydrology and Erosion group, Institute of Environmental Assessment and Water Research (IDÆA-CSIC), C/ Jordi Girona 18-26, 08034 Barcelona, Spain 26 Instituto de Agricultura Sostenible—CSIC, Córdoba, Spain 27 INTERRA Research Institute, University of Extremadura, Avda. de las Letras, 10071 Cáceres, Spain 28 Instituto de Agricultura Sostenible, Consejo Superior de Investigaciones Científicas, Córdoba, Spain 29 Department of Environment and Planning, Earth Surface Processes Team (ESP) Centre for Environmental and Marine Studies (CESAM), University of

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Different research groups around the Mediterranean basin have come together to analyse soil degradation due to water, using weather types as the independent variable. The main objective is to expand our knowledge about the observed temporal patterns of runoff and sediment yield based on atmospheric weather conditions. In this study, we analyse the spatial and temporal variability of the runoff and sediment yield under the influence of general synoptic conditions of the atmosphere. We have studied the climatological frequency of weather types for the period 1981-2010 and the frequency of the WT's during the events occurred in our study period (1980-2016). Wilcoxon test (greater and less alternative) was used to determine which the most or less efficient weather types are: to detect which are the weather types that generate the largest amount of sediment yield and runoff. Preliminary results indicate that there are weather types very efficient and others less efficient. The behaviour observed in the efficient of the weather types vary in time (months) and space (Mediterranean basin). In this contribution, we show a set of maps classified into two groups (big efficient and less efficient), clustered by months and weather types. This set of maps allow us to observe spatial patterns and variations in the influence of weather types on runoff and sediment yield.

Keywords: *Weather types, Sediment, Temporal patterns*

The Geography of Dublin's Building Stock: An Urban Building Energy Model Using the European Building Typology Web-tool TABULA

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The extent, intensity and properties of building cover in cities is primarily responsible for a variety of urban climate effects. These include the patterns of solar access, wind and air temperature that impacts on both building energy management and the climates of outdoor spaces. Moreover, the occupation of buildings, which serve particular functions at different times of the day and week is responsible for much of urban energy demand that generates the anthropogenic heat flux. Meeting these demands is

responsible for the generation of waste materials and gases (including greenhouse gases) that affect regional and global climates. Consequently, detailed information on buildings (materials, dimensions, energy systems, use, etc.) and their geography (placement) is critical to climate management at a hierarchy of urban scales. This study presents a detailed database on all the buildings in the centre of a mid-latitude city (Dublin, Ireland) that was created using a building typology allied with remote sensing and geographic information systems. The work uses the TABULA scheme, which was created to examine energy use (and fuel poverty) across Europe based on the residential building stock in each country. This source is complemented by data on commercial buildings obtained from available census data, tax records and visual references from Google Street View. Together, this information data provides a comprehensive database on the built elements of the urban landscape that can be used in a number of modelling initiatives. Here, these data are employed to build a model of building energy use (Wm-2) and Carbon emissions that accounts for both spatial and temporal patterns across the city centre. Combining the form and function of buildings with this temporal model allows the simulation of energy demand and heat loss and provides a spatial framework for planning interventions that may include renewable energy harvesting, fabric changes and district heating. This approach outlined here can be extended to other urban places to provide an understanding of the nature of building energy demands and their management.

Keywords: *Energy, Climate, Modelling,*

A5: LEGALITIES AND LIVEABILITIES: MAKING SENSE OF THE IMPLEMENTATION OF LAWS/POLICIES AND LIVED EXPERIENCES OF LGBTIQ/SEXUAL AND GENDER NON CONFORMING PEOPLE

A Tale of Two Worlds? Presence, absence and subjectivity in LGBT rights policy

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During a 2017 UK House of Commons backbench debate, Nick Herbert MP described the current state of global LGBT rights as 'a tale of two worlds'. Using this spatial metaphor, he celebrated the development of legislative and other protections for SOGI (sexual orientation and gender identity) minorities in some states, while castigating others for their failure to achieve similar progress. This paper uses the spatial and temporal implications of 'two worlds' to explore the limits of current UK policy on global LGBT rights. In particular, it argues that queer and SOGI individuals often occupy a paradoxical position in which they are simultaneously visible and invisible, welcome and excluded, within legal spaces and discourses. It suggests that this paradoxical positioning is not a side-effect, but a necessary feature of current UK legal engagements with global and domestic LGBT rights. By tracing the paradoxical presence and absences of SOGI subjects within law, this paper explores how political perception and legal action contribute to the consolidation of homonationalist hierarchies and flattened subjectivities. It suggests that within this legal landscape, a continued narrow focus on decriminalisation can obscure other forms of legal and physical violence. Drawing upon this legal analysis, the paper argues that the 'tale of two worlds' facilitates particular scalar and jurisdictional manoeuvres and particular legal solutions that can be of limited usefulness to vulnerable SOGI and queer minorities.

Keywords: *LGBT rights, homonationalism, Commonwealth, Diplomacy*

Spaces of Resistance: Moving beyond tolerance to acceptance for LGBTIQ people in South African Churches

Louise Sarsfield Collins, Maynooth University. Email: louise.sarsfieldcollins@mu.ie

South Africa has the most progressive equality laws on the African continent and some of the most progressive globally. However, there is a marked difference between abstract legal rights and substantive rights that impact people's day-to-day lives. Since independence, with new legal freedoms and protections, queer people in South Africa, especially black queer people have become more visible than ever before. With this visibility comes real risks and dangers. Research published in late 2016 (Love Not Hate, 2016) found that 44 per cent of respondents had experienced some form of discrimination or harassment in the previous two years, due to their sexual orientation. In many cases this goes beyond verbal harassment to violence. In the first week of this year alone, the news of two hate related murders were reported in the pink media in South Africa. This paper argues that as well as increased risk and danger, increased visibility provides new opportunities and spaces to resist and challenge the heteronormative and heteropatriarchal norms, which give rise to homophobia. One such space is within churches. These challenges to dominant norms bring together religious, legal and social arguments in a bid to transform church spaces to move beyond homophobia, becoming not only tolerant but accepting of queer people. Drawing on fieldwork conducted during 2017 and 2018 in KwaZulu-

Natal, South Africa, the paper explores how abstract legal rights have been used to challenge discrimination at a variety of scales within churches and in both formal court settings and more informal community contexts.

Keywords: *LGBT, Religion, South Africa, Legal Geographies*

Multi-scalar Resistances: Heteroactivisms Beyond the Urban/Rural Divide

Catherine Nash and Kath Browne, Brock University and Maynooth University. Email: cnash@brock.ca

Changes to sexual and gender rights in the early 21st Century have dramatically altered the terms of liveabilities. Whilst this has been investigated through Lesbian, Gay, Bisexual and Trans lives, there is also a need to explore how resistances to LGBTQ equalities are manifest. This paper explores discourses that advocate for the superiority of normatively gendered, heterosexual individuals and heterosexual marriage for the raising of children and the future of society. Examining how heteroactivist groups are organizing across local, regional, national and international scales, we consider the constitution of social movements that are both urban/rural, local/national, national/transnational. We do this by examining the voting patterns (by Federal electorate) of the Australian Marriage Equality Postal Survey, conducted September-November 2017. We focus on the electoral results within Sydney (with some national comparison). While Sydney is understood as open, cosmopolitan and queer, the electoral results revealed the city's western suburbs as the site of the strongest opposition to marriage equality in Australia, while its inner and eastern suburbs were among those electorates most supportive of marriage equality in the country. The postal survey thus demonstrated Sydney is a geographically divided city in terms of support for marriage equality. We develop this contested city focus, to argue that the heteroactivisms visible in the city were not only informed by national debates, they were also transnationally reconstituted, including through links with Ireland, Canada and the USA. In investigating how these multi-scalar heteroactivist networks operate, we argue that a focus on heteroactivisms and their crossings of multiple scales is central to engaging with contemporary sexualities activism and scholarship.

Keywords: *Sexual geographies; transnational; urban movements*

Safe Spaces? The use of new social media to challenge and redefine social and legal definitions of male sex work in Ireland

Paul Ryan, Maynooth University. Email: paul.ryan@mu.ie

The Criminal Law (Sexual Offences) Act 2017 moved Ireland from a prohibitionist to a neo-abolitionist position on prostitution through the introduction of a sex purchase ban, similar to that introduced in some Nordic countries since the late 1990s. It was heavily influenced by a civil society campaign (TORL) that utilised radical feminist knowledge production to develop a conceptual framework with which to understand prostitution as violence against women, where consent and agency could never be fully exercised. Although representing 9% of all commercial sex transactions in Ireland the voices of men and trans workers were entirely absent from this debate (Maginn & Ellison 2014). In this paper I argue that the current political and legal narrative that governs male sex work has failed to understand the lived reality of men who engage in commercial sex which has increasingly become more opportunistic, transitory and embedded within new social media apps heavily used by the LGBTI community. Applications like Grindr and Instagram have become hybrid spaces that have blurred the boundaries between the physical and the digital to facilitate diverse forms of sex work that exchange sex and intimacy for goods and access to the choreographed online lives of workers in ways never anticipated by policy makers. The paper draws upon in-depth interviews with 18 male sex workers from Brazil and Venezuela living in Dublin who had engaged in some form of commercial sex activity.

Keywords: *sex work, law, social media*

Yogyakarta + 10 and the assembling of new opportunities for sexual orientation and gender identity equalities legislation globally

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When the Yogyakarta Principles were adopted by a 'distinguished group of international human rights experts' meeting in Indonesia in 2006, they were intended to outline how existing international human rights law and obligations might apply to questions of sexual orientation and gender identity. In November 2017, the Yogyakarta Principles were updated, with ten new principles added to reflect changes in human rights law and emerging political issues. The original Yogyakarta Principles have functioned as a key device around which human rights defenders, LGBTQ advocacy groups and other actors have organised to advance SOGI human rights in national, regional and international arenas. By reinterpreting states' existing human rights obligations, they have attempted to create space and

leverage to explicitly address sexuality and gender identity/expression equalities whilst trying to minimize the opportunity for opponents to claim they are making a 'special case' for sexual and gendered minorities. This paper engages with the new principles contained in the Yogyakarta +10 declaration, and examines the process by which they were articulated, to consider how legal scholars, diplomats, and LGBTQ advocates are assembling new possibilities for expanding equalities legislation in a variety of geographical locations and geopolitical contexts.

Keywords: *Geographies of Sexualities; Critical Geopolitics; LGBT equalities; human rights*

A6: 50 QUESTIONS FOR IRISH GEOGRAPHY RESEARCH TO HELP SECURE THE EARTH AS OUR HOME - WORKSHOP DISCUSSION

Discussion leaders: Helen Shaw, Ro Charlton, Maynooth University; Philip Lawton, Trinity College Dublin; Irene Morris Cadogan, Geographical Society of Ireland

As we consider this conference theme of "The Earth as our Home" it is apparent that geography researchers, as an interdisciplinary group, comprising human and physical interests through space and time, is well placed to consider some of the connected questions that need to be addressed to ensure a secure future on the planet. For example, continued critique of both the foundational ideals and approaches to the environment, apparent within the interdisciplinary notion of sustainability, arguably illustrate what makes geography such a unique and valuable discipline. Methods for peer-development of key questions in a field of research have been honed and developed over recent years (Sutherland et al, 2011) and valuable syntheses have been published. Such papers can aid information flow and assist researchers in focusing on key issues of concern. In drawing upon the rich debates within the different sub-fields of geography, we aim to develop the top 50 questions for future research in Irish Geography as a contribution to the CIG 50th Anniversary. The session will comprise a workshop to discuss, edit and prioritise questions harvested via social media and emails to our networks prior to the conference. Post-conference we will finalise the list and develop a multi-authored paper containing a record of the questions and rationale for research priorities.

SESSION B: 2:00-3:30PM

B1: GEOGRAPHY AND THE IRISH STATISTICAL SYSTEM

Introduction to the Irish Statistical System

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The Irish Statistical System (ISS) comprises those parts of the public sector involved in the collection (whether directly or indirectly), processing, compilation or dissemination of data which are used for official statistics. In Ireland, official statistics are produced by the CSO, as well as a range of other government departments, agencies and state bodies. The CSO has a formal coordination role to play across the public service in relation to official statistics. Recently, this coordination role has been strengthened with the establishment of a new directorate (Statistical System Coordination Division) responsible for 1. Assessing the quality of the ISS 2. Embedding a National Data Infrastructure across all government bodies/agencies and 3. Demonstrating the value of these data for policy and research which benefits Irish society. In this presentation I will highlight the organisation of the Statistical System Coordination Division and its work to date as a means of introducing the wider session. I will then briefly highlight future projects relating to point 3. above with the aim of highlighting potential areas of collaboration with geography researchers in Ireland. I will provide a specific case of utilising the ISS to examine commuters in Ireland.

Keywords: *geography, statistics, data, cso*

Towards an administrative Census of Population Living in Ireland

Justin Anderson, Central Statistics office. Email: justin.anderson@cso.ie

An administrative census is a concept of estimating population by utilising data which is held as administrative data held by government departments. In line with international trends, the Central Statistics Office (CSO) has initiated plans to run an administrative census in 2021 in tandem with the traditional census of population in order to assess the feasibility of using more administrative data sources for the Irish census beyond 2021. Multiple government departments have multiple data sources containing information on specific subsets of the population, for example, people employed, self-employed, receiving benefits, in education and so forth. Each dataset has different purposes for which they obtain data and different definitions with which they work with. The challenge for the CSO is to attempt to obtain and combine counts of people from these various disparate datasets in-line with

census definitions of who is resident in the state, accounting for duplicates, undercounting, over counting and quality of completeness of the component datasets. From this, the intention is to create a statistical population register of all individuals from these administrative datasets, and using PPSN (where possible) or matching techniques to link between sources, which can act as a spine to create population estimates for the country as a whole and also broken down by age, sex, and geography, and also by a variety of themes which are currently available from traditional census data. In this presentation we detail work done so far by the CSO to develop estimates from administrative sources.

Keywords: *Census Population Data*

Refinement of housing completion estimation in Ireland

Laura Flannelly, Central Statistics Office. Email: laura.flannelly@cso.ie

There are a number of data sources available that look at residential building activity in Ireland. This presentation will look at ESB connections data and provide a more refined view of housing completions in Ireland from 2011 to 2017.

Keywords: *housing, residential building activity*

Dept. Health - Health Outcomes Project

Lianora Bermingham, Central Statistics Office. Email: lianora.bermingham@cso.ie

The Department of Health are working with the Central Statistics Office to produce statistical analyses of Medical and GP Visit Card holders. Linking Medical and GP Visit Card datasets to other government administrative datasets have provided the following statistical analyses:

- Medical /GP Visit card holder by employment status
- Medical /GP Visit card holder by income
- Medical /GP Visit card holder by house ownership/rental status
- Medical /GP Visit card holder by child benefit status
- Medical /GP Visit card holder in receipt of Disability Allowance and those in Partial Capacity Benefit
- The number of Medical /GP Visit card holders that are availing of the Wage Subsidy Scheme by income
- Flow of Medical /GP Visit card holder over several years to show in and out of the scheme compared with their employment status, income.

Results of these analyses will provide the Department of Health with enhanced information on the cohort of the population with Medical and GP Visit cards, and furthermore inform evidence-based policy making in this area. By examining the complex interactions between the benefit system, including Medical and GP Visit card holders, Income and Earnings and moreover Geographical information, invaluable insights can be gained into the well-being of persons with disabilities in Ireland.

Keywords: *health, statistics, administrative data*

Health Data within the Irish Statistical System: Identifying new sources and geographies

D. Arodudu, M. Brennan, G. Mills, T. Ningal, M. Bradley and R. Foley, Maynooth University (Arodudu/Foley), UCD (Mills/Ningal) EMRA (Brennan/Bradley). Email: ronan.foley@mu.ie

Access to good quality health data at meaningful scales is a problem that has bedevilled medical/health geography in Ireland. Key gaps remain between spatial detail and the level and availability of useful and usable health data. Green shoots are emerging, especially in relation to self-reported health data at small area scale. But other data on health with potential for fuller exploitation exists within and beyond the CSO system. This includes Census data on disability and wider limiting-long term health conditions as well as a range of health-specific survey data that increasingly incorporates a longitudinal component. This presentation reports on a data audit for an EPA/HSE funded project looking at finding spatially-detailed health indicators to model against green-blue infrastructure, to identify the value of potential access to green and blue space. In trying to identify health data at workable small scales, the data audit examined recent surveys by HIQA, the EPA and a wider discussion on data sharing via the DASSL Report. In the end the project worked with three broad data sets from measured, self-reported and derived sources. Most importantly, measured data for mortality was derived from a new 'intermediate area' (IA) geography, developed by the NCG at Maynooth. We propose these IA geographies as a potential spatial solution to health data collection and reporting, but also identify specific aggregations and individual level data from within the HSE and Department of Health which might also have potential for the collection and dissemination for Irish researchers.

Keywords: *health data, census, disability, boundaries*

B2: ART AND GEOGRAPHY 2: EMBODIED GEOGRAPHIES OF THE NATION II

Healthcare, not Airfare! Art, Abortion and Political Agency in Ireland

Sydney Calkin, Durham University. Email: sydney.calkin@durham.ac.uk

Ireland currently has some of the most restrictive abortion laws in Europe. Every day, between ten and twelve Irish women travel to access abortion in British clinics. Today, as political momentum grows to change Ireland's abortion laws, artists play an important role in forcing public recognition of the status quo and making its injustice visible. Building on geographical engagements with Rancière, this article examines the effects of artwork in asserting political agency and contesting women's marginalization from geopolitical narratives. It argues that Irish artists have disrupted the political discourse of 'abortion-free Ireland' by contesting the territorial displacement of abortion from Ireland: they have brought abortion politics into the public conversation by re-framing the issue as one of forced exile from Ireland in pursuit of healthcare. The article examines two artworks that depict Irish women's experiences of abortion-related travel to England as part of the larger political campaign for liberalization of Ireland's abortion laws. These works challenged the enforced silences around abortion in Ireland and facilitate women's testimony through works that are public, collective, and anonymous.

Keywords: *Abortion, Art, Ranciere, Ireland*

How can we know the dancer from the dance? The Irish body and what it represents in a set dancing class in suburban Dublin and beyond

Catherine Hayes, Maynooth University. Email: catherine.hayes.2014@mumail.ie

This paper is an auto-ethnographic exploration of the Irish body in a set dancing class at home in Dublin and beyond, at set dancing festivals in County Clare. It frames set dancing in the geopolitical context of the colonisation of Ireland which produced migratory flows over centuries and within the influence of recursive flows of culture made possible by modern aviation and televisual technology (Crowley et al. 2012; Gilmartin 2015). It interrogates transmission of 'traditional Irish culture' through the medium of dance and observes power dynamics at play before, during and after Irish Independence in 1922. Central to its argument is the embodiment of the set dancer: how dance is taught, how practice inscribes itself on the body, how practised bodies experience 'flow' and collectively transcend daily life in an expression of joy and communitas that signifies home (Mauss 1935; Bourdieu 1977; Csikszentmihalyi 1997; Bondi 2009). Explicit denial of nationalist identity by dancers is interpreted by reference to accounts of dance being refractory to linguistic articulation (Bateson 2000; Thrift 2000). Regulatory laws and state practices are invoked in describing the role of the gaze of the new, un-homely Irish state as it restricted, confined and othered the bodies of those seen to deviate from a new, neo-Victorian, Jansenistic Catholic sense of national respectability and identity (O'Connor 2005). Performativity is used to explain contemporary reclamation of bodily autonomy both by articulate dance artists and by taciturn, non-performing set dancers (Butler 1988). Needing no more than their skilled bodies and a good tune, set dancers occupy space and create home wherever they find themselves.

Keywords: *embodiment, dance, home, belonging*

Sounding Louth: Listening for Identity in the Traditional Music of Louth

Daithí Kearney, Dundalk Institute of Technology. Email: daithi.kearney@dkit.ie

Louth does not rank highly in a regional narrative of Irish traditional music yet it boasts a rich musical heritage and in 2018 will host Fleadh Cheoil na hÉireann, one of the largest Irish traditional music events in the world. This paper critically examines the evolving soundscape of Irish traditional music in Louth as experienced in recordings by selected artists in the latter half of the twentieth century and contrasts this with developments in the community and voluntary sector. It engages with discourses that cross ethnomusicology and geography to engage with concepts of place and soundscape as process and the interpretations of place that emerge through sonic representations of place. A key focus of this paper centres on the imagination of Louth as a musical/non-musical place because of differing constructs of 'tradition', 'authenticity' and 'commodification' in the context of Irish traditional music. The presence of external musical influences and their impact on music-making is evident but these external influences become internalised within the processes of place and soundscape. Key figures include the Sligo-born fiddle player John Joe Gardiner, the successful Siamsa Céilí Band that won the senior All-Ireland Céilí Band competition three years in a row (1967-1969), the innovative ensemble Lá Lugh and the commercially successful band The Corrs. It is their interrelationship at a local level within a community of practice and the shared musical influences that construct a network integral to how Louth is heard.

Keywords: *Irish traditional music, Louth, soundscape*

Visualising a Sense of Place and Belonging in a Dublin Dock-working Community
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Despite the ruination of many port cities all over the world in the wake of globalisation, Dublin's port remains vibrant as well as geographically close to the city. In the essay film *Keepers of the Docks* (Sweeney, 2017, 70 mins) the stories of retired dockworkers and contemporary stevedores, marine operatives and port managers are intertwined with my own reflections on the interconnectedness of global transformations on their working lives. These custodians of the docks are given central voice while the reflective narration unfolds and draws together a number of interdependent and recurring themes: a nostalgia for lost communal tradition and solidarity; the interconnected hubs of local dock work; and the complexity of the global digitalised structure which facilitates ship movement between world ports. This presentation will consist of a series of short reflections on key clips from the film *Keepers of the Port*. At the heart of the audio-visual project is a desire to convey a sense of how working in Dublin Port has shaped the thoughts, feelings and relationships of different dock constituencies. In this regard, I understand that place is inextricably linked to identity and memory and that it shapes how stories are recalled and personal narratives constructed. As a filmmaker, I am interested in the way that the layering of aural and visual traces, both material and non-material, allows for the creation of a sense of place (Anderson 2015). This intersects with an ongoing conversation on place within cultural geography where context is vital to understanding place.

Keywords: *Film, Dublin Port, Dockworkers*

an cuardach seo naofa. Nuair a throid na cosa. Meta narrative in Site-specific Performance Practice as a Platform for Deconstructive Ecopsychology.

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Making works in isolation often in very remote or isolated environments, my intimate series of landscape embodiment rituals raise the dichotomy of site-specific practice as potential platform for increased environmental awareness. Reviewing my recent environmental works in a framework of deconstructive Ecopsychology, I will address through theoretical and practice based models how far the artist and landscape form a dynamic synthesis within the collaborative experience and embodiment of landscape. I will debate how far site specific performance and the practice of long distance walking offers an embodied landscape narrative. Framing my series of endurance walks across the landscapes of Wild Atlantic Way in Eire; I will question how durational site specific practice addresses notions of affect and effect within the social reception of ambulatory and performance practices as socio cultural platform for cross community ecological representation. Traversing terrain and disciplines, between dance, long distance walking, personal pilgrimage and environmental reactionary practice; this paper will explore the sensitive and poignant synergy between land and body. This paper and film presentation seeks to raise the seminal question: how can the body become mirror to its surroundings, asking through embodied practice, photography, film and writing; how does the body become a living archive? How does the discipline of embodied practice reflect the process of the body immersing itself into landscape to construct a meta-narrative of terrain; how can performance be used as a mechanism for cartography to make landscape more accessible as terrain and resource?

Keywords: *embodiment, PaR, Ecopsychology,*

B3: COMPENSATORY HOMEMAKING IN TIMES OF CRISIS AND 'CRISIS-ORDINARY' I

Wall stickers, Blankets, Fireplaces: The Materials of Home-making in Compromised Conditions

Katherine Brickell, Ella Harris, Royal Holloway, University of London and Mel Nowicki, Oxford Brookes University

The importance of objects and materials in the production of home has long been recognised (Clarke, 2001; Cox, 2016; Miller, 2008; Miller, 2010; Pilkey, 2014). Scholars from across disciplines have explored how feeling at home requires far more than having a roof over one's head. Rather, it also depends on the capacity to control and curate the objects within and decoration of the home in order to produce comfort and familiarity and reinforce aspects of identity. This poses a problem for people placed in temporary accommodation, who are routinely denied agency when it comes to decorating their temporary homes (Williams, 1996; DeWard & Moe, 2010; Choi & Snyder, 2008). This paper explores objects used by families in temporary accommodation in 'compensatory' acts of homemaking, which, here, refers to practices that seek to create a feeling of homeliness while accommodating, or sometimes

refusing, the restrictions and conditions of temporary accommodation. It does so by drawing on research conducted with homeless families in London and Dublin. In London, I explore how residents attempt to make home in PLACE/Ladywell, a 'pop-up' housing block in Lewisham, South East London, built to temporarily house 24 homeless families. In Dublin, I draw on the stories of families now living in 'Rapid Build' properties, but formerly housed in hotel accommodation. Through an exploration of three objects; wall stickers, a blanket and a fireplace, the paper considers how such objects mediate struggles to retain agency and autonomy in relation to homemaking in the context of temporary accommodation.

Keywords: *Pop-up; precarity; compensatory; materiality*

The de-construction of home: homeless families' experience of marketisation and Family Hub emergency accommodation

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This paper draws on participatory action research (Ledwith, 2007) using a human rights and capability approach (Nussbaum, 2011; Bonvin & Laruffa, 2017) to explore homeless families' experience of emergency accommodation and the marketization of social housing in Dublin. Undertaken as part of the H2020 funded Re-InVEST project, the research implemented Re-InVEST's unique methodological approach, the Participatory Action Human Rights and Capabilities Approach (PAHRCA, Murphy & Hearne, 2016) with homeless families in a Family Hub in Dublin. The approach aimed to empower participants to engage in a process of co-construction of knowledge and to engage in dialogical action with policy makers. The research co-constructed important knowledge, and particularly gendered understandings, of what 'home' means to the families (predominantly headed by lone parent mothers). In particular, the absence of security of tenure within the new 'form' of marketised social housing in the private rental sector, the Housing Assistance Payment (HAP) left families vulnerable to the insecurities of the private rental sector in crisis and fearful of future homelessness, the absence of ontological security of home (Padgett, 2007) that exists in traditional social housing, and the inability to achieve a secure base for their children, close to their community and support networks. Furthermore, while 'Family Hubs' have been developed and legitimised by government and policy makers as an improvement on commercial hotels as emergency accommodation for homeless families, our PAHRCA research revealed, in contrast, the difficult (and damaging) realities of day-to-day living and creating a temporary 'home' in this new emergency accommodation.

Keywords: *Family Homelessness Marketisation Institutionalisation*

Suspended homemaking: young people and housing benefit cuts in the private rental sector

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In the current context of austerity, housing welfare for young people in the private rental sector has suffered significant cuts. Single people (without resident children) aged between 18 and 34 are now only entitled to Housing Benefit at the rate of a room in a shared property, the Shared Accommodation Rate (SAR). As a result, young people have been forced to live in stranger shares. This paper examines how recent cuts to housing benefit have meant that housing welfare no longer enables young vulnerable people to make a home. Although, for young people who have experienced long periods of sofa surfing or being homeless, living in a stranger share is often seen as an improvement to their previous situation it is not felt as home. Living in a stranger share is seen as a temporary solution, as "a means to an end", in their path towards home. The paper is based upon in-depth biographic interviews with young people that have claimed or claim Local Housing Allowance at the Shared Accommodation Rate and lived, or are living in, shared accommodation. Based on young people's narratives, the paper looks at the ways in which living in shared accommodation hinders young people's homemaking capacities. We examine how, in this context, homemaking is suspended onto a future away from their room in the shared house. The paper seeks to contribute to existing work on the critical geographies of home, with a particular focus on how home unmaking is experienced in an age of austerity urbanism.

Keywords: *austerity urbanism; housing; welfare; home unmaking*

A Tale of Two Boroughs: Social Reproduction, Capital, and Homemaking in Hackney's Rental Market

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In the context of housing shortages, privatisation, and an increased cost of living, the construction of young private renters as an oppressed social group has developed in tandem with discourse around generational inequality. New apps like 'MoveBubble' promise prospective London tenants that their service is 'for you guys, the renters', drawing on a discourse of incredulity regarding private housing

expectations that positions precarious and low-quality housing as a consumer injustice, rather than as a failure of the state. This paper illuminates the homemaking labours undertaken by young renters to pool material resources within networks of relatedness constructed around intersecting capitals. Using Bhattacharya's appraisal of social reproduction theory as being able to theorise the relationship between market and extra-market relations (2017), the paper draws on qualitative interview data to explore the creation of 'underdog' identities in the context of private renting, the role of digital space in manufacturing feelings of home, and disparities in available familial boundaries across the private and socially rented sectors. In doing so, the paper posits the 'sensuous labour' (Katz, 2015) of everyday life as a marketable unique commodity within London's rental economy, and a key component of compensatory homemaking along heavily classed and raced lines.

Keywords: *social reproduction, housing, intimacy, precarity*

B4: HISTORICAL CLIMATOLOGY: DATA RESCUE, DOCUMENTARY EVIDENCE, MANAGEMENT, QUALITY ASSURANCE AND RECONSTRUCTION

Wetter winters: real or an artefact of what we measure?

