

SSCI 600: The Geography of Life and Death

Units: 4

Term—Day—Time: Fall, 2020, Mondays, 5:00-7:50 p.m.

Location: WPH 202 and Online Office Hours: Mondays, 3:00 to 4:00 p.m. and Thursdays, 7:00 to 8:00 p.m., or by appointment Contact Info: jpwilson@usc.edu, 213-740-1908

Library Help: Andy Rutkowski Office: VKC 36B Office Hours: By appointment Contact Info: arutkows@@usc.edu, 213-740-6390, http://biy.ly/andy/hangout

Course Description

This course explores the various ways place and space have been invoked and used to improve our understanding of human well-being and the social and environmental determinants of human health during the past several decades. The class will explore these topics from a variety of perspectives, including: (1) examples of exemplary works that connect population, health and place; (2) the theoretical, quantitative, qualitative and spatial approaches used for this type of scientific inquiry; (3) the ways in which place-based human, environmental, and behavioral factors may mediate health-related exposures and human wellbeing; and (5) the role of place in shaping and perpetuating inequality. The class introduces the current state-of-the-art using an assortment of weekly readings and discussions, and a series of individual projects will allow class participants to develop their own proposals for more detailed research.

Learning Objectives

On completion of this course, students will be able to:

- Describe the various ways place (or space) has been invoked and used to assess human well-being and describe the social and environmental determinants of human health.
- Describe the theoretical, quantitative, qualitative, and spatial approaches that are now used for this type of scientific inquiry.
- Discuss some of the ways in which place-based human, environmental, and behavioral factors mediate health-related exposures.
- Discuss the various ways in which we can resolve individual-level exposures and placebased information.
- Discuss how place affects different groups of people in different ways and why place may need to be handled carefully in plans and programs which aim to accomplish meaningful social change.
- Discuss the current approaches, methodological issues, and enduring challenges in works connecting population, heath and place.

Prerequisite(s): None Co-Requisite (s): None Concurrent Enrollment: None Recommended Preparation: Students must be enrolled in an existing USC Ph.D. program

Class Conduct

Harassment, sexual misconduct, interpersonal violence, and stalking are not tolerated by the university. All faculty and most staff are considered Responsible Employees by the university and must forward all information they receive about these types of situations to the Title IX Coordinator. The Title IX Coordinator is responsible for assisting students with supportive accommodations, including academic accommodations, as well as investigating these incidents if the reporting student wants an investigation. The Title IX office is also responsible for coordinating supportive measures for transgender and nonbinary students such as faculty notifications, and more. If you need supportive accommodations you may contact the Title IX Coordinator directly (titleix@usc.edu or 213-821-8298) without sharing any personal information with me. If you would like to speak with a confidential counselor, Relationship and Sexual Violence Prevention Services (RSVP) provides 24/7 confidential support for students (213-740-9355 (WELL); press 0 after hours).

Course Notes

The course will be taught as a seminar and class meetings will be used to discuss the assigned readings and any questions and related topics that arise from the readings. The learning and teaching strategies are student-centered. They aim to encourage a deep-learning approach by using reflection and self-evaluation. The individual class sessions will be organized around a series of class readings that are designed to provide the essential background and framework for study. Students will be required to reflect on their learning through in-class discussions and weekly briefs.

Required Readings and Supplementary Materials

The weekly readings will be accessed via the USC Library's electronic collections and/or provided by the instructor via Blackboard.

Description and Assessment of Assignments

Students must prepare a seminar, a research paper and presentation, a series of weekly briefs, and participate in class discussion on a regular basis.

<u>Class Participation</u> (10%): A class participation grade will be assigned based upon how actively students engage in the course. Students will be required to read all material outlined for each week of the course, and be prepared to lead and participate in group discussions about the readings in class. Failure to attend, or not be adequately prepared to discuss the readings will lead to the assignment of a lower grade for that week.

<u>Weekly Briefs</u> (40%): Each week students will use the Blackboard Discussion Forum to provide a critique of an article from the class reading list for that week of their own choosing. These electronic commentaries will be shared among the class, and graded based on the overall quality of the contribution. To help simulate discussion, each student will comment on at least one other student's critique each week.

<u>Class Presentation</u> (10%): Each student will present on one of the articles included in this syllabus in consultation with the instructor. The student will prepare a one-page summary that will be distributed in advance of the class itself and make a short 20-minute presentation summarizing the work at hand and its strengths and weaknesses.

<u>Final Project</u> (40%): In the second half of the course, each student will work on a project determined in consultation with the instructor. These projects will focus on a specific health problem or challenge and the final report (25%) and class presentation (15%) will summarize the current understanding of the problem or challenge and the kinds of solutions that have been attempted thus far, as reported in the published literature.

Grading Breakdown

	No. of	
Assignment	Assignments	% of Grade
Class Participation	1	10
Class Presentation	1	10
Final Projects	1	40
Weekly Briefs	10	40
TOTAL	13	100

Assignment Submission Policy

Assignments will be submitted for grading via Blackboard using the due dates specified in the Course Schedule below.

Additional Policies

Students are expected to attend and participate in every class session and to complete and upload all assignments before the deadlines noted in the Course Schedule below. Late work will be assessed a penalty of 10% per day and zero grades will be assigned for work more than one week late.

	Topics/Daily Activities	Readings and Homework	Deliverables/Due Dates
Week 1 8/17	Introduction to Class Brief introductions coupled with a discussion of class goals, projects, and this week's readings.	National Research Council (2011). How does where people live affect their health? In Understanding the Changing Planet: Strategic Directions for the Geographical Sciences. Washington, D.C., National Academy of Sciences: 67-82. Reidpath et al. (2002). An ecological study of the relationship between social and environmental determinants of obesity. Health & Place 8: 141-145. Richardson et al. (2013). Spatial turn in health research. Science 339: 1390-1392. Stamp (1964). The Geography of Life and Death. Ithaca, NY, Cornell University Press. Thompson (2018). Gardening for health: A regular dose of gardening. Clinical Medicine 18(3): 201-2015.	No deliverables.
Week 2 8/24	Place The first part of a two- part discussion exploring the various ways in which place has been conceptualized and used to better understand human health determinants and outcomes, with a special focus on the chapters in a recent and influential book.	 Kemp (2011). Place, history, memory: Thinking time within place. In Burton et al. (Eds.) Communities, Neighborhoods and Health: Expanding the Boundaries of Place. Berlin, Springer: 3-19. Matthews (2011). Spatial polygamy and the heterogeneity of place: Studying people and place via egocentric methods. In Burton et al. (Eds.) Communities, Neighborhoods and Health: Expanding the Boundaries of Place. Berlin, Springer: 35- 55. Gehlert et al. (2011). Placing biology in breast cancer disparities research. In Burton et al. (Eds.) Communities, Neighborhoods and Health: Expanding the Boundaries of Place. Berlin, Springer: 57- 72. 	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 8/20. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 8/24.

Course Schedule: A Weekly Breakdown

		Leung & Takeuchi (2011). Race, place, and health. In Burton et al. (Eds.) <i>Communities, Neighborhoods and Health:</i> <i>Expanding the Boundaries of Place.</i> Berlin, Springer: 73-88. Stack (2011). Attachment and dislocation: African-American journeys in the USA. In Burton et al. (Eds.) <i>Communities,</i> <i>Neighborhoods and Health: Expanding the</i> <i