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The observed long-term trend of wetter winters over western Europe is well established in the climate literature. These trends are observed in the longest rainfall records available, such as the England and Wales Precipitation (EWP) series and more recently the Island of Ireland 1711 series. However, close inspection of recording practices reveals ambiguity over whether or not early observers were measuring rainfall or precipitation – critically through the inclusion/exclusion of snowfall. This paper reflects on the practices of early observers and uses long-term independent datasets to reconstruct winter precipitation for the UK and Ireland. Results suggest that precipitation in early records (pre-1860) is underestimated and that the trend to wetter winters is likely weaker than observations would lead us to believe. This matters because scenarios of future changes in precipitation are often framed as “warmer/wetter” or “more of the same”.

Keywords: *Rainfall trends, wetter winters, snowfall, observations*

A 305 year continuous monthly rainfall series for the island of Ireland (1711-2016)

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A continuous 305-year (1711-2016) monthly rainfall series (Iol_1711) is created for the Island of Ireland. The post 1850 series draws on an existing quality assured rainfall network for Ireland, while pre-1850 values come from instrumental and documentary series compiled, but not published by the UK Met Office. The series is evaluated by comparison with independent long-term observations and reconstructions of precipitation, temperature and circulation indices from across the British-Irish Isles. Strong decadal consistency of Iol_1711 with other long-term observations is evident throughout the annual, boreal spring and autumn series. Annually, the most recent decade (2006-2015) is found to be the wettest in over 300 years. The winter series is probably too dry between the 1740s and 1780s, but strong consistency with other long-term observations strengthens confidence from 1790 onwards. The Iol_1711 has remarkably wet winters during the 1730s, concurrent with a period of strong westerly airflow, glacial advance throughout Scandinavia and near unprecedented warmth in the Central England Temperature record – all consistent with a strongly positive phase of the North Atlantic Oscillation. Unusually wet summers occurred in the 1750s, consistent with proxy (tree-ring) reconstructions of summer precipitation in the region. Our analysis shows that inter-decadal variability of precipitation is much larger than previously thought, while relationships with key modes of climate variability are time-variant.

Keywords: *Precipitation reconstruction, observations, weather diaries, Island of Ireland, variability and change.*

A 250 year drought catalogue for the island of Ireland (1765-2015)

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We construct a long-term (250 year) historic drought catalogue for Ireland using the Standardised Precipitation Index (SPI) to identify droughts from the Island of Ireland Precipitation (IIP) network (1850-2015). Using reconstructed precipitation we extend an island wide composite series to 1765. Documentary sources from newspaper archives spanning the last 250 years, together with other historical sources are used to i). add confidence to the quantitative identification of droughts and ii). develop insight to socio-economic impacts of historic droughts. Results show that Ireland is drought prone but recent decades are unrepresentative of the true drought climatology. For the period 1850-2015 we identify 7 major drought rich periods with a large spatial fingerprint; 1854-1860, 1884-1896, 1904-1912, 1921-1924, 1932-1935, 1952-1954 and 1969-1977 and highlight the substantial diversity of events in terms of drought progression, severity and spatial extent across the island. Two exceptional long duration events are found in the record; the drought of 1800-1809 (in fact a series of three droughts with brief interludes) and the continuous event of 1854-1860. Throughout the last 250 years droughts have resulted in agricultural hardship, water resource crises and failures and even preceded some of the major famines of the 18th and 19th centuries. We show that newspaper archives can be used to track the progression of drought events and impacts and thus advocate their wider use in understanding historic droughts. The resulting catalogue should underpin future drought and water planning across the island.

Keywords: *Drought, Historical Climatology, Ireland*

The Copernicus Climate Change Service Global Land and Marine Observations Database

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This presentation shall outline the planned service provision for a new Copernicus Climate Change Service concerning the availability of in-situ fundamental climate data records. The team at the Irish Climate Analysis and Research Units (ICARUS) based in Maynooth University are working with several European parties in tandem with NOAA/NCEI to provide via the C3S Data Store improved access to land and marine surface meteorological records for climate research. This presentation shall provide a high-level overview of service aims, timelines and progress to date. On the marine side the service shall aim to improve the existing ICOADS holdings with improved quality flagging, duplicate removal etc. On the land side a set of integrated holdings across Essential Climate Variables and timescales is envisaged. Data shall be made available via the C3S data store under a common data model. The Service shall interact with sister lots concerned with data rescue, provision of baseline /reference network data, and provision of in-situ data products and the broader Copernicus Climate Change Service and Copernicus services. The Service aims to incorporate all available long and early instrumental series and make these available to users

Keywords: *Climate data store, ICARUS, Copernicus*

Ensemble reconstructions of historical river flows for the island of Ireland

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Long-term river flow data underpin understanding of flood and drought risk, the detection and attribution of signals of change, understanding drivers of hydrological variability and contextualising recent extremes. In Ireland long river flow records are lacking. The majority of gauging stations across the island were installed in the mid-1970s in response to drought conditions. The few longer records that do exist extend to the 1940s and 1950s and were typically commenced to monitor arterial drainage schemes, or have been impacted by a variety of confounding factors. Thus, the lack of high quality long-term flow records hampers understanding of hydroclimatology and limits opportunities for robust planning in the water sector. This IRC funded research aims to reconstruct river flows for 35 catchments that comprise the Irish Hydrometric Reference Network (IRN). Uniquely, reconstructions employ a number of gridded climate and historical reanalysis products that take advantage of data rescue efforts and paleoclimate reconstructions to facilitate flow reconstruction at various timesteps and record lengths. Using an ensemble of suitable hydrological models, daily river flows will be reconstructed from 1850-2016, monthly flows from 1766-2016 and estimates of the annual water balance from 1700-2016. This paper will focus on the initial development of methods for flow reconstructions for a single catchment and will outline plans for realising the ultimate aims of the research.

Keywords: *Hydroclimatology; Rainfall-runoff modelling; River flow reconstruction*

Generation of a new temperature and precipitation database of high temporal resolution based on the recovery of non-digitized information

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A new project (CLImate of the last CEntury in Spanish mainland) of the Spanish government is aimed to build of a new temperature and precipitation databased with high temporal resolution.

The new database achieves a high temporal resolution by taking advantage to newly digitized data provided by the Meteorology National Agency (AEMet), and by working with other sources such as non-digitized data. Over the years, the Spanish government has been recording information on climate variables in annual books. Many of those books are not digitalized and they represent a valuable source of information. In this new project, we have merged the digitized information whit non-digitized data and, by doing this, we have achieved a new database expanding the temporal resolution (more than 100 years). In this contribution, we show the work protocol carried out to merge both sources of information and the steps carried out to build the temperature and precipitation database for mainland Spain. Preliminary results indicate that the available climatic information increases, in many cases to double, which allows us to improve our confidence in later works (interpolation, climatology, trend, etc.).

Keywords: *Rescue, Database, Quality control, Inerpolation*

B5: EVOLVING GEOGRAPHIES, EVOLVING METHODOLOGIES

“Eat our food, know our culture”: examining Hui food culture in Beijing

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For urban Hui living in Beijing, their food culture plays central role in shaping how they understand their identities, their nationality and their place within broader Chinese society, affecting their everyday geographies and their inter-ethnic interactions. Seen here as being a distinctly sinocized hybridisation of halal, it will be argued that the concept of qingzhen (“pure and true”) is a mechanism through which the Hui define, and perform, their food cultures, while drawing invisible religious and cultural boundaries between themselves and the majoritarian population. Such performances are central to how the Hui view their identities and have led to the establishment of distinct geographies of belonging in Beijing. It is argued here that through examining these performances of Hui food culture and by exploring places of Hui food production and consumption, a unique and telling insight may be gleaned into the lives and understandings of Hui minority subjects. Specifically, it will be suggested that such an analysis of Hui food cultures allows for an understanding to be gained of how processes of minoritisation and othering have impacted on the lived experiences of Islamic minority subjects in China, while also allowing for other topics to be explored such as gender, religion and migration. As many scholars within Western and Chinese academia attempt to bridge the gap between the two academies, it is suggested that examining food cultures is a particularly fruitful, and context appropriate, way of researching Chinese minorities.

Place in Virtual Space: an analysis of geospatial data narratives presented in cross-reality visualisations

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Currently, through the application of cross-reality (xR) technologies, geospatial information is being applied as visualisation tools to convey a broader understanding of global spaces. Evidence supports that the use of multimodal concepts from digital-multimedia can facilitate the understanding of spatial data to a wider audience. However, when considering the more humanistic, culture-oriented (social sciences) approach to multimodal Geographic Information System (GIS) visualisation, as can be presented on xR technologies, the socio-technological affordances of these platforms possesses the ability to augment the users’ understandings of place, within physical space and vice-versa. A focus on a humanistic sense of place can enhance social meaning for users by allowing them to construct a narrative and thereby maximise the potential of the communicative space. This paper has collated several examples from the field of electronic literature that establish these concepts in a GIS context and explore the possible extended meaning that can be gained from cultural representations of space

on xR technologies. By using this approach, in the context of space and place, we present an analysis of the potentialities of spatiotemporal data meaning-making when visualised on cross-reality platforms.
Keywords: *cross-reality technologies, geospatial information, visualisation, multimedia, space, place*

Exploring the everyday experiences of older people in Greater Dublin: A Qualitative GIS approach

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An essential component of a more subjective, psycho-social, and capabilities-based interpretation of 'ageing well', is being able to carry out those activities and interactions that are most important to an individual. Health Geographers have long known that place matters for health and wellbeing, and that a supportive or unsupportive environment can positively or negatively influence everyday activities of individuals with different abilities and capabilities. A 'Qualitative GIS' (mixed-methods) approach is therefore introduced, which integrates both spatial and qualitative data, to represent and understand how individuals engage with their local environments. In particular, this research seeks to identify older people's 'activity spaces' through the use of interviews, mapping exercises, and interviews 'on the move' with a diverse range of older people in the Greater Dublin Area of Ireland. Such an approach goes beyond more traditional objective ways of conceptualising Age Friendly Environments in terms of what an 'ideal' environment may look like, but instead seeks to better understand everyday realities from an individual perspective, by identifying personal needs and wants that are important for a good quality of life, and the role the environment can play in either enabling or hindering this. The use of innovative mapping methods can provide useful insights into everyday experiences, and offers a way of exploring how older adults' local environments can better support them to 'age well - in place'.

Keywords: *Qualitative GIS, Older Adults, Health Geography, Ageing-In-Place*

The Barren City: A New Reality?

Mary Broe, Maynooth University. Email: mary.broe.2010@mumail.ie

The digitisation of the 1901 and 1911 Irish census offers the opportunity for 70 million Irish diaspora around the globe to have access to their family and local heritage (National Archives of Ireland). For the geographer it opens the door to the possibility of reconstructing places, housing, and population demographics, of all of Ireland, but more interestingly reconstructing the small geographical areas of towns, villages and city areas of the past. Using the 2011 census, small area population statistics (SAPS) interactive mapping tool, the geographer can map and include demographic data for small discrete areas within the city. These discrete areas, for example, areas bounded by roads that were in use during 1911 and in 2011, can be chosen to allow the lone researcher or small research group to analyse the same area using the 1911 census, within a manageable timeframe. I will discuss how this method was applied and how this data was used to compare the change in the population of children within these small areas in the Pearse Street Community. I will also discuss future use of this method to examine demographic change within the whole Pearse Street Community over this time frame.

Keywords: *Children, Barren, City, Irish Census,*

B6: POSTER COMPETITION (GSI-PECN)

Walkability in the dispersed city of L'Aquila

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During the reconstruction of L'Aquila there have been many fundamental shifts and changes in the organization and livability of the city, as has been outlined elsewhere in this collection. One key aspect of everyday life which has been affected both by the earthquake and reconstruction has been the walkability within the city. As such this research investigated and outlines the issue of walkability in the dispersed city of L'Aquila. We focused on walkability as a key aspect of everyday life that, although identified in the policy as important for the reconstruction of the city, it has not been prioritized. Within the work we focus on the definition of quality of the built environment for pedestrian mobility in L'Aquila and identify some of the obstacles posed.

Keywords: *post-earthquake, walkability, reconstruction, livability*

Assessment of exposure to a flash flood in an arid environment: a case study based on a neighbourhood (Abruq ar Rughamah) in Jeddah, Saudi Arabia

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In arid areas, flash floods represent one of the most severe hazards for people and infrastructure alike. The associated risks are compounded by increasing exposure and vulnerability through rapid and unregulated urbanisation, poor infrastructure, the absence of response plans, and sociocultural factors amongst others. This research explores flash flooding risk in the Saudi Arabia city of Jeddah, with a particular focus on the Abruq Ar-Rughamh neighbourhood, which experienced a destructive flood November 2009 that resulted in 116 deaths and made more than a 1200 homeless. The neighbourhood makes an interesting case-study as it has two distinctive urban layouts, representing planned and irregular settlement types. In this paper, I focus on exposure to flashflood hazard using geographic information on urban layout, building types and resident population in conjunction with data from satellites, flood mapping studies and topographic data. The results show that much of the study area is located in natural flood path, especially the unplanned areas. Those parts affected by the 2009 disaster as exposed now as they were with no comprehensive site rehabilitation. This paper concludes that it important to develop a risk management strategy that includes limits to urban expansion in flood-prone areas and neighbourhood redesign to increase flood resilience

Keywords: *Urbanisation. Flood hazard. Urban planning. Unplanned area.*

For the Love of the Land: Exploring the Farmer-Farm Connection in Later Life through the Lens of 'Insideness'

Dr Shane Conway, Discipline of Geography, NUI Galway. Email: shane.conway@nuigalway.ie

The senior generation's unwillingness to relinquish managerial duties and retire is a globally recognized characteristic of intergenerational farm transfer. This is despite the array of financial incentives put in place to stimulate and entice the process. Applying Rowles' concept of 'insideness' as a theoretical framework, this research brings into focus the suitability and appropriateness of previous and existing farm transfer policy strategies, by presenting an insightful, nuanced analysis of the deeply embedded attachment older farmers have with their farms, and how such a bond can stifle the necessary hand over of the farm business to the next generation. A multi-method triangulation design is employed, consisting of a self-administered questionnaire and an Irish adaptation of the International FARMTRANSFERS Survey in conjunction with complimentary Problem-Centred Interviews, to generate a comprehensive insight into the multi-level farmer-farm relationship in later life. The overriding themes to emerge from the empirical research are farmer's inherit desire to stay rooted in place in old age and also to maintain legitimate connectedness within the farming community by remaining active and productive on the farm. Additionally, there is a strong sense of nostalgia attributed to the farm, as it is found to represent a mosaic of the farmer's achievements as well as being a landscape of memories.

Keywords: *Family Farm; Succession; Retirement; Farm Viability*

ENERGISE: Developing, testing and assessing options for cross-cultural transformation of energy use in households using a Living Lab approach

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ENERGISE is an innovative pan-European research initiative to achieve a greater scientific understanding of the social and cultural influences on energy consumption. Funded under the EU Horizon 2020 programme for three years (2016-2019), ENERGISE develops, tests and assesses options for a bottom-up transformation of energy use in households and communities across Europe. ENERGISE's primary objectives are to develop an innovative framework to evaluate energy initiatives, taking into account existing social practices and cultures that affect energy consumption; assess and compare the impact of European energy consumption reduction initiatives; advance the use of Living Lab approaches for researching and transforming energy cultures; produce new research-led insights into the role of household routines and changes to those routines towards more sustainable energy; encourage positive interaction between actors from society, the policy arena and industry; effectively transfer project outputs towards the implementation of the European Energy Union.

Keywords: *Energy Geographies, energy cultures, Living Labs, Europe*

Weathering Below Irish Blanket Bogs and Potential Impacts on Carbon Dynamics

Claire McVeigh, Raymond Flynn and Donal Mullan, Queen's University Belfast. Email: cmcveigh27@qub.ac.uk

Weathering regulates the Earth's climate. The acidic and waterlogged nature of peatlands suggest that weathering rates in deposits below blanket bogs may be higher than in other habitats in comparable settings. This project is investigating the impact of weathering on organic subsoils, inorganic subsoils and bedrock underlying three Irish blanket bogs, with emphasis placed on differences in bedrock type and peatland condition. High temporal resolution monitoring of hydrogeology, coupled with geochemical, geophysical and hydrological survey data, in catchments comprising of relatively intact upland blanket bogs, provides a means of understanding how peatland and substrate geological conditions can influence global carbon sequestration and thus how weathering processes may influence climate. The impact of peatland condition will be examined by comparison of rates in the test catchments, with areas more damaged by human activity. Preliminary measurements suggest that deeper hydrological pathways provide an important route for removal of weathering by-products. Peat groundwater is low in typical major ions. However, initial chemical analysis of stream water has shown higher concentrations of these ions than in peat, while levels of calcium and magnesium prove higher in areas underlain by carbonate compared to sandstone regions, reflecting weathering of the underlying rock and inorganic subsoil.

Keywords: *Peatland, weathering, carbon sequestration*

Geographies of anti-water charges digital contention in post-financial crisis Dublin – mapping a changing protest network

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Contemporary activism is now commonly described as 'networked' (e.g. Bennett et al., 2014; Zayani, 2015; Tufekci, 2017) but the theoretical and practical implications of space, power, and unevenness within networked social movements remains unclear. Academic geography is currently experiencing a growth in interest in 'the digital' (Ash et al., 2016) but research on digital contention's spatial and relational networks (and their implications for power and counter-power in contemporary societies) is lacking. This poster addresses the subject of digital contention from a geographical perspective, using longitudinal network analysis and geospatial techniques to map how community groups have used social media to engage in 'networked' contention of water charges in post-financial crisis Ireland. The poster demonstrates how spatial and relational geographies of online protest networks can be mapped through a case study of community groups opposing water charges in county Dublin, comparing spatial and relational geographies in 2015 and 2018. These spatial and relational maps visualise community-based opposition to the water charges as a network of counter-power (Castells, 2007) which are an important part of the socio-political landscape of post-financial crisis Ireland.

Keywords: *Critical GIS, protest, post-financial crisis*

Advocates of Rural Societal Change? Exploring the Role of European Policy in Overcoming Gender Inequalities in Female Entrepreneurship within the Irish Hinterlands.

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With the increased championing of endogenous development coupled with this need to build capacity within local and regional economies, enterprise development has emerged as a counter strategy for the economic ills endured by the European countryside. With the drive for sustainability and securing the future needs of peripheralized regions, rural women are attempting to diversify the local economic base, by engaging in multifarious business endeavours both within and beyond the farmyard. The proliferation of female-led enterprises are of paramount importance to the economic and social development of our hinterlands. Despite their pivotal role, limited supports are made available to them, causing further challenges for rural women – whom historically have been hidden owing to hegemonic and patriarchal constructs – to enter the entrepreneurial milieu. With European rural policy advocating the need for enterprise development, this paper explores just how gender inclusive current programmes and initiatives are. With the LEADER programme dedicating supports specifically for enterprise creation, the paper investigates whether women in the Republic of Ireland are being incorporated within its previous and current programme. Drawing on findings accrued from 54 facilitators of the LEADER programme and 35 female entrepreneurs, it will determine if LEADER assists or impedes reinforcing inequalities among entrepreneurial women in the rural.

Keywords: *Rural Entrepreneurship, Rural Women, Rural Policy*

‘In the light of present knowledge’: historical perspectives on peatland conservation and management

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The use of historical approaches is increasingly recognised as a valuable component of conservation and ecosystem management (Egan & Howell, 2001; Marcucci, 2000), revealing landscape change over time, as well as reflecting changes in policy and management practices. Historical approaches are interdisciplinary in nature, synthesising information from diverse subjects including geography, ecology, archaeology, palynology, cartography, and history. This project demonstrates how different types of knowledge can inform the conservation and management of peatlands, and how an interdisciplinary, integrative approach facilitates a better appreciation of both cultural and natural heritage aspects of the landscape. The time period covered in this case study begins in the 1600's, when the study site (Girley bog, County Meath) first appears meaningfully in maps and historical records. Girley Bog has a long history of anthropogenic disturbance and land use, including drainage, reclamation, grazing, fertilisation, turf cutting, burning, forestry plantations, and dumping. In generating this contextual history, a clearer picture emerges of social-ecological interactions at the site, and how attitudes, policies, and practices have changed as our knowledge of peatland landscapes has evolved. This history can also be used for education and interpretation purposes, facilitating engagement with communities about peatland management and conservation.

Investigating the relationship between wave run up variability and dune erosion in the west of Ireland

Niamh Connolly and Eugene Farrell, NUI Galway . Email: eugene.farrell@nuigalway.ie

The soft coastlines of Ireland are very susceptible to chronic erosion from storm events compared with rocky shorelines. This field based research investigates the impact of storm waves on two coastal dune systems on the west coast of Ireland. Specifically, we examine how storm events (frequency, direction, and surge) and tides (water level) are coupled create potential dune erosion events. Field observations of comprise over 24 months of wave run up data across two beaches (Brandon Bay, Co. Kerry and Achill Island, Co. Mayo) from time lapse photography. These images are processed using remote sensing techniques to identify the frequency of occurrence and environmental conditions when dune erosion events occur. The results of this study will provide an insight into the short term response of dunes to storm events but also provide a basis for the prediction of long term dune evolution from projected changes in the NE Atlantic ocean climate system with regard to increased storminess, changing storm tracks or direction, and/or increased sea levels. These research outcomes are therefore important for developing future planning and sustainable management strategies of soft sediment systems along the Irish coastline.

Keywords: Storms, Dune Erosion, Wave run-up

Bi-directional ammonia flux between vegetation and the atmosphere

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The transfer of ammonia (NH₃) across the landscape-atmosphere boundary is bi-directional and driven by the physico-chemical character of the system. The deposition and emission of NH₃ is dependent on the nitrogen (N) status of the system. Arable land-use has led to the disruption of the biogeochemical cycle of N with practices involving relatively N intensive activities. The long-term inputs of N can lead to increased N saturation within the vegetation and litter, reducing net N input to the ecosystem. The use of fertilizers is employed to augment N levels in depleted soils. The associated ecological impacts and consequences for human health have necessitated the development of air quality models, which facilitate the development of emission scenarios and temporal exposure limits. Model development and scenario analysis requires detailed spatial and temporal data on NH₃ dynamics. This study seeks to address that challenge through the design and implementation of passive sampling using 18 ALPHA (Adapted Low-cost Passive High Absorption) samplers and active sampling using DELTA (Denuder for Long-term Atmospheric sampling) II Denuder assemblies. Part of the measurement strategy is to place active samplers in three arable settings within the Fingal County Council area as well as passive samplers. Control areas such as wood lands in a mountainous area and in a low-lying area will be equipped with further passive samplers in order to create a gradient system of monitoring. The data output generated will be used to develop an advanced model as well as the formulation of a state-of-the-art mechanistic paradigm.

B7. LOCAL APPROACHES TO ENHANCE AND APPRECIATE BIODIVERSITY - A WALK AND TALK SESSION AROUND OUR GREEN CAMPUS

Leaders: Jim Carolan, Gail Maher and Helen Shaw, Maynooth University

Biodiversity is under threat and changes in biodiversity threaten the Earth as our home. Whilst large scale projects are proposed and debated (e.g. E.O.Wilson's 2016 book, *Half Earth*), what can we do closer to home to enhance biodiversity and sustainability? This session will use that after lunch slot to get some fresh air and take a biodiversity walk and talk on campus. We will examine the changes made at Maynooth University as part of the biodiversity campus initiative, including hay meadows and bug houses. We will take the opportunity to discuss the role of green campus initiatives and share ideas to communicate the value of nature among diverse cohorts of students and the public. Sharing experiences can be informal during this walk and talk, but formal abstracts are also welcome.

Reference

Wilson, E.O., 2016. *Half-earth: our planet's fight for life*. WW Norton & Company.

SESSION C: 4:00-5:30pm

C1: CREATING SPACES FOR COOPERATION: CROSSING BORDERS AND BOUNDARIES BEFORE AND AFTER BREXIT

Brexit Geographies, Soft Spaces and Relational Territorialities

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The pending exit of the United Kingdom from the European Union has far-reaching consequences for the political geography of the island of Ireland. The current territorial settlement, founded on the 1998 Belfast Agreement was made possible by the common membership of Ireland and the UK of the European Union. The territorial logic of the Belfast Agreement replaced competing territorial claims with a settlement whereby the territoriality of Northern Ireland has shifted from that of a bounded container space within the UK to a relational space, dependent on North-South-and Ireland-UK relations within the broader European context. Brexit continues to represent a moment of critical transformation with as yet very uncertain outcomes. This paper explores the potential for a nuanced understanding of the 'island of Ireland' and Irish border region pre- and post-Brexit, as liminal 'soft spaces'; spaces of possibility located outside the formal spheres of nation-state territoriality, but nevertheless very much located within the shadow of territory. The paper aims to provide a conceptual introduction to the themed session informed by critical debates on the shifting forms of state territoriality in Europe.

Keywords: Brexit, border, territoriality, soft space

Spatial Planning and Development In A Post-Brexit Landscape – Local Issues and Learning from other External EU Borders

Caroline Creamer and Brendan O'Keeffe, ICLRD - International Centre for Local and Regional Development, Maynooth University. Email: BrendanOK7@gmail.com

Inter-jurisdictional boundaries such as the border between Northern Ireland and the Republic of Ireland have a profound political and socio-economic significance for the communities and settlements that straddle them (McClelland & Creamer, 2014). With cross-border engagement at a national and local level being at its strongest, the decision by the U.K. to leave the European Union in 2019 has cast a dark shadow over the collaborative space. Local authorities on both sides of the border will find themselves in new spaces, and are already being challenged to promote new models and mechanisms of engagement and collaboration. This paper articulates issues concerns and recommendations articulated by local-level stakeholders on both sides of the RoI-NI border. In addition, it will explore some of the arrangements that local / municipal authorities have put in place along other external EU borders, whereby these enable and ensure collaboration. The paper will consider the applicability of these to the border on the island of Ireland.

Keywords: External Borders, Local Government, Services, Planning

Functional Geographies for Cross-Border Cooperation before and after Brexit

Gavan Rafferty and Neale Blair, Ulster University. Email: g.rafferty1@ulster.ac.uk

The notion of 'functional geographies' has gained momentum across academic and policy communities in recent decades. In an EU context, the elevation of territoriality and functionality in policy-making has drawn greater attention to 'spatial context and distribution' (Faludi and Peyrony, 2011) and 'place-based' approaches (Nosek, 2017) for nurturing a more just distribution of opportunities in places, across

different spatial scales and across different European territories. Following twenty years of peace, the island of Ireland has witnessed a degree of convergence around governance structures and the expansion of relational cooperative spaces that reflect complex socio-economic functional relationships that stretch across different territorial geographies. The associated policy making and delivery mechanisms either operate through traditional 'hard' bureaucratic procedures or through innovative 'soft' spaces that work with, and operate across, 'fuzzy boundaries' negotiating mutual thematic policy areas, such as infrastructure and health. Reflecting on the legacy of social, economic and infrastructure integration and policy convergence to date, this paper explores the vulnerability of existing cross-border functional geographies by Brexit. In considering a post-Brexit context, the paper examines empirical findings from key actors about the functional workings of spaces and the activities, flows and linkages that occur in cross-border functional geographies.

Keywords: *functional geographies'; 'soft spaces'; cross-border collaboration'; 'Brexit'*

Spaces for Public Participation: valuing the cross-border landscape in North West Ireland

Andrew McClelland, Maynooth University. Email: andrew.mcclelland@mu.ie

Landscape, like other social, economic and environmental phenomena, is no respecter of territorial or administrative borders and is a highly pertinent policy-praxis arena within which cross-border cooperation can prospectively progress on the island of Ireland. The European Landscape Convention (ELC) and the Framework for Co-operation - Spatial strategies of Northern Ireland and the Republic of Ireland provide supportive 'soft' policy space for practical cooperation to emerge, with the latter identifying environmental quality and spatial analysis as priority areas for cooperation at multiple governance scales. Furthermore, the ELC stresses the importance of active public participation in the definition and implementation of landscape policies, representing a particularly challenging prospect in historically contested cross-border contexts. This paper elaborates upon the findings of the #MyValuedPlaces exercise, an online map-based survey completed in late 2017 aimed at capturing the public's perceptual values of the places special to them in the cross-border cultural landscape of North West Ireland. In pursuing this approach, it is recognised that people's place attachments and perceptions of the landscape are shaped by the complex interrelationship between its physicality, the diverse activities undertaken within, and the experiential and other associations that individuals and groups build up with the landscape over time. Thus, public participation GIS offers one possible method of engaging with the multiple, subjective understandings of landscape, including in the Irish border region. Moreover, it is argued that exercises of this type can help maintain positive 'relational geographies' and assist in the management of valued places before and after Brexit.

Keywords: *Landscape, Brexit, cross-border cooperation, PPGIS*

The Lamprooning of a Line: Symbolising and Satirising the Irish Border from Birth to Brexit

Kieran Rankin, Trinity College Dublin. Email: kieran.rankin@ucd.ie

As the main manifestation of the partition of Ireland, the Irish Border has proved to be a continuous source of political comment derived from the controversies it has consistently attracted not only for what it politically represents but also the practical difficulties it has posed. This paper aims to survey how the Irish Border has been portrayed and caricatured via cartography and other representations to symbolise and satirise various events or issues of the day. It will also explore how the abstract and linear concept of a boundary has been creatively adapted to educate, influence, or satirise matters that have had a real impact on the individual as well as affairs of state.

Keywords: *Irish border, Ireland, partition, representation*

C2: ART AND GEOGRAPHY 3: THE EARTH AS OUR HOME

Fostering Art for Sustainability in Ireland; time for new cultural policy?

Cathy Fitzgerald, Independent researcher and artist. Email: cathyart@gmail.com

A recent art and sustainability study report for County Carlow and Ireland (2017) by researcher and eco-social artist Cathy Fitzgerald highlighted comprehensive cultural research, policy and strategies that are being implemented in Britain to foster the cultural sector to engage with issues of sustainability. Building on cognitive research and environmental philosophy, and recent international cultural policy research, and underlined by the United Nation's publication of its Sustainable Development Goals (SDGs) for the planet, there is growing evidence that the arts have a key role alongside science to engage a wider public in changes toward more sustainable living and over well-being. Unprecedented

and accelerating climate and other eco-social challenges, if examined through moral reasoning, require urgent action from all sectors, including the cultural sector. Cathy reviews the basic science, the reasons why we in the cultural sector must act too and highlights strategies from developed national art and sustainability programmes in England and Scotland. These strategies include assisting national and cultural institutes in practical energy audits so they become independent, public champions of sustainability learning for their visitors and audiences (there have been significant cost savings to the cultural sector as well); ongoing events to educate cultural practitioners in sustainability science and strategies that enable closer partnership between art and science.

Keywords: *art, sustainability, cultural, policy*

This is no place like home: place making on a community allotment

Luci Gorell Barnes, Artist on AHRC projects with Bath Spa University and the University of the West of England. Email: contactlucigb@gmail.com

Companion Planting is an open access allotment group run by Luci Gorell Barnes in informal partnership with the local nursery school and Children's Centre. The group meets weekly on a Council allotment plot with the aims of:

- Bringing people together to make new social networks
- Supporting people to develop a sense of belonging and pride in their neighbourhood
- Helping participants to share existing their skills and acquire new ones
- Sharing cultural differences in ways that foster respect and understanding
- Encouraging people to grow some of the food they consume.

Companion Planting brings socially vulnerable families together through gardening and creative practice. Participants are mainly women and children; some are born and bred Bristolians, whilst others are recently arrived in the UK as refugees or asylum seekers. Often from rural areas, the latter group now find themselves in Bristol's urban environment and unfamiliar climate. Companion Planting is a place where people can learn what plants they can grow here whilst developing new emotional and social attachments for themselves and their families. This paper will present the day-to-day nature of how we go about this and think about the following questions:

- How can we feel at home when we are on strange soil?
- How can growing and cooking food together help us develop a sense of belonging?
- How can we support people to integrate their skills in their new situation?
- How can host and refugee communities come together to celebrate diversity?

Keywords: *Belonging; displacement; women refugees*

Re-envisaging 'at-home-ness': 'storytellers', 'renouncers', and 'concerned elders'.

Iain Biggs, University of Dundee. Email: iain19biggs@gmail.com

Drawing on Doreen Massey's understanding of the global nature of the 'place called home', and of space as: "a simultaneity of 'stories-so-far'", this illustrated presentation will suggest the need for testimonial visual narratives to support ecological politics in pursuing a necessary re-configuring of our sense of home and belonging. Touching briefly on aspects of current Irish art, it will suggest that their approaches might usefully be supplemented by looking at potentialities evoked by artworks not subject to the underlying framings of contemporary Western culture. This will involve referencing the work of three contemporary Indian artists - Gulammohammed Sheikh, Arpita Singh, and Sheba Chhachhi – using the themes of 'concerned elders', 'storytellers', and 'renouncers'. Drawing on Paul Ricoeur's notion of 'narrative identity' and Richard Kearney's 'testimonial imagination', it will explore the three artists' desire: "to retrieve the sense of the spiritual from organized religious practice and to transpose it to the realm of the secular" as an urgent task seen from a socio-environmental perspective. In conclusion, the presentation will suggest correspondences between the orientation of these artists' work and the need to reconfigure our senses of at-home-ness implicit in thinking by, for example, Isabelle Stengers, Felix Guattari, Donna Haraway, David Abram, Keith Basso, and Jane Bennett. The overall aim of the presentation is to position the three artists' work as offering potential ways of re-envisaging home and belonging we might otherwise miss.

Keywords: *Re-visioning, At-home-ness, secular, art*

W e i r d Regionalism

(Nichols, William) (Lynn, Sam), Bath Spa University. Email: sam@samdeanlynn.com

W e i r d Regionalism is an ongoing collaboration between artist Sam Dean Lynn and eco-academic W.D Nichols. The impetus for the project started with a loosely connected series of Facebook groups: W e i r d Appalachia, W e i r d Rustbelt, W e i r d Cornbelt, etc. These groups demonstrate an important counter-narrative to the American idea that ignorance and bigotry are produced in these "belt" areas.

By reclaiming anti-fascist, pro-labour, and elevating traditional environmental knowledges, these groups embrace an anti-bourgeois sense of place (Cresswell) which expresses solidarity with the more-than-human world in a unique way. Our project seeks to reify this internet phenomenon by turning memes and comments sections into critical theory and hand drawn images.

Keywords: *regionalism, solidarity, social difference, outsider-environmentalism*

Art and the elemental commons

Derek McCormack, University of Oxford. Email: derek.mccormack@ouce.ox.ac.uk

How does art help us address the elemental entanglements of the idea of the earth as home? In this paper I suggest that one way in which art does this is by allowing us to hold together different spaces and senses of the elemental: the elemental as environmental milieu, as physical-chemical entity, and as ontological proposition. This claim is developed in the paper by tracking various ways in which a relatively simple object – the balloon – is used as a device for doing atmospheric things within aesthetic practices and artistic experiments. These experiments reveal the different forms of envelopment, infrastructure, and movement through which it might be possible to articulate a kind of elemental commons. The paper considers the possibility that one way of grasping what it means to be at home in this commons is in terms of drifting.

Keywords: *art, atmosphere, the elements*

C3: COMPENSATORY HOME MAKING IN TIMES OF CRISIS AND 'CRISIS-ORDINARY' II

Destigmatising 'housing for the homeless': Affective infrastructures of brick-clad modular housing in Dublin, Ireland

Katherine Brickell, Ella Harris and Mel Nowicki, Royal Holloway, University of London. Email: katherine.brickell@rhul.ac.uk

For many once homeless families now living in Dublin's 'Rapid Build' housing, the term 'modular' had evoked imagery of emergency accommodation bearing no or little resemblance to traditional 'bricks and mortar' housing. Some residents had concerns regarding the structural soundness and quality of the buildings, with such fears often connected to historical connotations of post-war prefabricated ('prefab') housing in Ireland. Drawing on Berlant's 2011 work, we argue that the brick-cladding of their new modular homes is a mundane yet affective infrastructure that held an unanticipated significance in re-constructing a secure and positive sense of home after feelings of stigma, shame, and social marginalisation. The findings arise from interviews and focus group research undertaken between October-December 2017 with 21 residents from two Rapid Build housing estates and 12 key informants who had a professional stake in their design and development.

Keywords: *Housing home Dublin crisis*

My room is the kitchen: compensatory homemaking and emerging housing strategies among disadvantaged urban youth in Ireland

Sander van Lanen, Rijksuniversiteit Groningen. Email: s.van.lanen@rug.nl

The current Irish housing crisis shows that the 2008 financial crisis never disappeared. Rather, among a narrative of recovery, the crisis lingers on in the everyday lives and spaces of Irish inhabitants. Under austerity urbanism, poorer populations became increasingly excluded from services and facilities including access to affordable housing. This paper explores strategies of 'compensatory homemaking' among youth from deprived urban areas in Ireland, for whom both desired homes and accommodation in general became unattainable in the context of austerity and recession. Building on qualitative fieldwork involving young adults aged 18 to 25 in Cork and Dublin, it focusses on a group eager to leave their parental home but unable to do so. On a personal scale, youth engage in compensatory homemaking by adjusting expectations and desires, while new housing strategies emerge including moving out of the city or employing homelessness as a housing strategy. Such strategies neither solve nor normalize the financial crisis, but reshape the facets through which it is experienced. As crisis flows from the financial sphere into the places and spaces of everyday life, it creates an all-encompassing 'slow crisis' that alters domestic routines, rituals and materialities, creates new forms of living together and house-sharing, and presents new strategies to access housing and create home. Therefore, housing and the home become vital spheres through which austerity, recession and the financial crisis become embedded in the lifeworld of disadvantaged urban youth, shaping contemporary lives and livelihoods in the city-after-austerity.

Keywords: *Austerity, youth, housing, recession*

Urban Homesteading and Crisis Ordinary

Brenda Parker and Oona Morrow, University of Illinois at Chicago, Wageningen University and Research. Email: bkparker@uic.edu

Urban homesteading is a sustainable lifestyle that emphasizes household self-provisioning through urban agriculture, canning and pickling, and a variety of do-it-yourself and craft projects. Through such practices homesteaders endeavor to politicize home and homemaking, as sites for social and environmental change. In this talk, we explore urban homesteading as a type of compensatory homemaking that people undertake in response to perceived crises in environmental quality and food safety. We explore homesteading as a strategy through which households attempt to create a sense of security, efficacy, and pleasure amidst these crises – while performing new imaginaries of home and domesticity. Based on qualitative research with 19 urban homesteading households with children in the Boston and Chicago Metropolitan areas, we suggest that homesteading as a response to “crisis ordinary” also aligns with increased labor burdens for women and ideologies about good mothering in the United States. For many of these mothers, and households more generally, homesteading entails declining faith in and engagement with the state and surrounding social institutions. Households assume a greater burden in educating, feeding, and ‘protecting’ their children by their own means, with a feeling that there are no other options. This may have the consequence of further instantiating a state that is disengaged from social reproduction. In addition, the choice to respond to risk by homesteading is often, but not always, mediated and animated by economic, temporal, and social privilege, with implications for equity among mothers and households more broadly.

Keywords: *Urban homesteading; mothering; alternative food; sustainability*

Pretty Vacant? Policy level compensatory homemaking and the evidence gap on residential vacancy in Dublin.

Dr D. Downey, M. Grehan and Dr P. Privalko, Dublin Housing Observatory, Dublin City Council. Email: daithi.downey@dublincity.ie

The Pillar 5 actions of government’s Rebuilding Ireland Action Plan for Housing and Homelessness (2016) call for the utilisation of existing housing as a means to increase supply. From late 2017, statutory housing authorities must adopt a Vacant Homes Strategy that will ‘recover into use’ unoccupied and vacant housing stock for social housing purposes. We review recent experiences in two schemes deployed as market interventions (the Repair and Leasing Initiative and the Buy and Renew Scheme). Additionally, local authorities were requested to gather their own data on vacancy using survey approaches. We present the findings of DCC’s pilot residential vacancy survey and highlight its findings and its limitations. We identify a number of obstacles to ‘on-the-street’ surveying as a strategy for gathering data on residential vacancy. Our results suggest that surveying for vacant residential housing is problematic and where data has been collected it illustrates the varied nature of vacancy, suggesting the concept needs further clarification and definition. Lastly we discuss how current efforts to tackle residential vacancy can be considered an ‘incomplete’ form of policy-level compensatory homemaking. This may be due to challenges of neoliberal political economy in the production and use of vacant residential space. However, the absence of an evidence-informed, broader public policy intervention that tackles existing residential under-utilisation, obsolescence, dereliction and abandonment in order to deliver quality, affordable residential use of improved dwellings and converted and adapted space is also highly relevant.

Keywords: *Residential Vacancy Data Dublin*

C4: ENVIRONMENTAL SENSITIVITY

Human and climatic influences on chironomid communities in Irish lakes across timescales

Aaron Potito, Karen Taylor, Carlos Chique, Daisy Spencer and Seamus McGinley, Palaeoenvironmental Research Unit, School of Geography and Archaeology, National University of Ireland Galway. Email: aaron.potito@nuigalway.ie

Resolving human and climatic influences on lake sedimentary records is an ongoing challenge in palaeolimnology, especially in a European context where humans have had a substantial influence on the landscape since at least the mid-Holocene. This talk will focus on the interpretation of chironomid (non-biting midge) subfossils in lake sediment records in Ireland, where agriculture, and particularly pastoral farming, has been a predominant control on lake ecology since the transition to farm-based economies in the Early Neolithic ca. 5700 yr BP. Due to their unique life history traits, chironomids are

effective indicators of past environmental change and have been used widely in reconstructing summer temperatures. Chironomid communities are affected by a variety of inter-related environmental variables including temperature, lake water dissolved oxygen, benthic substrate and lake nutrient status, and disentangling the climate signal from direct human influences can be challenging. Strategies for rectifying the climate and cultural eutrophication signals in Irish lakes will be explored using examples of multi-proxy reconstructions across timescales from various sites throughout Ireland. A new chironomid-inferred temperature record from northwest Ireland will be presented and interpreted in the context of Irish prehistory from the late Mesolithic to the Iron Age. The talk will conclude with recommendations for integrating multi-proxy indicators to more effectively derive chironomid-inferred temperatures from lakes within a human-impacted landscape.

Keywords: *chironomids, lakes, human impacts, climate*

Developing an Environmental Sensitivity Mapping Webtool for Ireland

Ainhoa González, University College Dublin. Email: ainhoa.gonzalez@ucd.ie

The Environmental Sensitivity Mapping (ESM) project, funded by the Environmental Protection Agency, has developed an online tool to strategically explore onshore environmental sensitivities in Ireland. The purpose of the ESM Webtool is to support practitioners (e.g. Local Authority planners, consultants) when undertaking Strategic Environmental Assessment (SEA), a mandatory requirement under European law to anticipate and mitigate potential significant adverse effects resulting from plan or programme implementation. The Webtool has been developed with the objectives of enhancing SEA transparency and effectiveness across planning hierarchies and sectors, and of promoting informed decision-making. These are to be achieved by enabling rapid spatial examination of environmental considerations and identification of intrinsic sensitivities in the receiving environment, thus anticipating potential land-use conflicts. The Webtool centralizes SEA-relevant datasets and includes an innovative ESM Widget that promotes participative approaches to sensitivity mapping. The Widget enables "on the fly" combination of selected environmental criteria and stakeholder perceptions on their relative importance (in the form of weights) to produce environmental sensitivity maps specific to a given plan/programme. The ESM Webtool is fully operational and is currently being piloted in real-life SEAs of live plans to ascertain its visualisation and information capabilities, and the reliability and usefulness of environmental sensitivity maps produced through the Widget. This paper will describe the steps leading to the development of the Webtool, demonstrate its applicability, and discuss some of the findings of its sectoral applications.

Keywords: *Strategic Environmental Assessment, Online mapping, Spatial analysis, Environmental sensitivity*

The challenges of protecting rural coastal communities from climate change and human impacts A Case Study: Maharees Conservation Association CLG

Farrell E, Finn M, Lynch K, Carr, L, Wilkes Orozco S, Castro Camba G, National University Ireland Galway; IT Tralee. Email: eugene.farrell@nuigalway.ie

The Maharees tombolo separates Brandon Bay and Tralee Bay and connects the two villages of Fahamore and Kilshanning to the mainland (total population 293). Natural hazards and human activities are adversely impacting the long term health of the dune ecosystems and the preservation of the tombolo structure. Socio-economic forces have resulted in a transition away from primary modes of production (farming and fishing) the last two decades to tertiary goods and services focussed on tourism and visitors to the area. The lack of an integrated, fit-for-purpose plan to manage human activity (pedestrian paths and horse trails to access beach and related activities of parking, camping, unregulated access, dune scrambling, and fires) has led to destabilization of the fragile dune system. The foredunes are also suffering chronic erosion from Atlantic storms. The local community mobilised to form the Maharees Conservation Association (MCA) CLG in February 2016 to design short- and long-term coastal management solutions. The MCA has successfully engaged with all the relevant stakeholders to conduct coastal protection activities (beach cleans, dune vegetation planting, signage and access fencing, straw bales, dune fencing, cultural & heritage walks, public & committee meetings, fundraising events, media, and partnerships & outreach). In December 2017 the Maharees was identified by Kerry County Council as a 'priority cell' requiring a 'Coastal Erosion & Flood Risk Management Study' from the OPW. This is a major step to appropriating funds to implement measures to prevent/mitigate erosion and will be supported by results from the OPW funded project (2015-2017) in NUIG Geography.

Keywords: *coastal erosion; coastal management; community engagement; ecosystem goods and services*

National extent of cattle exclusion from watercourses

Paul Kilgarriff, Stuart Green, Mary Ryan and Daire O'hUllacháin, Teagasc. Email: paul.kilgarriff@teagasc.ie

The 4th NAP of the Nitrates Directive will require derogation farms to prevent cattle from having direct access to a water course by 2021. This research employs a GIS methodology to examine the extent of the number of farms bordering a water course in Ireland. Utilising Ordnance Survey Ireland's (OSi) Prime2 dataset, The Department of Agriculture, Food and the Marine (DAFM) Land Parcel Identification System (LPIS) dataset is merged into Prime2 to create a new farm boundary layer for Ireland; P2 Farm. P2 Farm is the first Irish dataset which maps individual farm boundaries. Whereas LPIS parcels are contiguous blocks of particular land-use farmed, P2 Farm contains individual fields along with detail of land-use. An examination of the OSi 1:50,000 discovery series river network highlighted a spatial mismatch with aerial photography. Farmers however will fence from the real watercourse and not an artificial representation of a river centre line. River width is therefore required. The river polygon and stream line data from Prime2 were found to be more spatially representative. The OSi 1:50,000 discovery series river network is overlaid with Prime2 river polygons to create a spatially rich river dataset. One advantage of using Prime2 data is the seamless nature of the data polygons. Combining the P2 Farm layer with the new river polygon layer; the total number of farms bordering a water course can be quantified. The results show that approximately 60% of farms border a length of river. Overall the total length of on-farm watercourse is ~55,000km.

Keywords: *GIS, spatial analysis, agriculture, environment*

Clustered and rising: evaluation of temporal variability in winter wave conditions and storminess in the northwest coast of Ireland

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Winter storms have significant morphological impacts in coastal areas, often leading to extensive infrastructure damage and wide-ranging socio-economic disruption. While storm-dominated coastal environments, such as the northwest coast of Ireland, are generally attuned to highly energetic wave conditions, morphological impacts can be intensified by changes in the frequency and sequencing of storm events, particularly during storm-groups or exceptional winter seasons. Aiming to assess the variability in frequency and sequencing of wintertime wave conditions and storms in the northwest coast of Ireland, we combine observational records with data from two independent reanalyses (ERA-Interim and WW3) and perform a statistical analysis of wave conditions over the past 6 decades. Both reanalyses represent observed wave heights with very good skill. Excellent agreement between modelled data and observations was identified up to the 99th percentile, despite a slight underestimation/overestimation by ERA-Interim/WW3 for waves above the 90% exceedance level. The winter of 2014/15 was the most energetic on record (67 years), but not the stormiest. The results show that highly energetic and stormy winters occur in clusters during positive phases of the North Atlantic Oscillation (NAO). Significant positive temporal trends for winter wave height, number of storms per winter and average winter storm wave height, suggest that winters are becoming more energetic and stormy, with potential implications for the erosion and recovery of coastal systems in the northwest of Ireland.

Keywords: *storms; waves; erosion; climate change*

C5: NEW SOCIAL GEOGRAPHIES

State Supported Segregation? Examining Migrant Clustering in Primary Schools in Ireland

Valerie Ledwith, NUI, Galway. Email: valerie.ledwith@nuigalway.ie

In Ireland, increased population diversity and growing secularisation have led to dissatisfaction with the denominational system of education provision, whereby 90 percent of primary schools are managed by the Catholic Church. In 2011, the Minister for Education (Ruairi Quinn) established the Forum on Patronage and Pluralism in the Primary Sector, with an emphasis on increasing school choices available to parents and families. While ensuring that schools cater for students from a range of religious or non-religious backgrounds is positive, an unintended consequence of this policy may be school segregation. This research provides evidence of migrant segregation in primary schools in Ireland, highlighting how school choice can lead to suboptimal outcomes for the aggregate population.

As such, enshrining increased parental choice as the corner-stone of school attendance policy is flawed since it supports an educational infrastructure that enables school segregation.

Keywords: *School choice; segregation*

Disability, hostility and the relational geographies of un/safety

Claire Edwards and Nicola Maxwell, School of Applied Social Studies/Institute for Social Science in the 21st Century (ISS21), University College Cork. Email: claire.edwards@ucc.ie

This paper utilises emergent ideas at the intersection of relational geographies of disability and geographies of safety and fear of violent crime (FOVC) to explore disabled people's geographies and mobilities of un/safety in Ireland. Despite a significant body of literature within sociology and disability studies which highlights the experience and fear of hate, hostility, and violence in the lives of many people with disabilities, geographers have been slow to consider the socio-spatial dynamics of disablism violence, and disabled people's everyday practices of un/safety. Drawing on findings from a two year Irish Research Council-funded study, 'Disability and the Creation of Safe(r) Space', we suggest that a relational approach has the potential to shed light on the material, affective and discursive intertwining of disability and un/safety in different socio-spatial contexts, such that the experience of un/safety and fear of violent crime works through complex assemblages of bodies, memories, objects and environments. Based on interviews, 'walkabouts' and photo elicitation with disabled people, we seek to unsettle binary constructions of particular spaces as 'safe' or 'unsafe' for people with disabilities, and of disabled identities frequently premised on vulnerability and victimhood, by exploring how the relations between physical environments, spatial perceptions, and what bodies and minds can do, contribute to disabled people's experiential geographies and mobilities of un/safety in Ireland.

Keywords: *disability, relational geographies, un/safety*

Advocacy and Activism: Endometriosis Online

Siobhán Madden, Maynooth University. Email: siobhan.madden.2012@mumail.ie

Endometriosis is a women's disease causing chronic pain and infertility. It is understudied and has no standard of care with doctors. How do these women create safe spaces within this environment? As a woman diagnosed with endometriosis, I am immersed in this world. Therefore, this research is an autoethnographic study of the social implications of the disease that has led to the creation of online safe spaces. They have formed a kind of online advocacy network that spreads knowledge and awareness while promoting adequate care for patients. This research highlights a disease, which was formally discovered in the 1920's and yet is still a mystery. Power and gender have influenced this approach to endometriosis and the online spaces created. There are links to health geography and how illness is treated according to gender. This link is an important one to explore but will not be the emphasis of the thesis. Instead, I will focus on the safe spaces created by women to protest power and gender barriers while also combatting their understudied disease. This kind of online activism comes from a lack of physical ability to organise and protest in the streets. Doctors are not as well educated on the disease as is needed for proper treatment and the research is not being done, especially in Ireland. 1 in 10 women worldwide has the illness which means the online safe spaces have created a network of sick women all over the globe. Their main goal is to help each other daily acting as a support network; however, on top of this is another goal of raising awareness and spreading knowledge. This has resulted in the posting of countless blogs, videos and articles, which are shared by several groups at a time. This kind of advocacy is a theme, along with affect and embodiment, I borrow from health geography to highlight the importance of this type of analysis.

Keywords: *advocacy, affect, embodiment, online, social movement*

Eco and Equity/Social Labelling and the Tobacco Conundrum: Supporting the European Union (EU) Stance on Prohibition

F. Houghton, Limerick Institute of Technology. Email: Frank.Houghton@LIT.ie

The European Environment Agency defines Life cycle assessment (LCA) as the 'evaluation of some aspects - often the environmental aspects - of a product system through all stages of its life cycle'. In contrast the United Nations Environment Programme (UNEP) defines social, or socio-economic, life cycle assessment (S-LCA) as 'a social impact (and potential impact) assessment technique that aims to assess the social and socio-economic aspects of products and their potential positive and negative impacts along their life cycle encompassing extraction and processing of raw materials; manufacturing; distribution; use; re-use; maintenance; recycling; and final disposal'. There has been significant growth in both of these fields in response to growing environmental awareness. Demand for environmentally and socially responsible products has been largely driven by consumer behaviour, although investor demand is also a factor. Eco-labelling is therefore an important factor in the commercial success of

many global and local brands. At present 'Big Tobacco' is still able to exploit such tactics to promote environmentally and socially friendly tobacco products. However, participation in LCA & S-LCA activities only serves to normalize a product which kills one in two of its users.

Keywords: *Life Cycle Analysis; Social Life Cycle Analysis; Tobacco Control*

C6: DOCTORAL RESEARCH AWARD

Artist/Citizen: *Choreographing the Nation Brand*

Dr. Fearghus Ó Conchúir, Maynooth University.

Supervisor: Professor Gerry Kearns. MU

Governing energy efficiency in the built environment: the geography of residential energy policy outcomes in Ireland

Dr. Irene Morris Cadogan, Maynooth University

Supervisors: Prof. Mark Boyle, University of Liverpool, and Dr. Ronan Foley, MU

Exploring the Human Dynamics Affecting the Intergenerational Family Farm Transfer Process in Later Life: A Roadmap for Future Policy

Dr. Shane Francis Conway, NUI Galway.

Supervisors: Dr. John McDonagh and Dr. Maura Farrell, NUI Galway

Energy Biographies: Exploring the intersections of lives, practices and contexts

Dr. Mary Greene, NUI Galway.

Supervisor: Dr. Frances Fahy, NUI Galway

KEYNOTE: 5:45-6:45pm

Fast Urbanism: Speed, scale and the city from the margins of India's urban age.

Ayona Datta, King's College London

Speed is fundamental to shaping the modern city. It continues to shape visions of the future city and of contemporary urban life. Notions of speed have produced distinct conceptualisations of space and time in capitalism, neoliberalisation and urbanization. In India, speed is shaping new vocabularies of the future (fast forwarding, future proofing, leapfrogging, race against time), new urban tropes (smart cities) and new domains of state rule (streamlining bureaucratic and regulatory processes, efficiency measures, e-governance, Big Data). In this talk I will examine how speed manifests in 'fast urbanism' – managing mega-urbanization into the future by increasing the pace of anticipatory action in the present, and what this means for those living on the margins of the Indian city. Taking India's recent national initiative to create 100 smart cities I will argue that the focus on the smart city as a strategy of fast urbanism initiates policies and approaches that seek to resolve deep seated social issues through digital technologies. For the urban poor, contrary to the promise of a smooth and seamless urban life, the smart city creates new struggles with mobility, travel times, delayed access to public services and social benefits, changes in family routines as well as the dangers of sexual and physical assault. I will conclude by suggesting that while speed is now the defining feature of global urbanization, it is creating new temporal geographies of exclusion that is transforming the parameters of urban citizenship.

FRIDAY 11 MAY

SESSION D: 9:00-10:30AM

D1: WOMEN IN GEOGRAPHY ROUNDTABLE

Participants: Professor Kath Browne, Dr. Ayona Datta, Prof. Gerry Kearns, Ms. Claire McGing, Ms. Siobhan Madden and Dr. Joanne Aherne.

Chairs: Ms. Aoife Kavanagh and Mr. Joe Robinson.

D2: ART AND GEOGRAPHY 4: WORKSHOP AND DISCUSSION. FOSTERING ART FOR SUSTAINABILITY IN IRELAND

Workshop Leader: Cathy Fitzgerald

Participants: Anna Davies, Frances Fahy, Christopher Phillips, Marcus Collier

D3: FOSS4G IN RESEARCH AND TEACHING 1

A Brief History Of GNU/Linux

Dennis Pringle, Dept. of Geography, Maynooth University. Email: dennis.pringle@mu.ie

The history of Linux is central to the history of Free and Open Source Software (FOSS). The UNIX operating system was developed in the 1970s in the early days of the internet to facilitate sharing of data and software between researchers and developers, but by the 1980s it had become proprietary software. Richard Stallman therefore established the GNU project to develop a UNIX-like system based on the principles of free software. To ensure the software remained free, he devised the GNU GPL (General Public Licence). By the early 1990s the GNU project had developed most of the tools required for an operating system, but it had not developed a kernel small enough to run on a personal computer. This final part of the jigsaw was completed by Linus Torvalds. Since then Linux has grown to dominate the market in everything from small devices like smart phones and onboard computers in cars to large servers and supercomputers. In fact, the only area where its impact has been minimal has been personal computers where Microsoft Windows and Apple still remain supreme. It is argued that Linux is in fact superior to Windows, due to the fact it fully embraces FOSS principles.

Keywords: *Linux Free Open_Source Software*

Open analysis of open data with open software

Burcin Yazgi Walsh and Chris Brunsdon, NCG - Maynooth University. Email: burcin.yazgiwalsh@mu.ie

The main issue that will be addressed is the importance of open data as well as open procedure to process open data. In order to discuss these issues the paper will be focusing on using open source R language for urban data analysis and different extensions of it for visualization in research processes. Discussions will be oriented around classifying small areas of Ireland based on the census 2016 data with R program and presenting interactive spatial outputs with Leaflet-Shiny integration.

Keywords: *Open Analysis, Open Data, R*

Rapid Geographical Dashboard Creation with R and Flexdashboard

Chris Brunsdon, Maynooth University. Email: christopher.brunsdon@mu.ie

'Flexdashboard' is an R library that makes it extremely easy to create data visualisations as a dashboard, making use of the Markdown markup language to define web pages. In this talk I will combine this with the R cartographic package 'tmap' to allow interactive, real time, open source reproducible geographical dashboards to be created. These may be used both as a means of research dissemination, and as a teaching aid - and of course as dashboards.

Keywords: *dashboard, cartography, FOSS4G, spatial data*

Data Visualizations for City Dashboards: Examples and Workflow

Liam O'Sullivan, NCG, Maynooth. Email: liam.osullivan@mu.ie

Existing open data sets may be geo-mapped and visualized using established proprietary GIS systems, creating an issue for open source web-based projects. This talk introduces some example cases where existing tools have been replaced with FOSS versions on the Building City Dashboards project at Maynooth University. A typical workflow is presented with practical code examples, offering key reusable functionality for a variety of visualization types.

Keywords: *FOSS Dashboards Web Development*

Using R as a tool for teaching and research

Martin Charlton, Maynooth University. Email: martin.charlton@mu.ie

At the National Centre for Geocomputation we use R extensively in our teaching and our research. Teaching is to students at PhD and MSc level – most complete a preliminary Java module. I shall briefly discuss R, as well as RStudio, markdown and rpubs with examples of their use.

Keywords: *R, RStudio, markdown, rpubs*

Building online open source maps in the classroom

Stephanie Keogh, Maynooth University. Email: stephanie.a.keogh@mu.ie

Transition year students in Saint Dominic's College, Ballyfermot in conjunction with the Building City Dashboards project in Maynooth University have created a local services community map using a combination of open data, crowd sourced data and free and open source software (FOSS). The map was created using QGIS and published online using QGIS cloud, a free spatial data infrastructure on the internet. This session will outline the project methods, all of which can be applied in an undergraduate or postgraduate teaching environment.

Keywords: *open source, open data, teaching, GIS*

D4: NEW DIRECTIONS IN IRISH HISTORICAL GEOGRAPHIES 1

Becoming English in Ireland in the time of Edward I

Mark Hennessy, Department of Geography, School of Natural Science, Trinity College Dublin..

Email: mhnnessy@tcd.ie

The Gaelicisation of English settlers has been a major theme in the study of English colonisation in medieval Ireland. Very little attention has been paid however to the Anglicisation of the Gaelic Irish in the late twelfth, thirteenth and early fourteenth centuries. This paper examines the various ways in which the Gaelic Irish at different social levels became Anglicised in this period. Anglicisation took place at the level of the manor, through the spread of the Common Law and the extension of English governmental structures. This paper explores the geographical and historical variations in this process of Anglicisation.

Keywords: *Ireland, Medieval, Anglicisation*

'Lanterns of civility': urban development in early seventeenth century colonial Ulster

Jonathan Cherry, DCU. Email: jonathan.cherry@dcu.ie

The Ulster plantation scheme devised in the early seventeenth century was the first to contain formal plans detailing the establishment of a network of towns across the recently seized lands. Over a relatively short period of time and virtually from nought a network of towns emerged dramatically transforming Ulster's landscape, economy and society. These plantation towns with their distinctive form and assemblage of colonial buildings dominating their streetscapes were to become key components of the cultural landscape simultaneously reflecting, legitimising and naturalising the new socio-economic and political order that had been imposed on Ulster. Today, four centuries after their conceiving these towns remain intriguing components of the cultural landscape providing a potent field of study for geographers, archaeologists and historians, concerned with the colonial strategy of urban development. This paper provides an overview of some of the key concepts which informed colonial urban development. The changing locations and numbers of towns proposed between 1609 and 1611 will be traced and accounted for. By 1629, sixteen locations – most already fulfilled a range of proto-urban functions - had been selected for development by the colonial powers and had been granted charters. A reading of the impressive fortifications, planned streets and market places alongside the central sites afforded colonial administrative buildings and churches reveals the strategic use of landscape by colonial urban developers as a medium in propagating colonial ideals of 'civility' and order.

Keywords: *Colonialism, urban development, Ulster*

Bringing Public Historical Geography into Conversation with Irish Heritage Studies: Personal Reflections on Legacy Initiatives Arising from the Centenary Anniversary of the 1916 Rising

Mark McCarthy, Galway-Mayo Institute of Technology. Email: mark.mccarthy@gmit.ie

Heritage can be defined broadly as almost anything that one generation hands down to the next, or anything from the past that people identify with. In post-conflict societies, heritage often involves using the past to shape the present and reimagine the future. Like heritage, public historical geography can

bring the past out of cloistered academic realms and broaden its accessibility to wider audiences by means of its practical application in: atlases of war and revolution, heritage trails, battlefield tourism, museum exhibitions, commemorations, films, and creative digitalisation (e.g. memory maps, mobile phone apps). Having reached the mid-point of the current 'Decade of Commemorations', the time seems ripe to reflect on how recent cross-disciplinary research on the 1916 Rising has endeavoured to bring public historical geography into meaningful conversation with Irish heritage studies. In adhering to this conference's theme of examining the past, present and future of 'the earth as our home', this paper furnishes some first-hand examples of the role played by public historical geography in mapping, surveying, exhibiting, commemorating, filming, and digitising the cultural heritages of 1916. It is argued that legacy initiatives in the realm of public historical geography can lend much to current and future generations, especially to those interested in exploring, discovering and learning about the rich mosaic of historic sites and memorials that constitute the heritagescapes of the Irish Revolution.

Keywords: *Historical geography, heritage, 1916 Rising*

Beyond a niche interest: the role of historical geography in contemporary debate

Ruth McManus, School of History & Geography, DCU. Email: ruth.mcmanus@dcu.ie

A well-known aphorism suggests that 'those who fail to learn from history are doomed to repeat it'. In a similar vein, it could be argued that the study of contemporary phenomena benefits from a longer-term perspective. Nevertheless, recent engagement by geographers with topics such as financialisation and the housing crisis have tended to ignore, or at best skim over, the lessons which historical geography can provide. Using a number of case studies, this paper explores the value and relevance of historical geography, suggesting that it has the potential to provide greater depth and additional insights on a range of issues. It argues for a deeper engagement both with and by historical geography to enlighten debate on contemporary issues.

Keywords: *historical geography, contemporary issues, urban*

D5. PERSPECTIVES ON REGIONAL AND URBAN PLANNING 1: 50 YEARS AFTER BUCHANAN – REGIONAL PLANNING IN IRELAND 1

The Buchanan Report and its aftermath: implications for Irish regional planning

Proinnsias Breathnach, Maynooth University. Email: Proinnsias.Breathnach@mu.ie

Published in 1968, Colin Buchanan's Regional Studies in Ireland (commonly known as the Buchanan Report) comprised the first formal national planning framework for regional economic planning in Ireland. This paper outlines the background to the commissioning of the report and summarises its main proposals. It then recalls the popular and political response to the report, and how this was translated into the subsequent Regional Industrial Plans implemented by the IDA in the period 1973-82 which, in essence, were the antithesis of the planning approach envisaged by Buchanan. The paper concludes by showing how these plans, and other parallel developments in the Irish space economy, served to create a popular mindset which thereafter placed major constraints on the public discourse around regional planning in Ireland.

Keywords: *Buchanan Report; growth centres; regional planning*

Regional Planning in Ireland after Buchanan: a critical review:

Jim Walsh, Maynooth University. Email: jim.walsh@mu.ie

Following the demise of the Buchanan growth centre proposals, regional development in Ireland in the 1970s was largely equated with strategies for regional industrial development that relied heavily upon the attraction and dispersal of foreign direct investment to locations outside Dublin. However, the shortcomings of this strategy resulted in a significant reorientation of industrial policy in the 1980s in the midst of a deep economic recession, during which regional development became more uneven and was relegated as a lower policy priority by government. The onset of the Celtic Tiger era in the early 1990s was accompanied by an absence of a coherent framework to support the development of all regions despite feeble attempts to establish governance structures required for compliance with EU Structural Funds. This ultimately led to the preparation of the National Spatial Strategy which was launched in 2002. Despite its innovative proposals, the implementation of the NSS was severely hampered by an unsupportive political culture and ultimately its abandonment in the context of the national economic crisis that unfolded after 2008. Work on a replacement strategy commenced in 2014 and was actively promoted as the National Planning Framework (NPF) Ireland 2040 project from early in 2017. The presentation will conclude with an assessment of the NPF.

Keywords: *Regional development NSS NPF*

For Buchanan read Fitzgerald. 50 years of hospital planning in Ireland. A familiar history.

Darren O'Rourke, Maynooth University. Email: darren.orourke.2017@mumail.ie

The Fitzgerald Report of 1968 began a debate on the spatial configuration of the Irish hospital system which continues today. It concluded that services should be provided at a small number of large hospitals within 60 miles of the population and proposed a model of 16 regional and general hospitals located at 12 centres in 3 newly-defined regions. Fitzgerald, however, failed to secure the necessary support for implementation. The intervening 50 years have seen the question of the future organisation, extent and location of Irish hospitals repeatedly revisited. Many attempts have been made to tackle the regional and spatial challenges of providing timely and equitable access to the population. Reports by the Oireachtas Committee on the Future of Healthcare (Sláintecare) and the Trauma Steering Group represent the most recent attempts. All have been hotly contested. Drawing on parallels with the Buchanan Report and regional development, here the “geographies of reconfiguration”, an historical geography of hospital planning in Ireland over 50 years will be presented. The political contestation of hospital planning, the morphing boundaries of regional governance and the role of medical training schools are examined, and the long-term consequences of the rejection of the Fitzgerald Report considered. Hospital planning is spatial and political. It is informed by and informs contemporary debates on democracy, participation and spatial justice. I conclude with a draft research proposal which aims to build on recent Irish and international literature to design and pilot an optimal model for public involvement in regional health service planning here.

Keywords: *Historical Geography, Planning, Hospital Planning*

Structural and Spatial Evolution of the Irish Urban Hierarchy since Buchanan: Implications for Planning and Sustainability

Des McCafferty, Mary Immaculate College, UL. Email: des.mccafferty@mic.u.ie

In drawing up a strategy for regional development that was based around the principle of larger centres of population driving the growth of their hinterlands, the Buchanan report (1968) faced a particular problem, which was recognised at the outset. Ireland, Buchanan noted, had an unusual urban hierarchy. Two dimensions of this issue were identified: first, the size distribution of urban centres, which was characterised by few medium-sized towns; and second, the spatial distribution, which was characterised by the absence of large towns in the north western part of the country. These imbalances in the settlement hierarchy have continued to challenge attempts at spatial planning in Ireland in more recent times, including the National Spatial Strategy (2002) and the National Planning Framework (2018). This paper will examine the evolution of the settlement hierarchy in the half century since the Buchanan report, and discuss the implications of the observed changes in terms of the sustainability of current patterns of urbanisation. The development of the urban system in the period 1966-2016 will be analysed using an array of indicators to summarise both size-related and spatial / regional changes. Consideration of the implications for sustainability will draw on recent Irish and European studies to comment on both the economic and the environmental (ecological footprint) aspects of sustainability.

Keywords: *Spatial planning, urban system, sustainability*

D6. ENVIRONMENT, BIODIVERSITY AND RISK

Complex Conflicts in Hazards Management: Insights from the Cork flood defences dispute.

Jim Jeffers, Bath Spa University. Email: j.jeffers@bathspa.ac.uk

In late 2016 an ambitious flood relief scheme was proposed for Cork City. It included a range of measures aimed at reducing flood risk throughout the River Lee catchment but with a particular focus on structural approaches in the city centre. The project became embroiled in a high profile dispute when a local campaign group naming itself the Save Cork City campaign emerged in opposition to the scheme. This group has opposed proposed flood walls in the city centre and argued instead for the construction of a downstream tidal barrier and other measures. This paper traces the emergence of this dispute and uses a frame analysis to explore the positions adopted by various parties involved. While this analysis illustrates that a range of framings are used by individuals and groups to make sense of the issues involved, it also demonstrates that many of the participants in the dispute share similar underlying assumptions about flood hazards and their management. Place attachment and human security both play an important role in shaping perceptions of flood hazards and adaptation choices. While highlighting areas of disagreement between local stakeholders, conflicts such as that in Cork can

also represent important opportunities to engage new wider constituencies with hazards management and to bring new perspectives into the decision-making process.

Keywords: *Hazards; flood risk; adaptation; governance*

Dredging the river: Exploring ecosystem crisis through sound art

Trish Morgan, Dublin City University. Email: trish.morgan@dcu.ie

This paper introduces and describes an ecological sound art project undertaken in 2016. This project had its conceptual genesis in the meteorological event of storm Desmond, which impacted Ireland and the UK in December 2015. The project was therefore concerned with the impacts of ecosystem distress on the fluvial geography of a rural area of the Irish midlands that was affected by the storm, due to its location in the catchment area of the river Shannon. The paper describes how the project recorded the underwater sounds of the fluvial ecosystem throughout the calendar year of 2016. It describes how the temporality of the ecosystem was revealed, and observes how such underwater dynamism is usually unavailable to an audience. Using theories of alienation, reification and praxis, it discusses how in revealing the underwater sounds and their temporal variance over a year, an understanding of the river can be revealed to an audience. The paper proposes that in contemporary moments of ecosystem distress that are coupled with alienation from nature, an ecological sound art practice can contribute to an understanding of ecosystems in a way that complements the rational and scientific.

Keywords: *praxis, sound art, river, rural geography*

What a parasite can tell us about the political ecologies of Ireland's water infrastructure

Patrick Bresnihan and Arielle Hesse, Trinity College Dublin. Email: pbresnih@tcd.ie

“History and politics were now a severe intestinal disorder”

- Mike McCormack, *Solar Bones* (2016)

In March 2007, Galway City was hit by an outbreak of cryptosporidiosis, an acute intestinal disease caused by the parasite *cryptosporidium*. The contamination of Galway's water supply lasted for 158 days and resulted in 242 confirmed cases of cryptosporidiosis, although the actual number affected was far higher. While Galway remains the largest outbreak, there have been many more minor outbreaks of cryptosporidiosis since 2007, largely in rural parts of Ireland. The dominant response to this new water-borne risk to public health has been to upgrade treatment works to counter the threat of the parasite. While understandable, these quick-fix engineering solutions tend to gloss over the more complex, historic and uneven causes of recent *cryptosporidium* outbreaks. *Cryptosporidium* is known to originate from animal or human faeces and is thus correlated with intensive, animal-based agriculture and inadequate wastewater treatment systems. The complex connections between *cryptosporidium* outbreaks and these longer gestating, socio-ecological developments are uncertain and hard to trace, making it hard to assign responsibility and politicize these critical instances of infrastructural failure. Drawing on the epidemiology of *cryptosporidium* and the recent history and uneven geographies of agricultural and urban developments in Ireland, this paper traces the complex relationships forged by the parasite *cryptosporidium*, the bodies (animal, human, water, land) it inhabits and connects, and the different political ecologies of infrastructural repair and decay it can help us to construct.

Keywords: *political ecology, infrastructure, water, cryptosporidium*

The potential for Natural Flow Retention Measures in Ireland

Mary C. Bourke, Trinity College, Dublin. Email: bourlkem4@TCD.ie

Climate model predictions for Ireland show an increased probability of high magnitude flood events and an earlier seasonal onset of flood conditions. Many European agencies have adopted a Natural Water Retention Measures (NWRM) approaches to reduce flood risk. Natural Water Retention Measures, as defined in EU policy, are multi-functional measures that aim to protect water resources and address water-related challenges by restoring or maintaining ecosystems as well as natural features and characteristics of water bodies using natural means and processes. Data from demonstration catchments in the UK suggest it is a viable and cost-effective approach for natural flood management. Given that Ireland retains much of its extensive agricultural lands, there is potential for restored and created wetlands, restored peat bogs, reconnection of channels with floodplains, and the growth of native woodlands. The Office of Public Works (OPW) is the statutory body charged with flood alleviation works in Ireland. They are mandated to reduce flood risk for the 1-100-yr flood. The absence of an evidence base has contributed to a lack of uptake of NWRM by relevant authorities. As a result, NWRM is not yet explored sufficiently for application in the Irish landscape. Low cost, multiple, small measures may present a more successful approach, particularly for smaller communities.

Keywords: *Geomorphology, hazard, flood*

Carbon Dioxide effluxes in Irish blanket peatlands

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This study proposes to investigate sub-surface CO₂ effluxes in a blanket peatland site located in Sally Gap, Co. Wicklow in Ireland. This will involve the accounting of production of CO₂ rates at different soil profiles and assessing drivers such as decomposition rates and nutrient status. The project also aims to assess rates and factors influencing CO₂ such as diffusion, advection and pressure pumping. The existence of thresholds, or tipping points, within the system will be monitored. The outputs of this study will be a mechanistic-based assessment of sub-surface CO₂ dynamics within Irish blanket peatland systems. This will provide a direct input in peatland carbon flux determinations and facilitate the optimisation of land-use carbon sequestration capacity as required under the IPCC Good Practice Guidelines. It will also add to our knowledge and understanding of the sensitivity of this ecosystem type to the effects of climate change, environmental system stress and land-use adaptation.

Keywords: *Peatlands, Carbon, Greenhouse Gas emissions, Land-use*

SESSION E: 11:00-12:30PM

E1: META-NARRATING THE CITY: CIRCULATING URBAN SPATIAL STORIES FROM ABOVE AND BELOW 1

Narrating the future city from its temporary ruins: Governing terrains of possibility in post-crash Dublin

Cian O'Callaghan and Cesare Di Felicianantonio, Department of Geography, Trinity College Dublin / Department of Geography, University of Leicester. Email: ocallac8@tcd.ie

We explore the terrains of possibility enabled by the reuse of vacant spaces following Ireland's crisis. The prevalence of unfinished developments, underutilised land, and 'new ruins' in recent years has made 'vacant space', in various manifestations, a more visible and politicised feature of post-crisis urbanisation. The scale and severity of property bubbles in various countries, coupled in some instances with foreclosure crises, has left vast landscapes of stalled, unfinished or vacant developments and stagnant property markets, and vacancy has become a central feature of national debates about 'the crisis'. But given their radical openness and transgressive potential, vacant spaces and modern ruins have also become sites of potentiality in post-crisis cities, as urban inhabitants reclaim buildings and spaces left ruined by austerity. Focusing our analysis on the diverse set of actors that intersect in the reuse of vacant spaces following Dublin's property crash, we explore how alternative engagements with these sites create terrains of possibility that offer new ways of narrating the future city. However, as urban property markets return through policies that open up cities to new rounds of financialised investment these alternative uses may once again be domesticated by entrepreneurial urbanism and reclaimed by market actors. Employing a frame of governmentality, we examine the use of different counter-narratives and tactics that seek to delimit these terrains of possibility. This interplay we argue is indicative of how vacancy constitutes an important site through which alternative urban futures are contested and fought over and new political subjectivities are formed.

Keywords: *urban vacancy; narrative; Dublin, governmentality*

Walking the Path to Change? Political Walking Tours in Dublin

Georgina Perryman, NUI Maynooth. Email: georgina.perryman.2018@mumail.ie

How can walking tours constitute a form of activism? This paper provides a new perspective on the discursive and spatial ways in which the city is constructed and narrated through walking tours. As a spatially mobile, embodied form of pedagogy, walking tours make local stories visible. In Dublin, such tours have critically addressed consequences of neoliberalism, austerity and the financialisation of the city since the global economic crisis in 2008. Moreover, they have challenged hegemonic gendered, classed, and heteronormative historical narratives. Drawing on semi-structured interviews with Dublin tour guides who self-identify as activists and/or educators, the paper argues that walking tours can constitute a form of activism through their value laden and intentional construction. Based upon local experts' views, I understand walking tours as an activist knowledge practice and a critical pedagogy of place. Bolstered by motivations towards conscientisation, guides use walking tours in conjunction with creative practices, such as storytelling, to invoke new narratives of the past through a peripatetic

approach to place, eliciting emotions from attendees that are contextualised by the mobility of the method and framed through dialogue with one another. In this way, walking tours create spatial, embodied pathways through the city as practices of critical memory-work and activist knowledge re-narrate and challenge hegemonic discourses. Limitations are identified about contributing the start of people's sustained activism, but these could be mitigated by more creative practices. The paper finishes with suggestions about further democratising walking tours and connecting them to more substantive avenues for activism in the future.

Keywords: *walking, social movements, activism*

Timespace: using rhythmanalysis to understand temporary spaces in Dublin

Rachel McArdle, Maynooth University. Email: rachel.mcardle123@gmail.com

Temporary uses of urban space are increasingly considered by planners, city councillors and architects as stopgap solutions in times of socioeconomic downturn (Haydn and Temel, 2006; Bishop and Williams, 2012), with little consideration given to the meaning of 'temporary'. In geography, timespace is generally understood as multiple (Crang, 2001), but the focus on the spatial (Massey, 2005; Harvey, 1989) means that the qualities of the temporal may be ignored. This limited temporal imaginary is visible in the political economy approach to the city, where the city is defined by boom and bust cycles. In contrast, I draw upon Crang's (2001) discussion of everyday rhythms in the city, which, building upon Lefebvre's rhythmanalysis, considers the temporal as intrinsic, not external to, a consideration of timespace. As I have explored elsewhere (Till and McArdle, 2015; McArdle, in progress), concepts such as 'temporary' or 'permanent' are deeply problematic and hide the (in) tangible benefits that creative, community and anarchist 'liquid' urbanisms offer to the city and its inhabitants. Using Dublin as the case study, this paper looks at an 'interim space' (Till 2011), Bloom Fringe Festival (BFF), an annual gardening festival. I consider the temporality of this festival as not limited to the event's calendar dates. I outline how the festival organisers and community gardeners are affected by the rhythmic and linear processes of time. My analysis of the rhythms and timespaces of the BFF suggests, following Crang, that a thorough conceptualisation of the temporal allows us to comprehend more nuanced and complex spatialities.

Keywords: *Temporary space, Dublin, Urban*

Contested Narratives: the Commodification of History and Class in Dublin's Liberties

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The Liberties area of Dublin has a long history and contemporary reality of impoverishment, yet in recent decades has also been a site of intense gentrification. Recent local entrepreneurial policies have instigated the redevelopment and repackaging of the district's old-fashioned shops, abandoned buildings and lower-grade functions into a 'powerhouse for creative industries and cultural tourism' (DCC, 2008: 12), presenting the neighborhood as an innovative, exciting, and safe place to be and to invest in. This study, part of a larger examination of urban transformations in Dublin, combines oral history and memory studies with ethnography and field research to examine the creation of meaning and the struggles of groups to represent their own experiences and culture in urban narratives. Current tourism and creative-industry-oriented branding strategies for the Liberties' conflict with and are confronted by almost eight decades of grassroots working-class history, as recorded in oral stories, documents and photographs, particularly based on accounts by long-term residents of the areas many social-housing flats complexes. These stories vividly illustrate the contradictions between the reconstruction of an historical narrative to strengthen new upper-middle class consumer identities and the deeply committed concern residents have for the quality of life of their community and the city's future. Interestingly, recent urban policy moves have highlighted how the presence of impoverished areas of the city and its people has become a marker of diversity. New branding strategies specifically seek to co-opt these meanings of the city while simultaneously acting as a driver for the commodification of that very same history.

Keywords: *Commodification of History, Urban Narratives, Oral Histories, Gentrification*

E2. ART AND GEOGRAPHY 5: DANCE AND GEOGRAPHY

Michael Keegan-Dolan's 'Fragile': (Im)Placing Dancing Bodies

Finola Cronin, University College Dublin. Email: finola.cronin@ucd.ie

Fragile (1999) is an early work of Michael Keegan-Dolan. Promotional information on the production references a quotation by French poet Adam de Saint Victor: 'Conception is sinful, birth painful, life hard, death inevitable'. Keegan-Dolan's choreography of life's relentless struggle in *Fragile* created

arresting imagery in a work that also anticipated - what would become a favoured trope - black humour. In contrast to Keegan-Dolan's more recent works best known for re-imagining stories from the canon of classical ballet and often with Irish settings, *Fragile's* non-linear narrative invites attention to bodies as form and in formation - as embodied sites of emerging consciousness. With a nod to Edward Casey's argument that place operates as a primary structure in the experience of self, I put forward that *Fragile* offers a study of the negotiation of self and the relationship to the other in danced emplacement. Bodies encounter place in *Fragile* in a choreography that exposes the multiple choices available in the discovery of here and there (Casey). Keegan-Dolan seduces us into partaking of those encounters through dancers' bodies that appear amplified and often grotesque. Bodies swollen and bulbous hence draw attention to themselves as voluminous 'flesh without bones' as the structural anatomical role of the skeleton accedes to skin's materiality (Deleuze).

Keywords: *Dance Bodies Place*

Traces from elsewhere: dancing together across distance and time.

Jenny Roche, University of Limerick. Email: Jenny.Roche@ul.ie

This paper explores the patchwork of meaning, connections and perspectives within a creative project through the viewpoint of an insider collaborator/performer. It plays across affective registers of distance and proximity by linking personal meaning making to the broader socio-political context through which the work emerged. The piece under discussion, *Time Over Distance* Over Time is deeply intimate, in that the content is drawn from the lives of the performers who endeavoured to reignite personal connections over large distances and work creatively in a dispersed space before coming together to materialise the work. The presentation weaves between various narrative layers and writing registers to uncover the complexity of the creative process and the subject matter as experienced by the author, touching on experiences of migration in an increasingly globalised world.

Keywords: *Dance; Choreography; Migration; Performer Perspective*

Dancing the Site: Place-making and Embodied Inquiry

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This presentation explores practices of creative place-making embedded within site-based dance. Through noticing, attending to place and developing embodied responses the genre encompasses both performative acts (i.e. dancing, ambulatory performance and role playing) and abstract, viscerally informed improvisations conceived as 'performative in themselves; as doings' (Dewsbury, Harnsay, Rose & Wylie, 2002: 438). Drawing on the author's practice-as-research (Hunter 2015) and the work of established site-dance practitioners the paper is informed by interdisciplinary discourses from Human Geography (Pile and Nast 1998, Massey 2005, McCormack 2015), Phenomenology (Merleau-Ponty 1966), New Materialism (Haraway 2016, Bennett 2009) and intellectual initiatives arising from the 'spatial turn' (Rendell 2006) within the humanities and social sciences that prioritise and valorise epistemologies of spatialised and lived experience. The paper illustrates engagement with cross-disciplinary debate and asserts that site-dance praxis problematizes epistemological hierarchies and academic silos. It considers how site-dance research exposes and reveals what 'lies beneath' habitual site-based, practiced realities and fosters creative inquiry through corporeal means. In doing so the paper reflects on the value of site-dance as a means of attending to subjective constructions of place and space through which individuals interpret and re-imagine lived environments according to their own needs, experience and corporeality.

Keywords: *Site-Dance, Choreography, New-Materialism*

The Home Within: maternal corporeality and spheres of affective experience

Aoife McGrath, Queen's University Belfast. Email: aoife.mcgrath@qub.ac.uk

As an embodied practice, dance provides a particularly rich site for exploring questions of maternal corporeality. This paper discusses a dance work developed as part of a research project on *Dance and the Maternal*, which investigates the communication of experiences of maternal corporeality through dance practice and performance. The paper will focus on an analysis of *Within: Body + Time* (2018), a solo dance work I co-choreographed with a 37-week pregnant dancer, Aisling McCormick, about the experience of time in pregnancy. This piece sought to communicate the inner landscape of thoughts, feelings and sensations experienced during pregnancy, through a danced exploration of corporeal transformations through time. An inner sphere of experience articulated within the public sphere of performance. Considering how the choreography of maternal corporeality engages with important current debates surrounding parenthood and feminism, and wider socio-political issues concerning women's corporeal autonomy, I am interested in exploring how maternal agency can be represented in dance practice and performance. The project's underpinning theoretical framework aims to create a

dialogue between dance studies, maternal studies and affect studies, engaging with a strand of maternal studies that looks for ways to acknowledge maternal agency, and to escape the frequent positioning of maternal subjectivity in the 'melancholia-murder binary' of psychoanalytical and philosophical thought (Baraitser, 2009). How might a danced maternal corporeality creatively question imposed societal borders and boundaries in order to move with agency through the affective environments it encounters?

Keywords: *Dance, Maternal Corporeality, Affect*

E3: FOSS4G IN RESEARCH AND TEACHING 2

An exhibition of free and open source software in research and teaching for and by academics.

E4: NEW DIRECTIONS IN IRISH HISTORICAL GEOGRAPHIES 2

Elite power networking in Mid Victorian Ireland

Suzanne Pegley, Maynooth University. Email: suzanne.pegley.2011@mumail.ie

This talk will consider how the social network of the power elite, against the backdrop of the places of high status, were able to dominate society through the social networks. The dissemination of power through social networks in a tightly knit hierarchical society within the landscapes of society were facilitated by the spaces and places of the built landscape. The gentlemen's clubs, such as the Kildare Street Club and the RDS were two such locations where the social networks were consolidated. Also included were the great country houses and their created parklands where fox hunting meets occurred. The talk will concentrate on the mid-Victorian period before the system began to irretrievably change into new forms of governance.

Keywords: *Power, networks, social, landscapes*

Béaloideas and Botany: Civic Cultures and Irish Natural Histories in the work of Helen Laird (1874-1957)

Nessa Cronin, NUI Galway. Email: nessa.cronin@nuigalway.ie

The spaces of civic culture in Revival Ireland (1891-1922) provided cultural contact zones where those of various backgrounds and interests could meet and exchange ideas whether across city tea rooms or on field club excursions to rural hinterlands. This paper seeks to re-connect the individual perspectives associated with the cultures of the writing of Irish natural history within the socio-political context of the revival period. The paper explores how men and women contributed to the production of civic spaces and formed multi-disciplinary communities of knowledge that were primarily anchored in the metropolitan spaces of Belfast and Dublin in Ireland in this period (D. Finnegan, N. Johnson). Through the figures of Robert Lloyd Praeger and Helen Laird, the paper explores what David Lloyd has called the "emerging institutions and practices of colonial modernity" through the lens of natural history in this period (2003, 318). The role that women played as producers of knowledge and contributors to this aspect of Irish culture has also been minimized, and here the figure of Laird will be discussed in terms of her work as a science teacher in Alexandra College, Dublin, as actress and costumier for the Abbey Theatre, and finally as the writer of a long and radical (but largely forgotten) treatise setting forth the case for "an Irish Ethnobotany" (1904).

Keywords: *Natural History, Ethnobotany, Culture*

Enabling health at the coast: Lessons from History

Ronan Foley, Maynooth University. Email: ronan.foley@mu.ie

People have, from time immemorial, travelled to the coast for health and wellbeing purposes. This socio-seasonal flow has if anything, intensified, but the magnetic appeal of the seaside as Paradise on Earth (Lenček and Bosker, 1988) had deep historical roots. This paper examines historic practices of health and wellbeing at the Irish seaside and coast, using a range of sources including traveller's account, diaries, local archival sources and oral histories. Those sources documented a range of spatial outcomes at the coast, caused in part by a burgeoning leisure economy, within which health played a significant role. The impacts on these new coastal towns were felt in multiple ways and reflected wider narratives around class, religion, housing and gender. In challenging some of those assumptions, native pilgrimages to the seaside for health purposes were regularly noted. Through the 19th and early 20th centuries in particular, shifting tides linked to changing environments, society and spatial politics simultaneously opened up yet closed down the resorts; the effects of which still linger into the present. Finally theoretical shifts within health geographies from therapeutic landscapes to healthy places, spaces and practices are fully reflected in these historical settings and suggest that older knowledges can be sometimes lost within contemporary re-imaginings of place and space.

Keywords: *coasts, health, therapeutic landscapes, flow*

Peopling the past: the potential of oral history for Irish historical geography

Arlene Crampsie, School of Geography, UCD. Email: arlene.crampsie@ucd.ie

It is over a decade since Andrews, Kearns, Kontos & Wilson (2006) and Riley & Harvey (2007) drew the attention of geographers to both the dearth of and great potential for oral history based research in historical geography. While these calls sparked oral histories on a range of topics and raised the profile of oral history as a research methodology, Irish historical geographers have been slow to engage. As such we are leaving untapped one of the richest, fullest historical sources for the recent past that we can access – the personal testimonies of the people who live in, shape, and are shaped by Irish places and events. In offering a consideration of the potential as well as the pitfalls of conducting oral history this paper seeks to demystify the process of oral history interviewing in the hopes of encouraging wider engagement with this still relatively new historical geography methodology. It also hopes to highlight the unique ability of personal testimonies to resonate with diverse audiences, offering new ways to illuminate the relevance of historical geography research across disciplinary boundaries and beyond the academy.

Keywords: *historical geography, oral history, methodology, personal testimony*

E5. PERSPECTIVES ON REGIONAL AND URBAN PLANNING 2: METROPOLITAN GOVERNANCE AND GOVERNMENT

Understanding metropolitan governance and government: Introduction to a debate

Niamh Moore-Cherry; John Tomaney, University College Dublin; University College London.

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Metropolitan regions are now regarded as the drivers of economic growth (Storper, 2014), as key economic sectors, firms, and the production of wealth are increasingly concentrated in urban areas (Glaeser, 2012; Scott, 2008). In a post-crisis context, metropolitan areas have become the focus for policy and governance reforms yet very often these reforms are no more than attempts to play 'catch-up' as metropolitanisation processes continuously escape administrative/government boundaries. Recent research (Moore-Cherry and Tomaney, forthcoming) has suggested that contingencies of local context as well as the unfolding of a broader neo-liberal logic play a major role in the unfolding of metropolitan government and governance processes. This short paper provides the background context for thinking through urbanisation processes in a metropolitan century.

Keywords: *metropolitanisation; urban governance; metropolitan boundaries*

Five theses of Directly-elected Metro-mayors

John Tomaney, Andy Pike, Peter O'Brien and Matt Jenkins, CURDS, Newcastle University.

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This paper offers an ex ante assessment of claims concerning the introduction of Directly-elected Metro-mayors (DEMMs) in England. A largely unchallenged consensus in policy, think-tank and media commentary suggests that DEMMs bring a range of benefits to those jurisdictions that are governed by them. The paper identifies five theses on DEMMs, which suggest they facilitate economic growth, provide authoritative leadership, cut through policy problems, enhance democratic engagement and accountability and facilitate action at the metropolitan scale. The paper finds a paucity of evidence in support of these claims. The paper sets out five tests for DEMMs in order to better evaluate their future contribution to urban development and democracy.

Keywords: *Metro-mayors; urban and regional governance; local democracy; devolution*

Next-door-neighbours: Collaborative working across the London Boundary

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Keywords: *London; collaborative planning; metropolitanisation*

Smart cities, metropolitan governance and scaling issues

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While there has been significant attention and investment in smart city technologies by companies and city administrations over the past decade, there is still a significant adoption gap in their deployment. Drawing on research conducted in Dublin and Boston, this paper argues that a key reason for this lag in adoption is the organization and operation of metropolitan governance and the difficulty in scaling technologies designed to work at the city-scale across local authorities/municipalities. Dublin is

governed through four autonomous local authorities, whereas Boston through 101 autonomous municipalities. In both cases there is no overarching metropolitan authority with sufficient power to direct coordination and on-the-ground decision making, though some city services such as public transport are organized independently on a city-wide basis. In the case of Dublin, a new co-owned body, Smart Dublin has been established to try and share information and facilitate cooperation between local authorities. In Boston, there is no equivalent body, though the Metropolitan Area Planning Council seeks to provide some overarching planning coordination and procurement services, especially for poorer municipalities but has little political power. The fragmented nature of political governance and city administration works to create insufficient scales of economy and coordination and blocks the neoliberal drive to adopt smart city solutions. In this sense, it is perhaps no surprise that many of the leading smart cities globally have unitary metropolitan authorities, for example, Barcelona, Vienna, Singapore, and Amsterdam.

Keywords: *smart cities, governance, scaling*

Debating Theories of Gentrification and Suburbanization in an 'Urban Age'

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Recently, there has been significant critical engagement with urban theory from a number of different perspectives. This can be broken down into two distinct approaches labelled as, first, 'planetary urbanization' (Brenner and Schmid, 2015) and, secondly, 'post-colonial urbanism' (Roy, 2016; 2017), both of which have generated a considerable amount of critical response and debate (Storper and Scott, 2016). In drawing upon these debates, this paper seeks to engage critically with two central theories of contemporary urban change, that of gentrification and suburbanization. The primary aim of the paper is to open new channels of inquiry into the relationship between contemporary urbanization and articulations of socio-spatial forms of uneven development. This is carried out, first, through an analysis of the ways in which gentrification and suburbanization have been brought into dialogue and set in discursive opposition to each other within their respective literatures. This is followed by a discussion of the manner in which recent debates within urban studies have led to more complex theorizations of uneven urban development, both within discourses of gentrification and suburbanization. Finally, the paper discusses the significance of increased complexity of scale, verticality and networks in understanding the relationship between capitalist social relations and urban restructuring.

Keywords: *Gentrification, Suburbanization, Governance, Urban Age*

E6. GEOGRAPHIES OF (NON-) REPRODUCTION 1

Heteroactivism: Linking Anti-Abortion and Anti-Lesbian and Gay Rights Activism

Kath Browne and Catherine Nash, Maynooth University. Email: kath.browne@mu.ie

Heteroactivism opposes sexual and gender rights and equalities in places and times that these rights are seen to be achieved and/or are in the ascendancy. It is composed of tactics that are spatially and culturally sensitive to new equalities eras, and manifestations of societal inclusion and tolerance. Heteroactivism valorizes heteronormative relationships, experienced within civil or religious marriages, which are seen as the best (and ideally the only) location for the birth and raising of children and as the building blocks of a stable society. In contrast to scholarship that separates abortion from LGBTI rights, heteroactivist organisations view these as all part of the undermining of the rightful place of heterosexuality and as overlapping and intersecting manifestations of liberal agendas. This paper will focus on 3 pictures from heteroactivist campaigns in Ireland, one from a poster in the Same Sex Marriage campaign, 2015 and two from the anti-abortion campaign to 'keep the 8th', 2018 to explore the overlaps and learning between these campaigns. Considering them together as heteroactivism, shows the new resistances that define heteroactivism as a spatial and culturally created phenomenon. In this way, this paper seeks to begin to explore some overlaps from a geographies of sexualities perspective, and specifically one that is focused on other sexualities and resistances to sexual and gender equalities.

Keywords: *Sexual rights; Gender rights;*

The Human Amoeba: Metaphors of non-human reproduction and asexual activism.

Joseph De Lappe, Open University, UK. Email: joseph.de-lappe@open.ac.uk

In less than two decades, asexuality has gone from typically being a zoological term to an increasingly claimed sexual orientation in the West. This has been facilitated by the emergence of Asexual Studies as a discipline, and, by asexual activism within and without the wider Pride/LGBT+ umbrella. Contemporary Asexual Studies has focused on two areas of asexual identity-formation (Scott and Dawson, 2015). Who is an asexual and how does that individual feel they are treated in society? My

research adds to this by concentrating on the role activists play. Activists, particularly online, have proven effective in campaigning for the representation of community members (De Lappe, 2015). The largest English-speaking online community AVEN (Asexual Visibility and Education Network) has over 70,000 registered members. Prior to 2000, individuals had identified as asexual using the metaphor of an amoeba for their social condition. Asexual activism in the West effectively began with Haven for the Human Amoeba, a Yahoo group that was founded in October 2000. This group proved contentious in ways that looked backwards, towards historic sexology and prior movements (Kahan, 2013), but also forward to how contemporary Asexual Studies and asexual activism would develop (Bogaert, 2004). Drawing on my ethnographic research with asexual activists, I want to consider what it might have meant to claim an identity as a human amoeba? To see oneself as non-productive, non-reproductive in normative terms and settings? What that might mean in the traces and places where that identity remains?

Keywords: *Asexuality, reproduction, activism, movements*

Techno-contraception: the gendered biopolitics of emerging non-reproductive technology

Laura Shipp, Royal Holloway, University of London. Email: laura.shipp.2013@live.rhul.ac.uk

For some time, Geography has been interested in issues of biopolitics, the ways in which bodies can be controlled. When digital technology becomes entangled into this, however, questions of control become all the more pressing. If reproduction could be controlled through digital technology, what biopolitical issues does this raise about the intimate ways populations can be controlled? Digital contraceptive technology is not something that remains a distant and futuristic idea. Contraceptive microchips that deploy hormones via remote control activation is a device that is being developed in the US presently, with aims to be on the marketplace in a matter of months. This raises questions about how such a technology might provide both opportunity for reproductive freedom, but also reproductive control? Yet, as the chip is only being developed for women, or those with uterus, reoccurring issues of the, often gendered, ways non-reproduction is conceptualised are brought to the fore. Through the case study of the US-made contraceptive microchip, the presentation explores the potential implications of this microchip and raises the possibilities for failure, misuse, and even technology-assisted assault.

Keywords: *Contraception; Gender; Biopolitics; Technology*

Taking back Pride: Examining a grassroots critique of homonormativity in Glasgow's LGBT Pride spaces

Andrew McCartan, Maynooth University. Email: andrew.mccartan.2018@mumail.ie

Homonormativity has been a key concept for understanding uneven contemporary LGBTQIA+ geographies in our current period of increasing equalities landscapes. However, Geographers have recognised the limitations of homonormativity as a framework for this analysis by highlighting the complexities and place-specific nuances of LGBTQIA+ identities and spaces. Pride events are a key space for examining homonormativity, with scholars debating the political purpose of contemporary events and exploring who feels in and out of place in Pride spaces. This paper analyses a grassroots critique that emerged in Glasgow, Scotland between 2015 and 2016. Forming with the assertion that "Pride belongs to LGBTQIA+ people and we want it back", activist group Free Pride started a 'queer battleground' in Glasgow that challenged how rival group Pride Glasgow were using space for the city's Pride events. This paper draws on a critical discursive analysis of interviews with Free Pride's organisers, participant observation at Pride Glasgow's 2016 event, and archival sources, to examine why Free Pride understood Pride to have been taken away from Glasgow's LGBTQIA+ people. I argue first that Free Pride's critique can be understood as a pushback against homonormativity through the examination of three key interrelated themes: (i) radical politics (ii) commodification, and (iii) exclusion. I then argue that while Free Pride may have legitimate grounds to critique Pride Glasgow as homonormative, this homonormativity is contingent and not all encompassing. From this I make claims over the usefulness of homonormativity for explaining the Glasgow context and the broader context of contemporary Pride spaces.

Keywords: *Homonormativity, LGBT Pride, Sexualities, Public Space*

SESSION F: 1:30-3:00PM

F1. META-NARRATING THE CITY: CIRCULATING URBAN SPATIAL STORIES FROM ABOVE AND BELOW 2

Irish Emergency Management: A story of institutional memory and resistance.

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Emergency response agencies are semi-invisible infrastructures that are only truly visible as a narrative of our city during a crisis or when they are being critiqued. Generally, they may not immediately appear as a group that “impose order and coherence on a fluid and often incoherent urban reality” (Boyle, McClelland and Robinson, 2018) but their operation, within urban spaces, are affected by temporary politics and their ability to respond and coordinate. The genealogy of Irish emergency management illustrates a collision of temporary politics, semi-permanent policy and permanent infrastructure that play out and are exaggerated in urban spaces, exemplifying multiple temporalities in the city. These can be transformed into negative forms of institutional memory and cultures, of which I will explore two key examples. Firstly, the recent narrative around An Garda Síochána illustrates an indirect resistance against the hegemony they work under. However, the stories of how these toxic cultures developed are almost always untold, ignored or misinterpreted. This is not to say that certain behaviours should be ignored and explained away as a consequence of their often contradictory treatment by the State, instead they should be evaluated in light of it. Their story is more than what is portrayed to the public. Secondly, how the emergency services are organised and positioned creates a protective barrier in which they can ensure the survival of their formal/informal dichotomy. This is critical to their culture and procedure but is under risk with changing technological innovation, increased data analytics and changing methods of governance. The stories of emergency services are often left untold and yet, their place within our cities is permanent but continually changed by temporary politics and forms of governance. Thus, conserving memories and institutional knowledge has grown to be an important tool to ensure their survival and resist or challenge the power dynamics that push down on them.

Keywords: *institutional memory, emergency management, urban stories*

‘I want to show you a dirty little bit of concrete over here’: narrating the transformation of Ebrington Barracks ‘from below’

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Informed by a series of recent walking interviews conducted through the former Ebrington Barracks site in Derry~Londonderry, this paper reflects upon the ‘spatial stories’ elaborated by participants, drawing upon their knowledge, memories, usage and perceptions of this ‘in-between’ place currently undergoing transformative change. Ebrington was one of several former British military sites associated with ‘the Troubles’ transferred to civil authority control in the wake of the Belfast (Good Friday) Agreement, by way of a ‘peace divided’ to stimulate social and economic regeneration. However, the repurposing of such redundant historic urban spaces is especially complicated in the case of ‘dissonant’ or contested sites, particularly over the treatment of the material remains of the past and its interpretation and representation in the present landscape. Although total erasure is one possible strategy, the ongoing ‘heritage-led’ development of Ebrington rather encompasses the integration of key older structures aimed at creating a mixed-use ‘regional destination’ with ‘unique investment potential’. Thus, the renamed Ebrington Square was central to Derry’s tenure as the first UK City of Culture in 2013, and its opening up to public access via the Peace Bridge was symbolically important in official attempts to reimagine the site and tell a ‘new story’ for the ‘post conflict’ city. Focusing on two walking interview accounts, one emanating from a heritage expert, the other from a lay member of the public, this paper explores one of the diverse ways of engaging with, talking about, and narrating Ebrington’s story ‘from below’.

Keywords: *Derry~Londonderry, contested heritage, walking interviews, Ebrington Barracks*

‘Break Out’. Exploring in-and exclusion from urban spaces... from the inside out

Bettina van Hoven, Elena Degenhardt, Elisa Panese, Isabela Antonyan, Johanna Paschen, Julia Long, Julia Damen, University of Groningen, the Netherlands. Email: b.van.hoven@rug.nl

(Urban) Planners, policy makers and educators persistently undervalue and underutilize the range of diverse experiences that need to be considered in creating inclusive spaces. One of the groups that remains suspiciously absent from public spaces comprises people with disabilities. People with disabilities often experience both physical and social barriers to using urban spaces in the form of lack of transport, lack of appropriate access to public buildings and facilities, but also negative stereotyping. As a result, there are few opportunities for meaningful and positive interactions between able-bodied

and impaired persons in public spaces. This is a matter of concern and should be a matter of priority when developing 'inclusive cities'. 'Break Out' is a participatory and transdisciplinary student research project on in- and exclusion in urban spaces. It entails collaboration between the University College Groningen, De Noorderbrug (an organization that provides care and housing for people with acquired brain injuries) and Art Academy Minerva, in Groningen (the Netherlands). Using photography, students document and discuss experiences of accessing and moving around urban spaces together with 'differently mobile' people. The photographs are also an important means of communicating insights from the project to a broader audience in a public exhibition. In our presentation, we highlight narratives of difference and sameness in the city of Groningen as discovered and documented in the ongoing project 'Break Out'. A pop up exhibition will give opportunities for engaging further with the project and the students involved.

Keywords: *physical impairment, inclusive city, participatory research, photography*

F2. ART AND GEOGRAPHY 6: DATA ART WORKSHOP. BUILDING CITY DASHBOARDS WITH ARTISTS' COLLABORATION

Data Art Workshop - Building City Dashboards Artist Collaboration

Jeneen Naji, Conor McGarrigle, Cordula Hansen and Jeffrey Weeter, Maynooth University.

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The SFI funded project, Building City Dashboards, is collaborating with media artists Conor McGarrigle, Cordula Hansen, and Jeffrey Weeter to create digital artworks using open data from the Dublin and Cork dashboards (<http://www.dublindashboard.ie/> and <http://www.corkdashboard.ie/>). The goal of this initiative is to explore and expand multimodal creative expression in the digital space using open urban data and to extend the work of the dashboards' visualizations as well as the public impact of the project through research and building alternative data tools, apps, and representations. This workshop will be a presentation and critique of work in progress from the artists on their collaboration with the BCD project to date. The artists will provide the specialist equipment necessary

Keywords: *digital art, visualisation, dashboards, data*

F3. GSI BOOK AWARDS SESSION

Leader: Gerry Kearns, Maynooth University

A celebration of the books and authors shortlisted for the GSI Book of the Year Award.

F4. ENERGY AND EVERYDAY LIFE: EXPLORING THE LIVED EXPERIENCE OF ENERGY SYSTEMS CHANGE 1

Energy Consumer to Energy Citizen: reflections on citizens' lived experiences as they intersect the energy transition

Breffní Lennon and Niall Dunphy, University College Cork. Email: blennon@ucc.ie

This paper situates itself within research identifying sustainable energy transition frameworks that best facilitate the technology shift needed to realise a low-carbon society. How local people continually (re)negotiate the many power dynamics, integral to engaging in the energy system, is represented using the perspectives of people living in six very different communities across Europe. The people in these communities face corresponding, and indeed some quite different, challenges as they proceed with their energy-transition pathways in keeping with wider societal shifts. While efforts to meet the challenges posed by the sustainable energy transition have been mixed, in part due to an emphasis on top-down technocratic solutions, efforts have been made to incorporate notions of citizenship into official discourses. This paper critiques those efforts and shifts the focus back to the human dimension of the energy transition. It examines local peoples' perspectives as they continually renegotiate the many (and sometimes hidden) competing spaces of social and economic power that exist at each level of the energy transition. Local people are often portrayed as being passive in this transition when, in fact, the reality can be quite the opposite. People tend to occupy fluid, (re)active, participatory spaces depending on a myriad of interlinked lifestyle choices and economic barriers that can influence the success or failure of (supra)national policy. This paper will present key findings from research conducted as part of ENTRUST, an interdisciplinary H2020 research project exploring the human factor in the energy system.

Keywords: *Energy, citizen, consumer, transition*

Steering demand: the role visible and invisible energy policies in the governance of everyday life

Mary Greene and Frances Fahy, NUI Galway. Email: mary.greene@nuigalway.ie

In light of critiques of individualised approaches to understanding dynamics of domestic consumption, increased attention has been placed on uncovering contextual processes shaping consumption and demand. To this end, practice theoretical approaches to researching consumption have drawn attention to the ways in which consumption practices are entangled in wider socio-technical landscapes and transitions. However, to date, little research has explored the ways in which wider political and institutional contexts shape and delimit everyday consumption. This paper begins to address this lacuna. In doing so, it discusses the importance of distinguishing between visible and invisible consumption policies as drivers of demand. While 'visible' consumption policies directly and intentionally intervene in practices, 'invisible' consumption policies are characterised by their indirect and unintentional effect on domestic energy practices. To this end, political economic and diverse institutional policies intersect in non-linear and often unpredictable ways to shape conduct. In-depth ethnographic analysis of individuals biographic narratives about their energy practice and its transformation over time suggest that invisible policies have had a significant effect in configuring everyday consumption, steering practice on an increasingly resource-intensive developmental trajectory. The paper concludes by discussing the complexity of the task of understanding the intersection of multiple, intersecting and often path dependent policy agendas in shaping trajectories of practice and calls for a focused research agenda for explorations of the processes by which consumption is steered by social institutions and policy.

Keywords: *energy, policy, governance, practice*

Imagining 2050 - A multidisciplinary approach to the energy transition

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Since 2000 significant decarbonisation progress has been made in Ireland's electricity sector with the share of renewables rising from 5% to 27% in 2016. However, progress in renewable heat and renewable transport has been slow (7% and 5% in 2016, respectively), which points to issues with the dominant techno-economic approaches used to understand and develop policy for these sectors. Even progress in renewable electricity is under threat as developers fail to engage with local communities and experience increased wind farm opposition. In response, a multi-disciplinary team of UCC and QUB researchers has just launched the EPA funded Imagining 2050 project. Imagining 2050 will engage with civic society using innovative approaches, to explore and co-develop future visions of, and pathways to, a low carbon and climate resilient future. A key innovation will be a recursive, iterative process combining mini-publics together with technical scenario analysis to envision and co-produce pathways for a low carbon, climate resilient Ireland. Imagining 2050 will combine transitions research together with technical analysis in a multi- and trans-disciplinary manner. Imagining 2050 will be further supported through a wide-ranging programme of stakeholder engagements with climate thought leaders, civil society agencies and intermediaries, state agencies and policymakers. The project will also explore and evaluate a number of innovative communications methods to capture and visualise the process, the visions and the scenarios. This overview presentation will seek engagement and insights from the discipline of energy geographies.

Keywords: *multidisciplinary approach; energy system pathways; citizen engagement*

Engaging an Ecovillage and measuring its Ecological Footprint

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As ecovillages present themselves as models of low-carbon living measuring the Ecological Footprint (EF) of an ecovillage serves both to validate that claim and to examine the component features of how the EF is achieved. This article examines the first measurement of the EF of Ireland's only ecovillage, situated in the village of Cloughjordan in county Tipperary. The objectives here were to measure the EF of the ecovillage at the household scale and then to use the EF to provide meaningful feedback and reflective learning on human carbon intensity to the ecovillage residents. Various methods were applied in this action research to achieve high levels of engagement and potent communication of what could be learnt from the EF. This article places a particular focus on how this was implemented in the ecovillage, on the results obtained, and on how these were shared with the residents. The decarbonisation of life style behaviours and practices is impacted both negatively and positively by (i) physical infrastructure, (ii) beliefs and attitudes and (iii) social contexts and this paper provides clear examples of this within the ecovillage. According to the methodology the ecovillage residents overshoot the fair earth share by 10% needing 1.1 planets to sustain their lifestyles. It is planned that subsequent to this intervention future planned measurements will show whether the overshoot has reduced.

Keywords: *Ecovillage, Ecological Footprint, Discourse Based Approaches, one planet lifestyle*

F5. PERSPECTIVES ON REGIONAL AND URBAN PLANNING 3: 50 YEARS AFTER MYLES WRIGHT – URBAN PLANNING IN IRELAND

From Myles Wright to the National Planning Framework: planning for the Dublin city-region

Jim Walsh and Cormac Walsh, Maynooth University and University of Hamburg. Email: jimn.walsh@mu.ie

The publication in 1967 of the Myles Wright Advisory Regional Plan for the Dublin city-region was a very significant milestone in the history of planning the development of the capital city region. This paper reviews the innovative aspects of the Plan especially its adoption of a functional perspective on the city-region and the articulation of a strategic advisory framework that was much more than a scaling up of recently prepared city and county development plans. However, the Plan also had limitations which have impacted on the subsequent development and functioning of the city-region. The presentation will highlight an uncritical acceptance of the likely dominance of private car-based transport, a neglect of the potential of the city centre and a preference for low residential densities. The presentation will also consider subsequent proposals for the Dublin region such as the Eastern Region Settlement Strategy (1985) and its subsequent rejection which contributed to a shift towards a new planning paradigm, that eventually resulted in the Regional Planning Guidelines and their alignment with national planning frameworks. The presentation will conclude with an overview of the legacy of the Myles Wright Advisory Plan and how it contributed to and also constrained the subsequent physical development and functioning of the city-region.

Keywords: *DUBLIN PLANNING WRIGHT*

Identifying hierarchal functional economic areas using travel-to-work datasets: An assessment of national spatial strategies in the Republic of Ireland 2002 and 2016.

David Meredith, Martin Charlton and Jim Walsh, Teagasc and Maynooth University. Email: david.meredith@teagasc.ie

Functional areas emerged as a key concept within EU spatial planning policy in the late 1990s. Since then a number of functional spatial concepts, particularly functional urban regions have received significant attention in relation to EU regional planning and policy. The European concept of functional spaces also informed the development of national spatial planning initiatives, e.g. the 2005 National Spatial Strategy and the recently published (2018) National Planning Framework. At both EU and national levels, the policy interest in functional areas resulted in the production of a range of datasets, analyses and assessment of the methods that can be applied to their identification. As a consequence of the demand from national and regional policy stakeholders, Ireland's national statistical agency, the Central Statistics Office, produce travel to work, school and college datasets following each census of population since 2002. In addition to describing the number of persons traveling between places, e.g. Small Areas, Electoral Divisions, regions, these micro-datasets provide a socio-economic profile of those making these journeys. In this paper we briefly consider the influence of European spatial planning concepts on the development of national spatial planning strategies in Ireland paying particular attention to the interpretation, within the Irish context, of a hierarchy of functional spaces. We then present an analysis of 2011 travel-to work data identifying the spatial structure described in the NPF public consultation document. A descriptive evaluation of the spatial structure is presented with reference to general commuting patterns highlighting the presence of regionally and locally significant travel-to-work areas. An analysis of the correspondence between the boundaries of the NPF spatial structure and the Rural Economic Development Zones (REDZs), which describe local scale travel-to-work patterns, is undertaken identifying a high degree of correspondence between the NPF and REDZs areas. The policy implications of these results are considered with reference to the NPF.

Keywords: *Functional areas, travel-to-work, spatial strategy*

Urban Challenges and Opportunities of the NPF

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The National Planning Framework represents a step change in Irish spatial development and discourse. For the first time, there is significant emphasis on the role of the urban and metropolitan and recognition that Ireland 2040 will likely be Urban Ireland 2040. This paper focuses on the challenges facing the implementation of the National Planning Framework and the politics of planning urban Ireland. It outlines the governance challenges facing a multiplicity of stakeholders and the opportunities for Ireland

if a more strategic and coordinated approach to urban development is adopted. While the role of Dublin in relation to the wider spatial development of Ireland is critical, the paper also addresses issues relating to 'second-tier cities' and their potential in Ireland's future development.

Keywords: *National Planning Framework; governance; Dublin; second-tier cities*

Panel Discussion

F6. GEOGRAPHIES OF (NON-) REPRODUCTION 2

Art, accessibility and reproductive justice in Dublin

Lorna O'Hara, Maynooth University. Email: lorna.ohara24@gmail.com

Reproductive rights recognises the rights of "all couples and individuals" to "decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so" (UNHRC 2014: 18). Women of colour and their allies in North America advocate for reproductive justice to move beyond the question of abortion (Ross, 2006). However, in Ireland, campaigning for abortion access -- "free, safe and legal" (ARC, 2018) -- remains a battle for reproductive rights and over public space, as evidenced by the Youth Defence billboards, graffiti, stickers, direct action, and performance art (O'Hara, 2016). In this paper, I focus on the role of street art to include a broader public that may otherwise find it difficult to engage with political issues in particular activist contexts. I discuss the pathways of forms of the iconic 'Repeal the 8th' mural by Dublin graffiti artist Maser, unveiled on the exterior wall of the Project Arts Centre on 8 July 2016 and removed two weeks later by Dublin City Council for violating "planning law" (O'Sullivan 2016). This has since become one of the most recognisable symbols of the Repeal movement nationally and internationally, appearing online, on T-shirts/bodies, posters and flyers, and projected onto buildings outside of Dublin. The mural's existence, removal and subsequent virtual and material presence demonstrates how street art not only plays a significant role in drawing attention to the contested nature of urban public space, but how art can relocate reproductive rights debates out of typical activist and academic circles to a broader public.

Keywords: *reproductive justice, art, feminist activism*

Pro-life Pilgrimages: political embodiments at Irish pilgrimage sites

Richard Scriven, NUI Galway . Email: richard.scriven@nuigalway.ie

This paper examines how the pilgrimage spaces of Croagh Patrick and Knock, in the west of Ireland, are mobilised as sites of pro-life activity through embodied performances. In response to growing calls to repeal the constitutional restrictions surrounding abortion in the Republic of Ireland, Roman Catholic pro-life groups are running active campaigns to prevent any liberalisation of these laws and to reinforce Church social teachings. Pilgrimages, as one of the more prominent and well-attended aspects of religious/ spiritual life in contemporary Ireland, are being utilised to promote this message. I examine how embodiment is central to this process as pro-life pilgrims perform prayers and rituals focused on the 'unborn child'. Through corporal practices, the fetus is sacralised as a tangible life while disembodiment of the pregnant person, enabling the rejection of pro-choice arguments concerning bodily autonomy and reproductive rights and health. Organised ceremonies and events, and their discourses, demonstrate how these pilgrimage sites are being (re)produced as pro-life spaces. More broadly, I consider how these movements reinforce Roman Catholic social doctrine, especially concerning gender, sexuality, and human reproduction.

Keywords: *Pilgrimage, Abortion, Embodiment*

Air, Sea, and Land: Thinking geographically about spaces of (non-)reproduction

Cordelia Freeman, University of Nottingham. Email: cordelia.freeman@nottingham.ac.uk

With reproductive access under threat globally this is a crucial time to understand the spatialities of abortion prohibition and contestation. In recent decades technology has facilitated women and medication to travel internationally across land, the sea, or through the air. As geographers have begun to think critically about the volume of space, the dimensionality of the air, sea, and land has been reconsidered (Adey 2015, Steinberg and Peters 2015, Elden 2013). In this paper I will trace geographical thought on the 'volumetric' spaces of the air, sea, and land and consider these interventions in relation to these spaces' roles in (non-)reproduction. This paper will highlight the role of technology in producing new mobilities to resist inter/national abortion regulation (Adey et al. 2014). Reproductivity is bound up with technoscience and governmentality (Murphy 2012) and I address the introduction of mobility-related technologies into these entanglements through the extra-ordinary and the everyday (Harris 2014). This is not to sideline the materiality of bodies moving through and across the air, sea, and land. I focus here on the relationship between the international and the domestic,

intimate space; showing the intertwining of the global and the corporeal in these geographical spaces of (non-)reproduction (Koopman 2011, Hyndman 2004, Pain & Smith 2008).

Keywords: *Abortion; Territory; Volume*

Geographies of Non-reproduction and Changing Patterns of Abortion Access

Sydney Calkin, Durham University. Email: sydney.calkin@durham.ac.uk

Reproduction is a perennial site of fierce political debate about the future of gender, the family, and the nation-state. The same can be said for non-reproduction: those who violate procreative norms are often subject to severe social sanction, especially women who choose to end pregnancies. Today, changing technologies, mobilities, and political alliances are profoundly re-shaping the way that women access abortion around the world. Access to abortion is increasingly de-linked from control by the nation-state, as activists use new technology and tactics to transform the governance of non-reproduction. However, such transformations in abortion access have also provoked a backlash by states seeking to institute new forms of control over pregnancy, childbirth, and abortion. This paper maps the changing patterns of abortion access and state control, pointing to the limitations of a state-based framework for understanding (non)reproduction. It then argues for a multi-scalar geography of abortion access that draws attention to the processes of subversion of state power and re-scaling of state authority over abortion. Broadly, the paper aims to open up conceptual pathways for imagining the future of abortion access outside of the nation-state framework and theorize its provision through trans-national feminist networks.

Keywords: *Abortion, Borders, Political Geography*

SESSION G: 3:30-5:00PM

G1. META-NARRATING THE CITY: CIRCULATING URBAN SPATIAL STORIES FROM ABOVE AND BELOW 3

The asylum's ontological boundaries

Ebba Högström and Chris Philo, University of Glasgow. Email: ebba.hogstrom@glasgow.ac.uk

Gartnavel Royal Hospital in Glasgow was opened as a 'lunatic hospital' on its present site in the 1840s, and it remains open today, if much changed, on the same patch of city ground. Over the years it has witnessed numerous rounds of innovation in psychiatric theory and practice, all inscribed into the materiality of buildings and grounds. From an initial greenfield site just beyond the city limits, it has been increasingly hemmed in by urban expansion (residences, businesses and other civic facilities). Despite the diversity of 'psychiatric spaces' now spread across the one site, it is still, to a great extent, perceived as sat 'within' its boundaries and 'secluded' from the surrounding neighborhood. In this paper, we will discuss the conception of the asylum as 'other' to, as 'outside' of or merely 'beside' the urban fabric of the city. This conception continues to fashion an ontological narrative, even in the 21st century, long after the original lunatic asylum - the relics of which remain 'on the hill' - has been vacated and the patients and staff located elsewhere in less bounded realities (both on and off-site). With help of Ahmed's (2006) concept of 'orientations', and from the departure-point of sites as spatial constructions rather than fixed entities (Burns & Kahn, 2005), different users' spatial and temporal stories of the site and its edges will be brought to the fore. Where are the boundaries that divide the hospital campus from the urban 'reality'? What are the material signifiers, the cultural associations or the emotional attachments (hopes and fears) that set the boundaries? Is there a continuous outer boundary, or multiple perceived and performed boundaries, some squeezed nearer the ostensible heart of the site, others leaking well away from it? Are the boundaries where 'we' (the researchers) think they are? Or, is it that we re-enact the idea of the asylum by representing it as a place 'outside' when, in fact, it is implanted in the midst of a surrounding urban reality?

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Keywords: *site, boundaries, psychiatric institutions, stories*

Performing the Green City

Kerry Burton, Centre for Climate Justice, Glasgow Caledonian University. Email:

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This paper traces the metanarratives that have shaped the becoming of a 'green' city. At a time where cities are increasingly orchestrated through urban experiments, the paper uses ideas about

performativity and the production of space to provide a critical examination the diverse performances of green-ness that support an urban imagination that does little to improve the material realities of an unequal city. The paper presents research undertaken in Bristol, the first UK city to hold the title of European Green Capital (in 2015). Green metanarratives have re-presented the city through stories that frequently re-order the city into new configurations that define who and what is part of the green and/or smart-green vision. In Bristol, the material and affective performances have been critiqued as elitist, as aimed at tourist and economic income rather than tangible change, and as controlling grassroots projects that didn't fit the narrowly defined green agenda. For the local authority, becoming a 'green city' was a major stepping-stone for a governance regime underpinned by the neoliberal rationalities of low carbon growth and global competitiveness and driven by overt ambitions to be a leading European city and smart-green knowledge broker. Post-2015, a new top-down metanarrative is performing Bristol as a 'smart-green city', so it is timely to explore three sets of insights (garnished from interviews, walking methods, and participatory workshops) that examine distinct yet overlapping metanarratives that have shaped Bristol as a 'green city' and more latterly a 'smart green city' alongside counter narratives of the 'post-capitalist green city'.

Keywords: *Urban; Performativity; Smart City; Green City*

A great sea-change in Derry? Culture, community, re-narration

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In Glasgow, Dublin, Cork, and Liverpool, the award "Capital/City of Culture" has altered the image of the city as a hollowed-out repository of post-industrial decline. In 2013, the first U.K. CoC designation was bestowed on the city of Derry, Northern Ireland's deprived second city still emerging from the violent legacies of The Troubles. Drawing on Barthes, Lefebvre, and others, we argue that while Derry's boosters grafted place-marketing languages learned from Glasgow and Liverpool to promote and narrate the benefits of the CoC year, neither these languages nor their strident critics possess the morphological capacity to describe 2013 and its aftermath in Derry. The dominant narratives of the benefits of culture-led regeneration, either learned from elsewhere, or created ad hoc out of Derry's tumultuous post-conflict space, have not materialised, but neither was the CoC year an exercise in neo-liberal creative destruction. It can be tempting to see 2013 as little more than a regime of empty signification; an attempt to placate a city that had, and would continue to be, peripheralised and neglected. Yet we suggest that the CoC signification regime was not merely "empty," but "ambiguous." Within that ambiguous space, citizens layered and inscribed their own spatial stories, stories of pride and hope, but equally of disappointment and despondency, especially as the promised economic dividend of 2013 failed to materialise. We argue that the contradictory, ambiguous nature of the 2013 year mirrors and reflects many of the unaddressed ambiguities and contradictions of Northern Ireland's spatial realities and calcified peace process.

Keywords: *Cultural Regeneration; Northern Ireland; Derry*

Tidal Tales: Caribbean Urban Cartographies of In/Security and Mobility

Susan P. Mains, University of Dundee. Email: s.p.mains@dundee.ac.uk

Caribbean cities are forged through movements of ideas, people, land and sea. These are tidal geographies signposting shifting, fluid and emotive landscapes. As Kamau Brathwaite's concept of tidalectics suggests, these landscapes--and their stories--are dynamic and politically embodied. In this presentation I develop the idea of tidal tales in order to critically reframe discourses of security, fear and escape in the context of the Caribbean, particularly Kingston, Jamaica. The Caribbean is an archipelagic urban region that has often found itself in uneven and contradictory conversations about security, mobility and control, and as such affords an important context for analysing the narratives utilised in relation to individual, national, regional, and global conversations around in/security. Kingston, for example, embodies and negotiates contradictory narratives of creativity, crime, connection and in-betweenness. Stories of Caribbean cities--depicted through a diversity of interconnected contexts, such as, media representations, government policies, oral histories and the visual arts--illustrate complex and diverse geographies. These stories--or cultural maps--point to the emotional, political and material dimensions of movement. The concepts of the archipelago and anancy/trickster, also enable an exploration of the ways in which narratives of im/mobility, offer opportunities for resistance and more inclusively creative urban cartographies.

Keywords: *Caribbean cities, tidal, stories*

G2. ANNE BUTTIMER AND THE PRACTICE OF GEOGRAPHY

Participants: Philip Lawton, Gerry O'Reilly, Anna Davies, Harriet Hawkins, Aoife Kavanagh, Karen Till, Federico Ferretti, Arlene Crampsie, Mary Gilmartin

In the period from the mid-1960s to her recent passing, Anne Buttmer (1938-2017) left a considerable and enduring mark on human geography, including the overlapping realms of humanistic geography, social and cultural geography, phenomenology, geographical thought and practice, and landscape and life. In both her approach to teaching and writing, Anne demonstrated a deep understanding the relationship between humans and the earth. Her work was theoretically rich, yet was ultimately grounded in a desire to reconsider our attitude to dwelling in our world. The session will elucidate the continued relevance of Anne's work in a manner that is both celebratory and critically engaged.

G3. EARTH OBSERVATION: APPLICATIONS IN ENVIRONMENTAL MAPPING AND MONITORING

Vegetation mapping of a coastal dune complex using multispectral imagery acquired from a Remotely Piloted Aircraft System

Suo Chen, Dr Eugene McGovern, Dr Alan Gilmer, Dublin Institute Technology. Email: D15123973@mydit.ie

Vegetation map, emphasizing the distribution of plant species, is important for analysing vegetation dynamics, quantifying spatial patterns of vegetation evolution, analysing the effect of environment changes on vegetation, and predicting spatial patterns of species diversity. Such analysis can contribute to development of targeted land management actions that maintain biodiversity and ecological functions. This paper represents a methodology for 3D vegetation mapping of a coastal dune complex using a multispectral camera mounted on a Remotely Piloted Aircraft System (RPAS) with particular reference to the Buckroneys dune complex in Co. Wicklow. RPAS, also known as Unmanned Aerial Vehicles (UAV's) and drones, has enabled high resolution and high accuracy ground-based data to be gathered quickly and easily on-site. The multispectral camera has Green, Red, Red-Edge and Near Infrared wavebands and a normal RGB camera to capture both visible and NIR images of vegetation. The workflow of 3D vegetation mapping of the study site included establishing ground control points, planning the flight mission and camera parameters, acquiring the imagery, processing the image data and performing features classification. The results, include an orthomosaic model, 3D model and multispectral images of study site in the Irish Transverse Mercator coordinate system, with a resolution of 0.167 m and Root-Mean-Square (RMS) error 0.050 m. 285 sample area (1 m*1 m) were used for the accuracy assessment of the classification between vegetation area and non-vegetation area in the site. The mean accuracy of the classification was 95.09%. These results illustrated the efficiency of the image data collection and the high-accuracy and high-resolution of the vegetation maps of the site using multispectral camera mounted on RPAS.

Keywords: *Vegetation map; coastal dune complex; multispectral imagery; Remotely Piloted Aircraft System*

Baseline mapping of land use on Irish peatlands using medium resolution remote sensing.

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Peatlands contain about 64% of all the soil organic carbon in Ireland. They deliver important ecosystems services such as climate regulation, biodiversity and water filtration. However, in Ireland they have been extensively degraded by drainage and land use change. Medium resolution satellite imagery was used to create baseline data for land use on peatlands. These data enabled baseline mapping of large scale land use change such as afforestation, conversion to pasture and industrial extraction. 66% of peatlands areas have undergone large scale land use change. This may have implications for peatland natural capital and ecosystem services particularly climate and water regulation. Advances in Earth observation particularly Copernicus Sentinel satellites and very high resolution aerial images offer the opportunity to refine these data and determine the current extent of large scale degradation on Irish peatlands.

Keywords: *Mapping, Land use change, Peatlands, Earth Observation*

Leveraging Advances in Satellite Technology to Develop a Method for 3D and 4D Coastal Construction Monitoring.

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Building Information Modelling (BIM) has revolutionised the traditional project management approach taken by the construction sector by establishing a single unifying methodology for monitoring progress throughout the entire project lifecycle. Project managers now apply 3D models and time series data at conception for site selection, right through construction and continuing into subsequent site monitoring for ensuring environmental compliance and maintenance. However, BIM standards and construction best-practice stress the need for timely, accurate mapping updates to ensure efficient monitoring. These updates are traditionally provided by established survey technologies such as GNSS, total-station, laser scanners or more recently, photogrammetry using imagery captured by UAVs. Traditional techniques provide high accuracy surveys but they can be costly, slow to deploy, require personnel on-site and operations can be restricted in isolated, hazardous or environmentally sensitive areas. Satellite remote sensing offers an alternative, rapid, non-contact approach that is exportable and repeatable for any site worldwide. We have developed an automated satellite methodology using a Dublin coastal site as a test case, demonstrating the suitability of recent advances in satellite technology for 3D and 4D monitoring. Benchmarking the satellite-derived models against traditional survey datasets has reinforced the potential for this technology as a complementary measurement tool for progress monitoring.

Keywords:

The application of satellite-borne remote sensors for monitoring coastal erosion and ecosystems in Ireland

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Advances in the resolution and availability of imagery from satellite-borne remote sensors provide an opportunity to utilise the data for near real-time monitoring of coastal erosion and ecosystems. This research project focuses on developing a technique for measuring changes in coastal geomorphology and vegetation cover using a combination of EO synthetic aperture radar and multispectral imagery. The technique is being developed, tested and refined using data collected from two study sites on the west coast of Ireland (County Kerry & County Mayo). Extracted shoreline positions are validated using orthorectified aerial photography archives, LiDAR imagery and repeat field survey data. Time series analyses are used to determine localised erosion rates and forecasting techniques will be utilised to produce predicted shoreline positions for years 2020, 2030 and 2050. These results will be benchmarked against equivalent shoreline predictions published in the Irish Coastal Protection Strategy Study (OPW, 2013). The imagery will be used to generate vegetation maps for the purposes of monitoring the ecological status of coastal habitats (with respect to the EU Habitats Directive) as well as identifying and delineating areas of invasive vegetation species such as sea-buckthorn (*Hippophae rhamnoides*) and Chilean-rhubarb (*Gunnera tinctoria*). The results will be of wider interest to coastal ecologists, geomorphologists, managers, and engineers involved in coastal research and conservation. In particular, the research can inform coastal management strategies for coping with the increased storminess predicted by future scenarios described in many climate models.

Keywords:

G4. ENERGY AND EVERYDAY LIFE: EXPLORING THE LIVED EXPERIENCE OF ENERGY SYSTEMS CHANGE 2

Can anything good come out of ethnographic research? A case for ethnography in energy transitions research

Margaret Matinga and Joy Clancy, Dunamai Energy, and University of Twente. Email: mmat_001@yahoo.com

Increasingly, national energy policies and projects in the Global South are designed based on broad international discourses. What is recommended for, say Malawi, hardly differs from what is recommended in Haiti, South Africa, Peru or Timor Leste, regardless of their different political, historical, cultural and economic trajectories. Notions of “best practice” and “international agenda” are used to justify blanket application of policies and project approaches: what works for one “poor” country in the

South should work for all. Even targets including deadlines, for example, of energy access are often common regardless of baselines and resource structures. The individual contexts of the countries are lost, and micro and meso-level dynamics are ignored. These dynamics include political histories that shape how energy policy choices are made; and socio-cultural values that mediate households' choices of energy paths even when various options are available. By ignoring these, policy failures and "unsatisfactory" energy transitions are simply explained in simplistic terms: "lack of political will", "lack of awareness", "poverty" and so on. The lived experiences of policy makers and households in the Global South, and how these experiences construct, negotiate and shape policy and daily energy practices are not acknowledged in terms of their socio-cultural, political, and historical contexts, and their subjective realities. Using empirical evidence from ethnographic research conducted in South Africa between 2007 and 2010, this article argues that although ethnographic research in energy transitions is sparse, it can offer nuanced understanding of lived experiences of both policymakers at various levels, and households. This can in turn support responsive and context-relevant policies and project designs. The purpose of the paper is to highlight the important contributions that ethnographic research can inform policy at local, national, and international scales."

Keywords: *ethnography, energy access, energy practices, policy*

Past, Present and Future: Developing a long-term perspective of changing energy cultures in The Gambia

Anne Schiffer and Mary Greene, Leedsbeckett University and NUI Galway. Email: a.schiffer@leedsbeckett.ac.uk

This research explores long-term energy systems change in the context of everyday life in the Gambian community of Kartong. Regular immersions in Kartong between 2010 and 2018 have led to in-depth human insight of changes in local energy culture over time (e.g. Schiffer, 2016). Immersions have been supported by ethnographic methods including semi-structured interviews and observation as well as mapping of infrastructure changes and participatory workshops on local energy futures. These form part of a human-centred design methodology aiming to understand and influence long-term changes of energy metabolisms. Building on earlier definitions of the urban metabolism (e.g. Currie & Musango, 2016; Giradet 2008; Kennedy, Cuddihy & Engel-Yan, 2007) the energy metabolism is understood here as the culmination of social-technical, socio-economic, socio-ecological and socio-political flows of resources including electricity, transport, people, food and information in, out and within a place. The most drastic shift has arguably taken place since the connection to road infrastructure and the national electricity grid which has firmly embedded fossil fuel dependence in everyday energy practice. The research has identified key themes that have influenced everyday energy practice at local level including infrastructure development, gender, education, political, spatial and seasonal dimensions. It draws out key recommendations for policy in the context of delivering access to modern energy services.

Keywords: *energy, ethnography, global south*

The African Charging Station

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The disparity between mobile phone ownership and electricity access in sub-Saharan Africa presents a seeming paradox. While mobile phones have spread rapidly and are now regularly used in around 80% of the region's households, residential access to the electricity required to charge the devices has remained largely stagnant and estimates indicate that only around 32% of households overall and 17% in rural areas have electricity sources within the home. This discrepancy raises an obvious question: given the battery-dependence of mobiles (and, increasingly, power-hungry smartphones), how can they be regularly operated in a context where electrical energy is so scarce? The answer is to be found in the local "Charging Stations" which have appeared in rural villages and even larger towns across the region. Typically taking the form of modest kiosks powered by small diesel generators, these small businesses serve as energy micro-hubs, charging customers small fees to plug in their phones and other rechargeable items – an innovative entrepreneurial response to Africa's increasingly important energy deficit. Though small, the kiosks have altered the social landscape attracting attention with the combined thrum of diesel generators, popular music and colourful bulbs. Impelled by the need to 'water' their rechargeable devices, people gather day and night to share – a beer, a cup of tea, a meal – and talk, joke, debate or dance while their phones refresh themselves. In this presentation, drawing on research in Sierra Leone, I will explore the phenomenon of the 'African Charging Station' and how they represent a vibrant electro-social space that redefines 'typical' African community.

Keywords: *Energy Poverty; Africa; Mobile Phones; Sierra Leone*

Risking flowers? Participation of women and marginalized groups in community rural electrification in Nepal, India and Kenya

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This article explores the processes by which three rural electrification initiatives have sought to include women in electricity supply in Nepal, India and Kenya, and the outcomes that such process have yielded. Through qualitative interviews and literature reviews of the project approaches, the study shows key strategies that are used to enhance women's participation in electricity supply: capacity building to ensure that women have technical skills to be engaged in operations, maintenance and in the business of electricity supply, and donor support. Two key differences are that in Nepal and India, a pool of village/local women are trained with the expectation that this will create a pool of women from which the electricity supply sector can draw from. In Kenya a small number of women are exclusively selected and mandated to maintain a specific system. Despite these efforts the study observes that with slight exception of Kenya- with specific and exclusive selection of women- the projects do not sustain women's participation in electricity supply. Despite technical training and awareness building around women in electricity supply, women chose not to engage in the sector for various reasons including marriages, socio-cultural attitudes, and work-life balance issues specifically those brought about by motherhood. Based on an analytical framework developed by the research team – which uses the lens of socio-technical systems and women's empowerment – we contend that the failure to retain women in electricity supply is, at least in part, because the current approach is an instrumental/technical approach that ignores the socio-cultural context in which such efforts are implemented. The outcomes of the efforts to increase women's participation in electricity supply in these cases also calls for the need to question the notion of agency as it is applied to development projects, and to questions of the empowerment of women from the global south in particular. We call for scholars to continually engage on this notion as to whether such "empowerment efforts" simply replicate patriarchal tendencies of institutions -in these cases donor and co-opted government institutions - acting on women rather than women acting for themselves in accordance to their desired outcomes and real-life constraints. This in turns resurfaces questions of how outcomes for women's empowerment should be measured and interpreted.

Keywords: *Women's empowerment, Participation, Rural Electrification, Energy Access*

Modelling sustainability: one community at a time

Vincent Carragher and Hugh O'Reilly, Trinity College Dublin. Email: vincentcarragher@gmail.com

This research identifies where actions are taking place in Irish communities which contribute to achieving Sustainability through the lens of the Sustainable Development Goals (SDGs). Using academic and practitioner evidence bases, examples of SDG action at the community scale will be identified, classified and explored. In previous research the author has identified 109 drivers of sustainability transition at the community scale and these will be utilised to ascertain the actors and mechanisms driving the sustainability in these communities. There has been significant energy transition by communities in Ireland forming an important part of the SDG action. The research explores the sustainable behaviours, and their determinants, which contribute to achieving SDG progress at the community scale. Resultant case studies will distinguish the specifics of the sustainability transition in each community and model its SDG progress. The project aims to disseminate these case studies providing actionable pathways to sustainability for other communities. Once assembled the case studies and the 109 sustainability drivers will be utilised to support a national Sustainability competition for communities. This sustainability competition will utilise potent drivers of behaviour change inter alia rivalry and recognition. The actions and progress of communities in the competition will be monitored through evaluation of SDG progress, sustainability drivers and behavioural determinants. It is expected that using these approaches that monitored communities will show strong progress toward the SDGs.

Keywords: *Modelling, case study, Sustainable Development Goals*

G5: CRITICAL AND CREATIVE GEOGRAPHIES OF DEVELOPMENT (Starts 3:15pm)

Characterising creative entrepreneurship in peripheral regions: Evidence from north-western Europe

Aisling Murtagh and Patrick Collins, National University of Ireland, Galway. Email: aisling.murtagh@nuigalway.ie

Peripheral regional development is impacted by many challenges. These regions are often distant from centres of power and impacted by forces outside their control, with small economies lacking diversity, dominated by more traditional, less innovative industry sectors (Copus et al., 2008; Wirth et al., 2016; Ehrlich et al., 2012). Human capital is also an unstable resource that is depleted as groups such as youth, skilled professionals and entrepreneurs are attracted to core areas for new opportunities (Kaufmann and Malul, 2014; Hall, 2007). But exceptions exist. The presence of the creative economy in peripheral regions is one example. Broadly speaking, the creative industries and the skills of its creative professionals are understood to be a source of innovative ideas, important to increase the innovation potential within the wider economy (Crossick and Kaszynska, 2016; KEA European Affairs, 2009). In this paper we explore how creative entrepreneurs can be characterised in peripheral regions and if these traits assist them successfully navigate the challenging peripheral economic development environment. Underpinning the findings are semi-structured interviews reflecting the experience of creative entrepreneurs in North East Iceland, Västernorrland in Mid Sweden and the western region of Ireland. The evidence suggests these entrepreneurs have a determined, adaptable and cooperative nature, as well as a reluctance to relinquish control over their creative outputs.

Keywords: *Peripheral regions; Creative entrepreneurship; Economic development*

Place, Branding and Cities of Culture: The Role of Pride of Place in Sponsorship Network Formation

Annmarie Ryan, Catherine Morel and Mervi Luonila, University of Limerick; Audencia Business School, Nantes; Sibelius Academy, University of the Arts Helsinki. Email: annmarie.ryan@ul.ie

The aim of this paper is to explore the interrelationship between commercial sponsorship, sponsorship networks and place branding in the context of European Capitals of Culture/Yearlong Public Cultural Programmes. (PCP) We understand 'place' as diverse, fragmented and socially constructed (Lichrou et al., 2010; Hannah & Rowley, 2011). In this regard, place branding is best conceptualised as a dialogue between a location's market actors, where through iterative interactions between multiple and varied network stakeholders the brand is enacted; and as such also shapes action (Onyas and Ryan, 2015). We take a network perspective to cultural sponsorship, which considers the role of sponsorship relationships in realising sponsorship benefits (Ryan and Fahy, 2012). In PCPs, the emerging network of sponsors/ supporters become a kin to a 'cohort' or network of actors with the possibilities for cross organisational learning and sponsorship capacity building in a specific time and place. At the same time, sponsoring of PCPs is also receptive to high emotions, including 'pride of place'. While the role of fan/consumer meanings during an arts event in sponsorship has been explored, we know less of the impact of 'pride of place' and other emotional triggers on sponsors themselves. We contend that harnessing the existing pride of place towards enabling private actors to co-create a vision of their city's future contributes to the literature on PCP, which as heretofore emphasised the role of these mega events in reframing/rebranding places, resulting in a revitalised pride of place (e.g. Bailey et al 2004). Instead here we see such pride as an input to sponsorship network formation.

Keywords: *Cities; Pride, Place-Branding, Sponsorship Network*

Creative and Cultural Industry Development in Chengdu - Urban Rural Regional Perspectives in Policy and Governance

Philip Crosbie, University College Cork / School of Asian Studies. Email: philipcrosbie@mac.com

The development of China's cultural and creative industries (CCI's) has grown extensively throughout the country as the cultural economy grows into one of the countries largest industry sectors. In what has been a complex element in China's modernisation process, China's political leadership has attempted to firmly fix on its agenda CCI's as mechanisms for expanding innovation and creativity into its society - to 'catch up to the West' ganshang xibu 赶上西部, while continuing to utilise Chinese Communist Party (CCP) ideology prior to and after its era of revolutionary Maoist socialism. As China's CCI development has moved extensively from its First Tier yixian chengshi 一线城市 cities towards more regional second and third tier cities, challenges relating to coherence of policy formation,

bargaining power imbalances between the Party-State and stakeholders, reactionary censorship patterns and issues of duplication have limited the potentials of China's regional CCI development. As China's oldest standing city Chengdu, the provincial capital of Sichuan, can boast a traditional cultural legacy stretching over millennia forming into patterns of unofficial or marginal locations of cultural activities within the city. This paper aims to examine such developments under the context of official elements of policy construction and governance from Chengdu's Municipal Government and Sichuan's Provincial Government. It looks towards illustrating an alternative approach to policy formation underscoring more experimentation and governmental pilot projects *shijian xiangmu* 试点项目 models, greater empowerment and flexibility ascribed to localised cultural elites and entrepreneurs, and more pragmatic localised governmental leadership forming the possibility of more sustainable and vibrant CCI environment which matches the main national policy goals.

Keywords: *Creative and Cultural Industries, China, Governmental Pilot Projects, Regional Development*

Pathways to Generative Urbanism in Africa?

Pádraig Carmody and James Murphy, TCD and Clark U. Email: carmodyp@tcd.ie

Recently work in urban geography has begun to conceive of cities as socio-technical systems. In this paper we extend this perspective to argue that while this is true, cities as socio-technical systems can be disaggregated into production, consumption and infrastructure regimes. The nature of these regimes, their multi-scalar relations with outside actors and places, and the nature of inter-regime couplings substantially influence whether generative, parasitic or splintered forms of urbanism emerge. This paper explores this theorisation through application to African contexts asks whether or not the BRI is likely to promote this. We argue that BRI presents an opportunity but that in order for more generative forms of urbanism to emerge states and planners need to promote the development of production regimes through activist state policies which foster multiple axes of strategic coupling between relevant actors and synergistic inter-regime couplings.

Keywords: *Africa, urban geography,*

New geographies of development and the emergence of 'global development'

Rory Horner, Global Development Institute, University of Manchester. Email: rory.horner@manchester.ac.uk

New geographies of development across economic, social and environmental dimensions raise major questions for the where of development. In this context, this paper explores 'global development', a term that has increasingly been referred to and which has potential to move beyond the limitations of international development, yet which has not been systematically unpacked. A distinction is made between global development as 'vertical' scale and as scope. As a strand of development studies focusing on common issues, the former co-exists in parallel with sovereign (national development) and foreign (international development) issues. The latter involves an overarching paradigm, taking in interconnected as well as shared issues anywhere. Global development as scope thus goes beyond the North-South binary and is argued to represent a greater fit with the geography of contemporary development opportunities and challenges.

Keywords: *international development, global development, scale, scope*

The Political Economy of Chinese-led Megaprojects in South Africa

Ricardo Reboredo, Trinity College Dublin. Email: reboedr@tcd.ie

The emergence of Chinese-led development projects throughout Africa is emblematic of increasingly complex and global processes. Megaprojects serve as some of the main instruments of Chinese geopolitical and geoeconomic strategy on the African continent and bring together a range of actors which can include central State-Owned Enterprises, regional SOE's, private investors, policy banks, governmental departments, economic migrants, small to medium enterprises, and international agencies. In the South African context, Chinese corporations have encountered a unique set of regulatory environments, multi-scalar governmental initiatives, and historical legacies which heavily influence project development and construction. Additionally, these ground-level realities often collide with both high-level political rhetoric and popular depictions of megaprojects as engines of economic growth. This research will look at 3 separate Chinese-led projects – the Hisense factory in Atlantis, the BAIC factory in Port Elizabeth, and the Modderfontein New City in Johannesburg - and explore the distinct sets of state/corporate networks which drive project development, the discourses surrounding their construction, and their impact (or lack thereof) on surrounding urban areas. Given their diverse

logics, sectoral distribution, and varying construction statuses, these projects are well suited for comparison and elucidate the complex nature of the Sino-South African relationship.

Keywords: *China/Africa, South Africa, Development, China*

G6. LIGHTNING TALK CHALLENGE - SNAPSHOTS IN GEOGRAPHICAL RESEARCH

The International PhD Experience in Urban Studies in Italy

Joanne Ahern, David Gogishvili and Dicle Kizildere, Gran Sasso Science Institute. Email: joann21ahern@gmail.com

Internationalization in graduate education has created diverse trends in different regions. Higher mobility of international students and increased variety of university programmes on offer has resulted in new challenges for the management of Italian university doctoral programmes. A reflection of the experiences of PhD students is useful at this time as they are the ones that this system will affect most and who will shape its future. This paper discusses the internationalization of PhD programmes focusing on urban studies and draws a general picture of the current state of PhD education in Italy for non-Italian students by examining their motives, expectations, programme environment, infrastructure and quality of teaching. With this aim in mind, we distributed a questionnaire to foreign students who studied or are currently pursuing a PhD in urban studies in Italy and also conducted a focus group with a group of foreign students attending a PhD programme in urban studies. We thus present a partial reflection on the current situation of doctoral education in Italy.

Keywords: *PhD education; Doctoral education; Doctorate; Higher education; Italian PhD students; Urban Studies*

Emancipatory digital methods

Sasha Brown, Maynooth University. Email: sashadbrown@gmail.com

Data science methods and tools have primarily been developed by transnational software corporations for the extraction of profits or by states for surveillance. However, there is a potential for some of these tools to be used to make corporations and governments more transparent and work towards a more just world. This presentation presents one application of using data science for social justice in revealing the practices and cultures of the Irish refugee and asylum determination system.

Keywords: *Digital methods, Social justice*

“Bottom-up” agricultural governance: what it means in practice

Jack McCarthy, UCD School of Geography; Teagasc Rural Economy and Development Programme. Email: jack.mc-carthy.4@ucdconnect.ie

In the European Union there is an increased focus on implementing agricultural policy through locally embedded groups of farmers and other interested stakeholders. This PhD examines the formation and decision making processes of one such group. The result is an illustration of how the cooperation required in these policy devices involves complex power dynamics in terms of diplomacy, inclusion, and the navigation of spatial knowledges.

Keywords: *governance; cooperation; agriculture*

The complexity of instituting participation

Caspar Menkman, Maynooth University. Email: caspar.menkman@mu.ie

Before substantive public participation is realised, it is often parsed or translated into languages or forms that suit the systems it responds to. This is often seen as a paradox. However in this short talk I propose a more complex take on public participation that goes beyond a simple opposition to introduce in brief the idea of an ecology of participation.

Keywords: *public participation, ecology, system*

What does Dublin City Council’s vacant sites register tell (and show) about ‘vacant sites’ in Dublin city?

Grainne Nic Lochlainn, Geography, Trinity College Dublin. Email: niclochg@tcd.ie

Dublin City Council (DCC) published a vacant sites register populated with information for the first time on January 1 st 2018. The register gives spatial and non-spatial information about the locations of sites liable to pay the DCC’s vacant site levy from January 2019 onwards. But what does the register tell (and show) about ‘vacant sites’ in Dublin city and, crucially, can it be made to tell/show more?

Keywords: *urban geography, vacancy, governance*

Tackling Hate Crime in South Africa

Louise Sarsfield Collins, Maynooth University. Email: louise.sarsfieldcollins@mu.ie

Following decades of lobbying by a variety of interest groups, including LGBTIQ activist organisations, South Africa looks set to introduce its first hate crime legislation in the coming months. In the interim, a number of quasi-official structures have emerged as a means for civil society, state agencies and government departments to improve reporting, and aid prosecution of so-called hate crimes. This paper examines how LGBTIQ organisations have attempted to negotiate power relations and provide a link between these structures and the experiences of victims and survivors of homophobic and transphobic 'hate' crimes.

Keywords: *Hate Crimes; LGBTIQ; South Africa*

KEYNOTE: 5:15-6:15pm

Exposure to severe heat within homes and work-places in Ghana

Rob Wilby, Loughborough University

Recent analysis suggests that an additional 350 million people could be exposed to deadly heat by the year 2050. Some of the most vulnerable communities will be found in rapidly growing, informal settlements in the global South. The project Vulnerability to Extreme Weather Events in Cities (VEWEC) brings together an interdisciplinary team to investigate the impacts of extreme heat on urban infrastructure, and resultant consequences for the livelihoods of poor urban residents in Ghana. By working closely with community champions we have deployed 120 thermistors in homes, work places and public spaces across eight contrasting neighbourhoods of Tamale and Accra. Our overall aim is to identify the factors contributing to local 'hot spots' of indoor temperatures and to align these findings with qualitative interview data on the coping strategies adopted by households. The talk begins by situating our work within a broader context of climate change threats to the urban poor. Next, the original experimental design and field study elements are described. Preliminary findings of extraordinary temperatures within homes and other indoor spaces are then presented. Variations between sampled spaces show the limit to which indoor temperatures may be mitigated by traditional building materials, technology and/or behaviours. Variations within and between the two cities reveal the additional heat burden of dense urban settlement relative to cooler, outlying suburbs. Ultimately, we hope that this research will enable the co-design and implementation of effective interventions to reduce vulnerability and increase resilience to extreme heat in Ghana and beyond.

SATURDAY 12 MAY

SESSION H: 9:30-11am

H1: CLIMATE MODELING & ANALYSIS: MINIMIZING OUR IMPACT ON EARTH AS OUR HOME

HiddenCosts: Impact on regional climate of land cover change due to afforestation

Priscilla A. Mooney, Hanna Lee, Stefan Sobolowski, Uni Research Climate, Bjerknes Centre for Climate Research. Email: priscilla.mooney@uni.no

Changing land cover from open landscapes to forestry is gaining traction as a viable government led action in Europe to reduce atmospheric CO₂. In fact, pilot afforestation programs have already begun in parts of Norway. However, the impact of these anthropogenic changes to land cover on the regional climate is poorly understood, particularly at high latitudes. It is possible that such changes to the land cover could counteract the original intentions of the afforestation policy. For example, a study by de Noblet-Decoudre et al. (2012) has shown that impacts from land cover change on the regional climate can be as important as greenhouse gas forcings. This study examines the impact of land cover changes for afforestation purposes on the hydrological cycle at local and regional scales. ERA-Interim reanalysis data is downscaled to 3 km from the period 1996-2005 over Norway using the Weather Research and Forecasting (WRF) model. Two high-resolution regional climate simulations are performed which differ by land cover. The first simulation (CTRL) represents the land use and land cover of present day Norway while the second applies the estimated land cover changes described in the Norwegian government's policy on afforestation. Comparisons between these simulations show the impact of land cover changes on the regional climate due to afforestation.

Keywords: *Afforestation, regional climate, land use/land cover changes*

Decadal and multidecadal Atlantic oscillations and their use for predictability

Gerard McCarthy, Maynooth University. Email: gerard.mccarthy@mu.ie

The North Atlantic is notable for large decadal variability in sea surface temperature (SST) manifested as Atlantic Multi-decadal Variability (AMV). Long time series of atmospheric and ocean variables reveal differing drivers of SST variability on quasi- and multi-decadal timescales. On quasi-decadal timescales an oscillatory signal identified in the North Atlantic Oscillation controls SST evolution directly via air-sea heat fluxes. However, on multi-decadal timescales this relationship with SST changes, while remaining consistent in phase. A recent reversal of the long term positive trend in Gulf Stream position coincides with a weakening and broadening in the Gulf Stream Extension indicating the onset of an AMV decline. We investigate the utility of these oscillatory variations to improving decadal predictability in the North Atlantic and beyond.

Keywords: *climate, ocean, predictability, variability*

Improving Seasonal Prediction of UK Winter Streamflow

Shaun Harrigan, European Centre for Medium-Range Weather Forecasts (ECMWF). Email: shaun.harrigan@ecmwf.int

Winter (December-January-February, DJF) in the UK is a key season for water management. Drier than normal conditions can suppress recharge of reservoirs and groundwater levels that can be critical for the provision of water supplies through the following summer, but above normal soil moisture and river flows enhance flood risk. Skilful hydrological forecasts of season-ahead prospects for above or below normal streamflow volumes would be extremely beneficial for decision-making in operational water management and is an active area of research. Recent work has shown that traditional Ensemble Streamflow Prediction (ESP) forecasts for DJF, with predictability from Initial Hydrologic Conditions (IHCs) alone, are skilful against climatology in many catchments in the south and east of the UK (higher catchment storage), but not for catchments in the north and west (lower catchment storage). However, there are several avenues that might improve upon the performance of traditional ESP that exploit the known influence of the North Atlantic Oscillation (NAO) on the hydroclimate of the north and west in winter: 1.) ESP_NAO – sub-sampling ESP members based on NAO+/NAO- years, and 2.) Dynamic_P – using a derived precipitation product from a 24-member ensemble of the UK Met Office's dynamical seasonal climate forecast system (GloSea5) based on atmospheric circulation downscaling, which has shown to give improved winter seasonal prediction skill over the direct precipitation forecast by GloSea5. The ESP_NAO approach uses IHCs initialised on the 1st of December from the GR4J hydrological model forced with sub-sampled historic climate sequences based on NAO+/NAO- years. The Dynamic_P approach also uses the same IHCs generated on the 1st of December, but is instead

forced with downscaled DJF average precipitation forecasts. The DJF averaged precipitation forecast values were temporally disaggregated to daily values for running through the hydrological model using a historic-sequence-correction method. Potential improvements of these two more complex forecasting approaches in overall performance is benchmarked against traditional ESP over a 20-year hindcast period (winters 1992/93 to 2011/12). This work is part of the Improving Predictions of Drought for User Decision Making (IMPETUS) project and provides insight to when and where scientific advancements in seasonal forecasting can be beneficial to water management.

Keywords: *Climate, Hydrology, Seasonal Forecasting, NAO*

Projected changes in precipitation extremes for the British and Irish Isles

Broderick, Ciaran; Murphy, Conor; Mooney, Priscilla, 1Irish Climate Analysis and Research UnitS (ICARUS), Department of Geography, Maynooth University, Ireland. 2 Uni Research Climate, Bjerknes Centre for Climate Research, Bergen, Norway. Email: ciaran.broderick@mu.ie

Given their potential impacts understanding likely changes in precipitation is critical for robust adaptation. To this end an ensemble of climate simulations from the EURO-CORDEX (COordinated Regional climate Downscaling Experiment for Europe) project are examined for changes in precipitation extremes for the British and Irish Isles (BII). The ensemble consists of 19 high resolution (0.11°) RCMs (Regional Climate Models) simulations each run using lateral boundary conditions from one of more of six different Climate Model Intercomparison Project Phase 5 (CMIP5) GCMs (Global Climate Models). A series of indices are employed which variously quantify the frequency, intensity and duration of wet and dry extremes. The study is conducted for winter and summer respectively and projections relate to two different Representative Concentration Pathways (+4.5 and +8.5 W/m²). Future changes are quantified relative to the baseline climate (1976-2005) for two 30-year horizons (2040-2069 and 2070-2099). Despite recent advances model simulations are known to exhibit biases which preclude their direct application in impact analyses. Hence, given the necessity of bias-adjustment and the uncertainty it introduces the study investigates the utility of seven commonly applied methods. We firstly explore the performance of the raw model and bias adjusted simulations in capturing the region's baseline climatology. Secondly we examine projected changes in extremes as indicated by the EURO-CORDEX projections. Here attention is given to the affect which each adjustment method has on the model projected signal of change, and to what extent this is dependent on the indicator type used (e.g. threshold based, percentile, duration).

Keywords: *Precipitation Extremes, Climate Change, Regional Climate Modeling, Bias-adjustment*

Creating an urban climatology: Towards a universal toolbox

Gerald Mills, eWUDAPT team, Geography, UCD. Email: gerald.mills@ucd.ie

Despite the advances over recent decades, climate science knows very little about most cities on the planet – it is generally ignorant of their extent, how they are constructed and how they are occupied. This is problematic as they are a spatial nexus where resource consumption and waste generation are concentrated and where population exposure to natural hazards is focussed. For example, urban areas are both significant drivers of climate change at local, regional and global scales and uniquely vulnerable to those changes due to their common topographic setting, at low altitude, in river basins and close to coasts. Yet cities, as spatial entities, are largely excluded from global climate science - from a modelling viewpoint, they are considered too small to be represented and from a measurement perspective they are places to be avoided as the urban effect 'contaminates' the natural signal. However, it has become increasingly evident that the solutions to climate changes, both mitigation and adaptation, must pay greater attention to the places where most people on the planet live. Moreover, the demand for weather services at urban scales is increasing in line with the ability to model atmospheric processes at these finer scales; these advances could herald more resilient cities with the evidence to support planning and design at appropriate time scales. However, the lack of information on urban landscapes and the dearth of urban observations represent a major obstacle to progress. Given the rapid emergence of new techniques and methods, is it now possible to create the scientific infrastructure needed to incorporate climate knowledge into urban decision-making quickly? This paper reports on a project to examine an extreme heat event in a city (Amsterdam) using crowd-sourced data linked to a simplified description of the urban landscape, which could be used to run and evaluate climate models. The wider purpose of the project is to develop a pathway to the creation of a universal 'toolbox' for baselining climate-related data for use in any city. In this paper Amsterdam, the Netherlands was chosen because much of the data infrastructure needed is already in place and the value of alternative information, much of which is available globally, can be evaluated.

Keywords: *urban climate, crowd-sourced data, station networks*

H2. BETWEEN NATURE AND CULTURE, LAND AND SEA: SPATIAL PRACTICES AT THE COAST 1

Emotional Ecologies: addressing cultural values in coastal and marine ecosystem services

Frances Rylands, David Cabana, John Brannigan and Tasman Crowe, University College Dublin. Email: frances.rylands@ucd.ie

How can we better understand care and value interactions between nature and culture? How might we meaningfully narrate these nature-culture relationships at the coast for decision-making and regulatory communities? The Cultural Value of Coastlines project is a two-year, Irish Research Council New Horizons project which seeks to address these questions. Focusing on the coastlines of the Irish Sea this interdisciplinary research navigates the interplay between ecology and culture, lay and expert, science and art in the past, present and future of our coastlines. Addressing the ecosystem services framework, The Cultural Value of Coastlines attempts to find useful ways to resolve tensions between policy-led preferences for generic systems of ecosystem classification and community-led preferences for place-specific forms of knowledge. This paper examines some of the ways in which we have begun telling the stories of the coastline by mapping the cultural and emotional into coastal policy-making frameworks. Using story mapping and story-telling we describe the engagements with the coast and sea that we have encountered through the project. Drawing on case study examples from Dublin Bay, Strangford Lough and the Cumbrian Coast we seek to retell and remap the emotional ecologies of the coastline.

Keywords: *nature-culture; Irish sea; ecosystems*

Defining MSP for Ireland

Liam Carr, National University of Ireland Galway. Email: liam.m.carr@nuigalway.ie

Ireland has begun developing its Marine Spatial Planning (MSP) framework, as guided by the MSP Directive 2014/89/EU. With a target date of implementing MSP by March 2021, relevant Irish authorities have been tasked with analysing and organising "human activities in marine areas to achieve ecological, economic and social objectives" through a framework that itself sits above a "hierarchy of plans and sectoral policies". As such, Ireland's embryonic MSP efforts offer a uniquely opportune moment to broadly test and link theories and practices from across the discipline, establish critical space and nascent lines of enquiry at the land-sea interface, and engage productively to better appraise policy discussions now underway within agencies, between stakeholder communities, and across economic sectors.

Keywords: *Marine Spatial Planning; Ireland*

On the subject of typology: How Irish coastal communities' subjectivities reveal intrinsic values towards coastal environments

Desiree Farrell, Liam Carr and Frances Fahy, NUI Galway. Email: d.farrell12@nuigalway.ie

Ireland is working to double the economic contribution of its €2.2bn marine sector by 2030 by focusing on expanding offshore energy, shipping, commercial fishing, and tourism sectors. This growth will be sensitive to environmental considerations, with a stated goal of achieving healthy ecosystems 'that provide monetary and non-monetary goods and services'. Such a goal may prove challenging if short-term economic priorities threaten long-term ecosystem functions and resilience. This study determines the intrinsic value of the marine realm via attitudinal data of stakeholders by employing a grounded theory approach utilizing Q-methodology. Stakeholders were sorted into three categorical factors (Nature Collaborators, Sustainability Seekers, and Nature Technicians), each representing a significantly distinct ecological thought. It is evident within the scope of this study that stakeholders value and understand intrinsic value, despite it not being adequately represented in policy decisions to date. This research seeks to demonstrate how stakeholder engagement and Q-methodology can be utilized to address current policy shortcomings in the EU and Irish context, specifically when attempting to modernize policy approaches to be holistic and integrated.

Keywords: *stakeholder engagement; Q-methodology; marine policy; intrinsic value*

Word and Image: representational practices at the seaside

Anna Ryan, School of Architecture, University of Limerick. Email: anna.ryan@ul.ie

We have today a range of languages with which to discuss the coast: from languages of policy and of law, to languages of engineering and of leisure. Our choice of words and the way we put them together to describe the coast highlight particular aspects, leaving others to one side. The language we use influences our thinking, impacts our decision-making and effects the way we anticipate the future at the coast and our possible responses to it. We use armour to defend and protect our coastal edges. We speak of stakeholders and systems and frameworks. We label surfer dudes and beach bums. This paper will focus on the language of nineteenth century travel writing on Irish seaside resorts. It will explore extracts from a range of period texts to reveal how the practice of travel writing at that time highlighted the spatial, material, textural and sensorial qualities of the coast. The power of influence that travel writing then held will be discussed in order to highlight the role representation has – and could potentially have – at the coast today, particularly when we draw attention to it as an active practice. In foregrounding representation, the paper will also juxtapose this focus on language with a parallel presentation of contemporary photographs of Irish seaside resorts in winter. This combination of word and image, past and present, aims to highlight shifting values at the coast, and to emphasise the potential of the active and constructing nature of representation where land meets sea.

Keywords: *coast, representation, historic travel writing, photography*

Drivers of transformative adaptation: Responses of a coastal community to the loss of a significant place.

Christopher Phillips, Maynooth University. Email: christopher.phillips.2013@mumail.ie

Loss of place can lead to the disruption of place attachment having negative effects on community wellbeing. High levels of attachment often result in resistance to adaptation strategies from communities who have experienced the loss of, or threats to place. Additional stresses and risks posed by climate change such as increased storminess, rising sea levels and flooding may force transformative change. These changes can often be sudden and non-linear creating challenges for policy makers when seeking stakeholder acceptance of transformational adaptation strategies. It is crucial to better understand the factors that determine whether or how a community successfully navigates transformative change. Courtown County Wexford is one example where severe coastal erosion has resulted in the loss of place and changed the lives of the community. However the loss of the beach at Courtown has inspired the implementation of adaptation strategies that aim to restore place identity and reorganise its functionality. Understanding how this community is navigating the process of transformative change will provide valuable lessons for improving the implementation of future adaptation strategies both nationally and internationally. The aim of this research is to investigate the drivers of transformative adaptation that is occurring at Courtown County Wexford and the role of leaders to identify lessons for navigating through adaptation that may be transferable.

Keywords: *Place attachment, transformative adaptation, coastal erosion, coastal communities*

H3. CONFRONTING THE COMMODIFICATION OF HOUSING 1

Consumption Value of Housing: A Spatial Perspective

Paul Kilgarriff, Martin Charlton, Ronan Foley and Cathal O'Donoghue, Teagasc; NCG Maynooth University; Maynooth University; NUI Galway. Email: p.kilgarriff1@gmail.com

The measure of a household's wealth should include not only monetary components but also non-monetary components and in-kind benefits such as imputed rent. In this paper the impact of net imputed rent on the distribution of income is examined in a spatial context. Two aspects of housing make it interesting; namely its costs and benefits. Housing wealth can provide a stream of consumption value. This will come in the form of imputed rent. Imputed rent is the rent an owner can expect to receive were the house on the rental market. We examine the spatial impact of net imputed rent, mortgage payments, private rent, public rent (social housing schemes) and annuity values on the distribution of disposable income from SMILE for the year 2011. 2011 is examined as it is the latest Census year for which detailed spatial micro data is available. We measure rental values at a detailed spatial scale (Electoral Division) adopting the kriging methodology (Brunsdon and Comber, 2015). To measure mortgage values, missing data analysis is employed to match various data sources (Enders, 2010). The created data is merged into the SMILE population dataset to examine the impact of housing on the spatial distribution of disposable income at a small area level. Our results show that housing decreases the income share of those at the top and bottom of the income distribution. The income of the elderly is also greatly increased.

Keywords: *imputed rent; inequality; spatial analysis; housing*

Data Factory: Smart Homes as Spaces of Extraction

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Recent research on the commodification of housing has largely focused on explicating the ways in which housing is turned into a financial asset, the financial interests and logics driving housing (re)development, and the financial governmentality that disciplines occupants. Such hyper-commodification of housing renders its value as 'home' secondary to its market value. Consequently, much critique has focused on the financialisation of housing rather than financialisation's direct intersections and intrusions in the home. In response, we focus on the increasing financialisation of home life, specifically through datafication, enabled by smart home technologies—data-driven, networked, automated systems—which offers unprecedented access to our domestic lives. Data is central to contemporary political economy. For businesses, much of the value produced by "smart" technologies does not necessarily come from buying the good, but rather from its use. Interacting with smart technologies—especially ones integrated into daily, personal lives—generates and makes accessible reams of data able to be commoditized by private corporations. This is how the imperative of data accumulation works: it transforms appliances into data producing, collecting, and transmitting machines. The home is turned into a data factory. We illustrate this datafication by drawing on evidence and examples from fieldwork. As such we argue that it is critical to position the financialisation of housing as occurring not just through its value as a market asset but also through the financialisation of the data it produces.

Smart affordable housing? The case of Milano 4 You

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Despite the increasing (academic and political) popularity of the "smart cities" concept, the political economy of smart projects remains largely unexplored, especially in relation to "smart" projects in housing and real estate. Resulting from fieldwork undertaken in Milan in 2017 involving different research methods, the paper focuses on the project Milano 4 You which will be realized in Segrate, one of the wealthiest municipalities of Italy located in the metropolitan area of Milan. Milano 4 You involves different private actors (including some 'usual suspects' like IBM and Samsung) and, once realized, it will include different functions (both residential and commercial), with housing planned to be affordable/social. This represents a novelty in the Italian context where social housing has traditionally lacked from the welfare system and has been under the control of public local institutions. In exploring this change in policy around the privatization of housing, the paper analyses the dynamics of financialization of land leading to the approval of the project. Aim of the paper is therefore to analyse the change in the provision of social and affordable housing connecting it to the dynamics of land rent, the socio-economic history of place and the political economy of smart cities.

Keywords: *affordable housing; smart city; Milan*

Strategic Development Zones: A state led model for private housing development?

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Suburban housing provision continues to be the dominant outcome of Irish housing policy and practice. One notable and increasingly prevalent feature of suburban housing development is the emergence of large-scale planned suburbs in areas designated as Strategic Development Zones (SDZ). While Strategic Development Zones represent a state led approach to housing provision they offer a model that is facilitative of private interests and in doing so create a pro development planning environment (Haughton et al, 2013; Murphy et al, 2015; Lawton, 2017) thus they continue the historic reliance on the private market to deliver substantial tranches of suburban housing. These SDZs are also illustrative of wider trends in the post-crash Irish housing market whereby local actors are still prevalent and active yet SDZs are increasingly subject to internationalised financial models through the impact of international private equity companies. Drawing upon several master-planned SDZ developments at different stages of evolution and development in Dublin's outer suburbs namely Clonburris, Cherrywood, Adamstown and Hansfield this paper will illuminate the ongoing and increasing reliance by the Irish State on the national and international private market to provide housing.

Keywords: *Suburbs; Strategic Development Zones; Housing;*

Assetisation, antagonism and decommodification in Dublin's private rental sector

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This paper explores the antagonisms which characterise the private rental sector (PRS). One of the most remarkable consequences of the global financial crisis has been the growth of private renting.

Investment in the PRS has taken two forms: institutional investors and small-time household investors. Each can be understood as instances of divergent forms of post-crash financialization. Institutional investors, most importantly REITs, abstract local rental streams and convert them into liquid tradeable assets. Within this form of financialization we can envisage how commodification might be contested: institutional investment involves a single, often international, landlord and by its very nature produces a collective of tenants subject to the same common conditions. Contesting the decommmodification of rental housing, however, throws up more complex questions in the case of small-scale landlords. Research suggests that such investors view rental property as part of household financial management strategies, such as pension planning. Such landlords often relate to their 'asset' in complex ways which often have strong affective and emotional dimension and may, for example, develop personal relationships with their tenant. Tenants, on the other hand, often find themselves torn between the desire to have a secure and affordable home and an identification with the landlord and their attempt to create a secure life for their family. This paper considers the experience of this form of antagonism for tenants and what it tells us about the politics of housing commodification. The paper draws on the author's research and experience working with tenants in the private rented sector.

Keywords: *housing, financialization, rent, politics*

H4. RURAL GEOGRAPHIES 1: RURALITY AS CHOICE: MYTH OR REALITY?

Negotiating the Rural in Irish Politics

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This paper explores representations of the rural in Irish politics and media, and policy linkages with rural development. The Irish government formation negotiations took place over 70 days in 2016. This period of time provides the lens through which discourses of rurality and power will be explored to understand how regional and local politics are, firstly, represented in national media, and secondly, how those representations heighten regional disparities in policy making. Although 'rural issues' became an integral part of the negotiations to form a government, this paper argues that the nature of how rural decline and struggle (and the very focus on these themes) were represented and influenced politics, serves to deepen the rural-urban divide and intra-rural inequalities. How the rural was represented during these 70 days, understanding how discourses contribute to social constructions of rurality, and the socio-spatial impact of the power of particular rural voices will form the focus of the paper.

Keywords: *rural, development, media, politics*

Young Farmers Perspectives on Age Old Issues of Succession and Inheritance

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The long-standing image of farming in rural Ireland has been that of a grey elderly man alone in his farm with no successor to take over. Recent years have seen a sharp increase in the number of young people undertaking agricultural education with a view to farming. Combined with this growth, is increased focus at national and EU level on the importance of regeneration of agriculture. This renewed focus on the role and importance of young farmers in the sector is leading to a change in the traditional, long standing view of farming in rural Ireland, and has the potential to revitalise rural Ireland both inside and outside the farm gate. This paper explores the views and perceptions of young farmers on succession and inheritance, and their role in the farm business. It will examine the views of our agricultural industry leaders and agricultural educators on the role and importance of these young farmers, and will identify the supports that young farmers require in the area of succession and inheritance.

Keywords: *Young Farmers, Succession, Farming*

School Days Over; Notes on the Disused School Houses in Rural Ireland, memory, cognitive landscapes, and public contributions to historical narratives

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This paper examines the contemporary and historical social significance of the disused school houses scattered across the rural Irish landscape, and also the use of the online environment for the dissemination of ongoing research with the aim of bringing buildings to the attention of the public, and drawing out the lost narratives associated with them. The overall aim of the disused schools project was to both highlight and narrate these often-overlooked buildings, and to engage the public with an important but ill-defined historical space with which many people have a deep personal connection.

Little or no research had previously been undertaken that examined the historical and contemporary social and cultural significance of early rural school houses in Ireland. Furthermore, the physical remains of only some of these institutional buildings had been recorded in the National Inventory of Architectural Heritage (NIAH) of Ireland (1990 - present), and the buildings were afforded varying degrees of protection on architectural merit only. There has, to-date, been no over-arching examination of these buildings and their collective social significance as representations of rural decline. This paper provides a background to the historical and contemporary social significance of these buildings, and will primarily explore the use of evocative photographic imagery, narrative and new technology and media as a method of triggering memory and meaning for the online public, and consequently encouraging engagement with, and contribution to, historical and cultural research.

Keywords: *Architecture, Cognitive Landscapes, Memory and Meaning*

A Place Like No Other: Investigating the Farmer-Farm Connection in Later Life through the Lens of 'Insideness'

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The senior generation's unwillingness to relinquish managerial duties and retire is a globally recognized characteristic of intergenerational family farm transfer. This is despite the array of financial incentives put in place to stimulate and entice the process. Applying Rowles' concept of 'insideness' as a theoretical framework, this paper brings into focus the suitability and appropriateness of previous and existing farm transfer policy strategies, by presenting an insightful, nuanced analysis of the deeply embedded attachment older farmers have with their farms, and how such a bond can stifle the necessary hand over of the farm business to the next generation. This research employs a multi-method triangulation design, consisting of a self-administered questionnaire and an Irish adaptation of the International FARMTRANSFERS Survey in conjunction with complimentary Problem-Centred Interviews, to generate a comprehensive insight into the intricate, multi-level farmer-farm relationship in later life. The overriding themes to emerge from the content analysis of the empirical research are farmer's inherent desire to stay rooted in place in old age and also to maintain legitimate connectedness within the farming community by remaining active and productive on the farm. Additionally, there is a strong sense of nostalgia attributed to the farm, as it is found to represent a mosaic of the farmer's achievements as well as being a landscape of memories. The paper concludes by suggesting that a greater focus on the farmer-farm relationship has the potential to finally unite farm transfer policy efforts with the mind-set of its targeted audience, after decades of disconnect.

Keywords: *Family Farm; Succession; Retirement; Farm Viability*

Feminizing the Rural or Reinforcing Inequality? Exploring the Role of the LEADER Programme in Female Entrepreneurship within the Republic of Ireland.

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With the increased championing of endogenous development coupled with this need to build capacity within local and regional economies, enterprise development has emerged as a counter strategy for the economic ills endured by the European countryside. With the drive for sustainability and securing the future needs of peripheralized regions, rural women are attempting to diversify the local economic base, by engaging in multifarious business endeavours both within and beyond the farmyard. The proliferation of female-led enterprises are of paramount importance to the economic and social development of our hinterlands. Despite their pivotal role, limited supports are made available to them, causing further challenges for rural women – whom historically have been hidden owing to hegemonic and patriarchal constructs – to enter the entrepreneurial milieu. With European rural policy advocating the need for enterprise development, this paper explores just how gender inclusive current programmes and initiatives are. With the LEADER programme dedicating supports specifically for enterprise creation, the paper investigates whether women in the Republic of Ireland are being incorporated within its previous and current programme. Drawing on findings accrued from 54 facilitators of the LEADER programme and 35 female entrepreneurs, it will determine if LEADER assists or impedes reinforcing inequalities among entrepreneurial women in the rural.

Keywords: *Rural Entrepreneurship, Rural Women, Rural Policy*

H5. MAKING SPACE FOR PUBLICS: A CHALLENGE FOR CITIES ON THE PATH TO BEING SMART 1

Building smart energy communities: between capability and responsibility

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This paper combines considerations of justice in the energy industry with the roles played by smart citizens in community electricity transitions. Energy justice is a relatively young field that closely mirrors the environmental justice literature. However it advances the latter by applying justice considerations to energy industry issues. Recently this literature has made considerable strides incorporating issues with procedures and recognition, attending to the heterogeneous voices and values that are part of energy practices. But only limited attention has been given to the capabilities required to participate in, effectively engage with, or voice concerns over transitions. These topics that are pressing as the introduction of smart and micro-generation technologies upset traditional socio-spatial relations and make new demands of citizens affected and part of transitional movements. Based on this gap in the literature, this paper explores the Irish Sustainable Energy Communities as an institutional structure advocating citizen participation in electricity infrastructures at the community scale. Community transitions rely explicitly on the capabilities involved in them. However as current theories of energy justice follow traditional infrastructural separations, they insufficiently capture the social, technical, and spatial realities of community transitions. The primary contribution of this paper is, then, to start theorising how capabilities should be incorporated as part of energy justice. Additionally this paper adds empirically to the discourse on smart citizens as it accounts for expected and/or required capabilities for informed, effective and technologically aided participation in transitions upsetting traditional socio-spatial relations.

Keywords: *participation, community, smart city, energy*

“‘The Community’ is a dangerous word”: engaging community in the making of smart Newcastle, NSW, Australia

Sophia Maalsen, Robyn Dowling and Pauline McGuirk, University of Sydney; University of Wollongong. Email: sophia.maalsen@sydney.edu.au

Smart cities have received significant attention for the technology-based solutions they promise as a cure-all to urban problems, but this tech-driven utopianism is increasingly critiqued for its privileging of technology at the expense of the citizen. More recently, interest is turning to the smart citizen as a way to address this imbalance. While Australian cities have been comparatively late to implement formal smart city strategies, they have had opportunity to learn from the challenges and critiques of early adopter cities. Retaining a citizen-centric position from inception to life in the smart city is one example of how Australia is doing smart cities differently. Newcastle, a post-industrial regional city and the second largest in NSW, is one city that is negotiating the tension between technology-driven and citizen-driven change. We draw upon research conducted in Newcastle to understand how the City is interpreting, including and managing the local community in its smart transition. We conclude that the citizen inclusive smart city occurs at the boundaries of competing government, industry and community needs, but this is a profitable space from which to learn how smart cities might be inclusive of a range of stakeholders necessary to creating a city that uses technology, not as a solution, but as an enabler for addressing citizen and city needs.

Keywords: *Smart cities; citizens; Australia*

Interfaces and divisions in the Dublin Docklands 'Smart District'

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The physical and social manifestations of division have long been an object of study, whether concerning the continued usage of physical 'peace walls' and hostile architecture, or social divisions as reflected in access to services and educational achievement. Less studied are the digital divisions that follow the normalisation of the 'smart citizen', through digital access to services and the privileges attained by those able and willing to use new technologies. The Dublin Docklands redevelopment marks a significant break from a pattern of suburbanisation and inner-city decline and repurposes part of the former port area as a city centre extension. This paper looks at the Smart Docklands project in Dublin, in relation to the interaction between digital and physical urban technologies in an area characterised by marked socio-economic contrasts. It is based on over thirty semi-structured interviews and participant-observation at consultation events, including consultation with local communities. It argues that reductive definitions of smart cities as networking technologies be reworked into broader considerations on urban technologies and the future of cities, with greater emphasis on the relationship

between technologies branded as 'smart' and the material and digital manifestation of boundaries in urban form.

Keywords: *smart cities, infrastructure, community*

SESSION J: 11:30AM-1:00PM

J1. PLACING GEOGRAPHY BEYOND THE CAMPUS

All you wanted to know about Second Level Geography?

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At the CIG in 2014, a review of the state of Geography in the Republic of Ireland was presented, outlining the impending changes in the programmes for Geography in Second level schools and in the development of teachers who would work in these schools. The change for a one year to two year programme for beginning teachers has now been fully implemented and, currently, changes to Senior cycle (involving students in their final three years in second level) are being explored but there is no sign of the involvement of Geography currently. Following a period of considerable uncertainty, the Junior Cycle Geography specification (taken by students in the first three years of second level education) has now been officially launched by the authorities and will begin implementation in September 2018 (Education & Skills, 2018). This paper will present an overview of the new specification and the implications of the changes both to the subject approach and to the overall status of Geography within the Junior Cycle curriculum as a whole and the future impact of such changes on the status of Geography at Senior Cycle and in Higher Education.

Education and Skills, Department of (2017) Junior Cycle Geography, Dublin, Government of Ireland. Available on-line at: https://www.curriculumonline.ie/getmedia/2a7a8d03-00e6-4980-bf20-f58def95688f/JC_Geography-en.pdf [accessed 14/3/18]

Keywords: *Second level, curriculum change*

'Predatory Publishing' & the Journal Publishing Oligopoly: Geography Journals & the Information Divide

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It is almost a decade since librarian Jeremy Beall of the University of Colorado Denver coined the term 'predatory publisher'. His list, known as Beall's list, of 'predatory, possible, or probable predatory scholarly open-access publishers' grew from 18 in 2011 to approximately 1000 by 2016. Such publishers are widely agreed to subvert academic scholarship through the absence of peer review, as well as misleading postgraduates and early stage researchers vulnerable as a result of 'publish or perish' culture inherent in the tenure, retention and promotion process. However, the established academic journal publishing industry has been found to be equally culpable in its pursuit of profit at the expense of quality. The most notable example is Elsevier Australia, which was paid by Merck to create six plausible pseudo-academic medical journals, all of which featured a positive focus on Merck pharmaceutical products. At present the journal publishing oligopoly is concentrating its power and hold over the sector, as well as increasing its profits. Geographers need to aware of the impact of their publishing strategies on the information divide and its impact on popular access to their work.

Keywords: *predatory publishing; academic oligopoly; Elsevier; open access*

Panel Discussion

J2. BETWEEN NATURE AND CULTURE, LAND AND SEA: SPATIAL PRACTICES AT THE COAST 2

Mortas ciné and the consultation problem: a review of social acceptance at the An Spidéal Marine and Renewable Energy Demonstration Site

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This case study examines the levels of public engagement generated by a foreshore license application in 2016 for the redevelopment of the An Spidéal marine renewable energy demonstration site in County Galway, Ireland. Combining a review of literature with that of public submissions and interviews, the study identifies some of the reasons why people object to marine renewable energy (MRE) development in Ireland. It indicates that in the absence of marine spatial plans, MRE development is likely to be opposed by local communities in view of the light statutory engagement requirements inherent to Irish foreshore legislation. The research also concludes that decision-making in MRE

consent is currently perceived as being a by-product of conflict of interests. Importantly, it links landscape to the “mortas ciné” (pride of heritage) by demonstrating that the understanding of place and identity could be one of the most significant obstacles to overcome in developing socially accepted MRE enterprises. A list of recommendations is proposed as to how a more inclusive system could be designed to build a more transparent and fairer system, which should mean that Ireland is open for business but also places social justice at its heart.

Keywords: *marine renewable energy, foreshore consent, social acceptance, landscape*

Alignment and dis-alignment of coastal farmland knowledges: a case study in agri-environmental governance

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To date, much resource conservation literature has focused on the imposition of governance regimes in these spaces by extra-local actors. However, recent research has diverged to consider the productive role of locally embedded resource users in producing spatial governance regimes. Building upon this work, this paper analyses how local actors may incorporate both tacit and technical coastal knowledges into their own strategies as they seek to improve farm livelihood viability. Specifically, it explores a novel iteration of agri-environmental programmes in Ireland under Europe’s Common Agricultural Policy (CAP), which are known as “Locally Led Schemes”. These schemes instate a competitive process whereby locally embedded operational groups apply for funding to implement environmentally beneficial farming practices that they themselves have designed. The analysis focuses on a coastal case study area of high environmental value where low intensity hill sheep farming prevails. The research employs qualitative interviews and to trace the formation of one such operational group that includes farmers, scientists, and public servants. The data shows that the formation of this group is interwoven with a form of boundary making that draws on historical relationships, pragmatic strategies, and specific coastal knowledges. This paper describes these knowledges and the extent to which they were aligned, in the process of boundary making for the purposes of this scheme. This paper thus contributes to understandings of coastal resource

governance by foregrounding the micro-level power dynamics of cooperation between locally embedded actors involved in this process.

Keywords: *Governance; territorialisation; knowledge; cooperation*

Negotiating Nature and Culture, Space and Place at the Danish Wadden Sea

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National parks constitute spatial practices whereby nature is placed within spatial bounds. Increasingly, however, national parks are viewed as instruments for sustainable regional development and nature conservation must be viewed as embedded within a wider societal context. This paper examines how nature conservation, regional development, tourism and agricultural interests are negotiated in the case of the Danish Wadden Sea National Park. The paper draws on empirical case study research including interpretative policy analysis and qualitative interviews conducted with key actors. Particular emphasis is placed on the role of boundary-drawing practices and a politics of scale in the governance of the National Park.

Keywords: *nature-culture relations, National Park, Wadden Sea, Denmark*

Engineering the Maritime Frontier: State Territorialization and Nature-Culture Relations in the South China Sea

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This paper explores the ongoing territorial disputes in the South China Sea (SCS), examining how nature-culture and land-sea boundaries are being weaponized through technological interventions as part of contested processes of state territorialization. Seven of the coastal states surrounding the SCS claim all or part of the resource-rich and strategically important waters as part of their maritime territory prompting international legal disputes and rising military tensions. This paper focuses on the Chinese state’s campaign to extend its territory in the Spratly Islands, one of the disputed areas in the SCS, by dredging sand on to coral reefs in order to produce permanent concrete structures that have fundamentally altered the geophysical make up of the reefs. The paper explores this campaign through three analytic lenses: First, it uses the concept of the ‘maritime frontier’ to explore the process of state territorialization in maritime spaces and how this questions the terrestrial ontology underlying classic geopolitical thought and the international law of the sea. Second, it examines the engineering of territory in the SCS as an example of how the relationships between nature and culture and land and sea are sites of political tension and technopolitical intervention. Third, it looks at this case as an instance of

Anthropocene geo-politics, whereby the geo- in geopolitics is being rethought and reworked in a context where social-nature relations are weaponized to fit the ends of state, entangling marine ecosystems into patterns of state and environmental violence.

Keywords: *Land-Sea, Frontiers, Territorialization, Nature-Culture,*

J3. CONFRONTING THE COMMODIFICATION OF HOUSING 2

Challenging financialisation through the Right to Housing in post-crisis Ireland

Dr Rory Hearne, Maynooth University Social Sciences Institute, Maynooth University, Dr Cesare Di Felicianantonio, Department of Geography, University of Leicester Dr Cian O Callaghan, Department of Geography, Trinity College Dublin,. Email: Rory.Hearne@mu.ie

Drawing on a critical understanding of the right to housing (Stammers, 2009, Farha 2017) as both a theoretical and political device, this paper explores new spaces of contentious politics in Ireland engaged in challenging financialisation-related housing exclusion. Informed by the periodizations proposed by Aalbers (2015) and Mayer (2013), we argue that we are in the midst of a profound structural transformation of housing systems, particularly in the most financialised and neoliberalised cases, such as Ireland. We show how this is resulting in new forms of housing exclusion, inequalities and the particular ways it results in the denial of the right to housing, thus creating new potential political subjectivities (e.g. homeless families, 'generation rent' affected by insecure tenure and unaffordable rents, and homeowners in mortgage arrears facing eviction from vulture funds). Our framework allows us to highlight the particular ways in which financialisation results in the denial of a right to housing and while it is being challenged by a new wave of activism, this opposition remains fractioned and mostly local. By adopting the right to housing framework, we aim to emphasize the key challenges activists face in the current phase: in particular, the absence of sufficient public mobilisation to achieve real policy change. We argue that by framing grievances in the framework of a right to housing we can attempt to overcome the theoretical and practical challenge of how to unite together different societal groups suffering housing exclusion in order to present a challenge to dominant processes of financialisation and commodification of housing.

Keywords: *Financialisation Human Right Ireland*

Hostels, Houses and Homes; Negotiating the Cork urban rental crisis after asylum

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This paper seeks to unpack the realities of negotiating access to the Irish private rental market as a 'new' refugee. Based upon a series of in-depth interviews with people recently granted refugee status or subsidiary protection in the urban area of Cork, I will investigate how the transition from liminal housing in asylum centres to 'normal' homes is negotiated. The current context of the rental crisis economically governs this transition, as the market rates for accommodation far exceed social welfare allowances and precarious, sub-standard housing options for refugees emerge during this transitional period. Other factors such as ethnic difference, social isolation and the institutionalising effect of asylum govern the socio-personal aspects of the transition. People do however slowly negotiate this market and in doing so band together resources, tacit knowledges and subversive practises to secure accommodation. Drawing upon Maliq Simone's (2004) concept of 'people as infrastructure' this paper will bring forward the multiplicities of networks used to overcome barriers to housing for refugees and will propose that in reaction to the shrinking spaces of refuge and the dominance of economic precarity during this time other 'topologies' of housing are emerging in the city. These topologies are informal and infrastructure-esque, created by precarious conditions themselves for the 'precarariat' who must use and extend them. Thus, by bringing forward the lived experiences of everyday spatial struggle for housing, I will expand the way in which critical housing geographies engage with refugee studies at a time of crisis.

Reciprocity, Community, and Commodification of (social) Housing in Dublin

Lidia Manzo and Sinéad Kelly, Maynooth University. Email: lidia.manzo@gmail.com

Key global processes of financial capital markets and securitization have restructured national property and housing systems, making them increasingly interdependent. The deepening financialization of housing has threatened what should be a social right, as trading in housing has become an enormously profitable business for the banking sector, allowing financial institutions to capture huge quantities of socially produced wealth. However, despite a growing scholarship, the extent of the commodification of social housing in daily lives and its implications for urban communities are poorly understood. While neoliberalization frees up capital controls facilitating private-sector actors to innovate and develop, this may not lessen the burden of both disinvestment and reinvestment for urban households. This is

particularly so for disadvantaged communities experiencing poverty and deprivation. In this context, social housing provision is likely to move towards greater reliance on private finance and increasing involvement of non-state actors. And yet, cuts to governmental funding have put pressure on either the redevelopment or the privatization of social housing complexes, exacerbating processes of displacement and contributing to erosion of the community fabric and weakening of social bonds which constitute the very system of support and solidarity for disadvantaged households. Drawing on a two-year field and participatory research project conducted in Dublin's inner-city Liberties area, we consider the extent to which the commodification of social housing in the aftermath of the property crash has created new forms of reciprocity and alternative responses emerging from community social capital.

Keywords: *Commodification of Housing, Social Housing, Community, Reciprocity*

Deconstructing Homelessness: People, Policy and Place

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The increase in numbers of people experiencing homelessness in Ireland is currently at crisis level. This sharp rise is reflected in trends globally, and the Irish state's response to homelessness has been very much in line with European policy. Examining qualitative data from four case-study sites in Ireland (Dublin, Cork, Limerick and Galway), this paper outlines emerging findings from an Irish Research Council Policy and Society project entitled 'Deconstructing Homelessness: Finding a Place for Geography?' The project draws together four elements considering Irish policy, NGO awareness campaigns, community service perspectives and the voice of the homeless person. Central to this analysis is an exploration of homelessness as a societal crisis experienced right across Ireland, challenging Dublin-centred narratives and explicating the importance of place. Furthermore, the paper highlights the damaging effect of narrow definitions of what it means to experience homelessness, discussing the impact of such narrow interpretations on local services and national policy interventions. The paper concludes by pointing towards a series of policy recommendations, cognisant to moving beyond a housing-led strategy, to consider a more holistic approach.

Keywords: *homelessness; Irish policy, society,*

Automating Homelessness

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Accessing services for the homeless involves an exchange of personal data recorded into and intake management system. In Ireland, the Pathway Accommodation and Support System (PASS) is used by all state funded homeless services and data are shared among user organizations and in compliance with data protection laws. In Canada Provinces deliver social service and each administers these differently yet there is a national Homeless Individuals and Families Information System (HIFIS) not universally used and data are not evenly shared. The government hosts the data and regional coordinators manage access. In the US, the Department of Housing and Urban Development (HUD) developed a series of data collection, management, and reporting standards that care providers adhere to and homeless management information systems (HMISs) must be compliant with these. This paper will presents research conducted in Dublin, Boston and Ottawa. The ERC Programmable City funded study examines how digital data were materially and discursively supported and processed in PASS, HIFIS and HUD HMIS to 'make up' the homeless. Hacking's dynamic nominalism framework theoretically framed the study of data, classification and indicators while a socio-technological assemblage framework informed the analysis of the context within which these systems are situated, how technologies were developed and data collection. Findings show a complex assemblage of legislation, regulation, and policies combined with funding rules and the historical evolution of local social service delivery models, and that places account for homeless people differently because of the assemblages that influence homeless people are made up.

Keywords: *Homelessness, Critical Data Studies, Assemblage, Socio-Technical, Programmable City*

J4. RURAL GEOGRAPHIES 2: CONTEMPORARY TRENDS IN THE SOCIAL ECONOMY SECTOR

Connecting Islands through Information and Communications Technologies

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In the modern world, information and communications technologies (ICT) are playing a major role in island communities. Once thought of as remote, cut-off and insular, islands are now prospering through the use of ICT. The growing accessibility of e-services, and virtual networks has created a sense of inclusion for islanders in a globalising world. It is through ICT that island communities can communicate instantaneously with the outside world. ICT is revolutionising and revitalising islander ways of life, reinvigorating social cohesion and empowering peripheral island economies in a variety of ways. Many island communities are struggling to access adequate broadband to meet their needs. Why is this? I will survey various supranational, national and regional specific policy documents to capture this as it will illustrate the challenges islanders face in relation to poor ICT coverage. The current initiatives and schemes in place to help islanders will be considered. The concept of spatial justice will be used to aid a comparative approach between the Scottish islands to other cold-water island communities. Overall, this investigation will explore how ICT is becoming a crucial component for island communities.

Keywords: *ICT, islands, spatial justice, accessibility*

Social Enterprise: A Strategy for Rural Socio-Economic Rejuvenation?

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In recent decades, the rural economic base throughout Europe has witnessed a period of significant structural change, with academic literature coining the term rural restructuring to classify and describe this socio-economic transition. As a result, there has been a knock-on effect on population structure and economic activity. Some locations, particularly those in close proximity to urban centres and with high levels of connectivity, have thrived whilst others, that are considered to be peripheral and rural, have declined dramatically. The development and expansion of social enterprises offers a possible strategy towards combatting the negative effects of rural restructuring – isolation; unemployment; and loss of retail services and recreational amenities. Social entrepreneurship provides an important role in delivering a 'social value to the less privileged or an environmental value, all through an entrepreneurially orientated entity that is financially independent self-sufficient and sustainable' (Abu-Saifan, 2012). There are many different types of social enterprise business models and structures, which vary according to social mission / purpose; ownership; and management structures and accountability. Prominent examples include: community enterprises; social firms; co-operatives; credit unions; development trusts; public sector spin-outs; and trading arms of charitable organisations. This paper will provide three contrasting case studies of social enterprises operating at different geographic scales throughout Europe. These organisations have responded pro-actively and effectively to the challenges posed by rural restructuring. The organisations include a community shop / tea-rooms situated in Ireland; a community owned public house in Wales; and a collectively owned organic farm and restaurant in Italy.

Keywords: *Social Enterprise; Rural Development*

Empirical evidence from rural social enterprises in a European context – A systematic literature review

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Social enterprises are often perceived as an effective response to a range of contemporary societal challenges including those faced by peripheral rural communities. However despite the growing political and academic interest in rural social enterprises there is a general consensus that the sector is under-researched and lacks coherent understanding by policy makers. It has been argued that in order to be effective, policy to foster social enterprises in rural areas needs to take in to account the specific characteristics of these social enterprises (Farmer, Steinerowski & Jack, 2008; Steiner & Teasdale, 2017). The purpose of this paper is to explore these specific characteristics through a systematic literature review of empirical studies of European rural social enterprises. A total of 41 peer reviewed journal articles, contained in two data bases (Scopus and ABI/INFORM), are examined in this paper. The articles reviewed mainly focus on the factors that enable and hinder the creation and development of social enterprises in rural areas and on the services delivered by them. The results from these studies

show that these organizations implement tailor made solutions that address a wide range of societal and environmental challenges. Moreover, these organizations are also characterised by their ability to combine endogenous and external, public and private resources to achieve their economic and social goals. However, although they appear to have the potential to foster (inclusive) local development the evidence from these articles suggest that SEs require external support and favourable structural/policy conditions in order to do so. It is also intended that the evidence presented from this extensive review of the literature will shed some light on Ireland's rural social enterprise sector and contribute to the shaping of its future.

Keywords: *social enterprise, literature review, rural development*

The Challenges of Heritage Tourism for Communities

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Tourism, recreation and heritage products and services are one the most commonly cited sectors providing opportunities for social enterprise in Ireland (Hynes 2016). This paper, investigates the benefits and challenges that heritage tourism can have at a community level. It is based on an integrated research paradigm with a combination of quantitative and qualitative techniques of research. It follows a mixed method approach to capture the experiences and perspectives of the participants in community heritage initiatives and investigate at a micro-scale community heritage organisations/projects. The findings outline that it is the local community that community heritage tourism impacts on the most but it is not without its challenges. They include lack of funding, increased bureaucracy, volunteer burn out and lack of interest from young people which are needed for the sustainability of projects into the future. Some of findings such as the need for less onerous bureaucratic control tie in with other reports such as O'Keeffe (2015). The findings of this research provide a wide-range of information about community heritage organisations and initiatives at the micro-level in Ireland. The findings give a voice to the community groups themselves that are involved in specific areas such as heritage and heritage tourism. There is limited research that gives such a voice to community groups, in particular in the heritage sector.

References:

Hynes, B. (2016) Creating an Enabling, Supportive Environment for the Social Enterprise Sector in Ireland, The Irish Local Development Network

O'Keeffe, B. (2015) Rural Vibrancy in North-West Europe. The Case of South Kerry, Rural Alliances Action Project

Keywords: *Heritage Tourism, Community Tourism, Volunteers, Community Engagement, Challenges*

J5. MAKING SPACE FOR PUBLICS: A CHALLENGE FOR CITIES ON THE PATH TO BEING SMART 2

Platforms and publics: Tracing the controversies around the Waze 'Avoid Dangerous Areas' function in the US, Brazil and Israel/Palestine

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This paper investigates the interplay between digital platforms and urban environments by tracing the controversies that surround Waze and its 'Avoid Dangerous Areas' function (WADA, from here on). In recent years, geographers have studied how software organises access to urban space, services and infrastructure, consolidating existing socio-economic divides and producing new patterns of exclusion. Such work calls attention to the mediating effects of software on cities, but overlooks that cities and their publics also shape how that same software works. To overcome this limitation, I trace here the controversies related to WADA in different locations: the US, Brazil, and Israel/Palestine. I address the following research questions: How did the public respond to WADA in different geographical contexts? How did these responses shape how WADA works? To map the WADA controversies, I consider related news and blog posts, threads on Waze forums, journal articles or commentaries by social scientists. Further, in the case of Israel/Palestine, I complement this online research with field observations and interviews with local users. By revealing the impact of local publics on how WADA works, the research provides an alternative account of digital platforms, and their intersections with local actors, datasets, values and social arrangements.

Keywords: *apps; publics; controversies; geoweb*

Civic infrastructure for reshaping smart cities

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While concerns have been raised regarding technocratic and neoliberal governance that underline corporate smart city developments, less research has explored ongoing efforts that seek to repurpose the resources, skills and expertise initially intended for corporate smart cities. This paper aims to sketch some possibilities of such repurposing by focusing on how they aim to reconfigure the focus and practices of innovation. The paper considers a wide range of efforts as civic infrastructure to discuss how they might provide crucial resources to enable the public to become more engaged in shaping urban futures, whether using the corporate-labelled smart technology or otherwise. These include the 'hacking' of civic life through hackathons, innovation, and start-up generated disruptions of city services. These initiatives focus on the capabilities not only to write code, access data or design prototype but also to devise alternative sociotechnical relations between diverse social organisations, governments and corporations. While these initiatives are hopeful that innovation and technology can be developed synthetically with the working and failure in urban life, the ambition to translate cross-sectoral practices, expertise, knowledge and logic has created internal and external tension. Also, slippages can occur between the aims of these initiatives and the resources they obtain to sustain themselves. To discuss these promises, slippages and tension, the paper draws on case studies conducted in Dublin, Boston and Sydney to sketch civic infrastructure and to suggest that the corporate smart city can be repurposed by both citizens and start-up companies and in doing so create different visions of the smart city.

Keywords: *infrastructure, publics, innovation, smart city,*

A Smart Approach to the Publics

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Different publics engage, willingly or not, with smart technologies in cities. Conversely, these are a catalyst for value production, for instance via data accrual and sharing and often under the label of the 'intelligence of the crowd' and 'open data'. The paper looks at urban commons, citizenship and governance in the smart city from the perspective of socially accrued value: is the 'intelligence of the crowd' transferable, hackable, or 'bankable' by whom? The paper reflects on the author's empirical work around participation in the smart city – data capitalism/communism, Living Labs, and the sharing economy. It suggests a 'smart approach' to the commons which evaluates smart technologies around a modulation of social and political capitals, trust and community-building, maintenance and defence of the accrued common value. Thus, the paper asks whether to recast "publics" in the smart city within a broader discussion on value, suggesting to re-imagine the exchange of value and utilities between the Smart City and citizens by way of protecting the urban commons with expanding collective social rights and entitlements.

Keywords: *smart city, citizenship, publics, urban commons*

J6. CPD WORKSHOP: WHAT WOULD A GEOGRAPHY PODCAST SERIES LOOK LIKE

Convenor: Eoin O'Mahony, UCD

This workshop of continuous professional development (generously supported by the GSI) asks the question: "what would a geography podcast series look like". All conference participants are welcome to attend this planned workshop. The format will be as follows: A short contribution from Fin Dwyer, creator and maker of the excellent Irish History Podcast series and another short contribution from Alan Maguire, one of the two hosts in the popular Juvenalia podcast series. Each will bring to bear their experience of creating and maintaining professional sounding podcasts. Each of these podcasts is very different but in their own way can help us understand how we build an audience for a possible Irish Geography Podcast. After these 10 minute contributions, there will be a broader and relatively structured conversation about how we might put together a geography podcast including a name, who we think the audience is and a series of topics for the planned first 6.

KEYNOTE: 1-2pm

Game of Homes: the Financialization of Housing

Manuel Aalbers, KU Leuven

A global wall of money is looking for High-Quality Collateral (HQC) investments, and housing is one of the few asset classes considered HQC. This explains why housing is

increasingly becoming financialized, but it does not explain its timing, politics and geography. Examples from the US, the UK, the Netherlands, Belgium, Germany, Italy and Spain illustrate not only the emergence and commonalities of housing financialization but also the continued relevance of national as well as local histories and institutions. Due to the financialization of housing, housing risks are increasingly financial market risks these days—and vice versa. Yet, the relations between housing and financialization remain under-researched and under-theorized. Since the 1970s, mortgage markets have been transformed from being a “facilitating market” for homeowners in need of credit to one increasingly facilitating global investment. Likewise, subsidized rental housing has become exposed to global financial markets through the use of social housing bonds and financial derivatives as well as through the rise of financialized landlords such as private equity firms and real estate firms listed at the stock exchange.

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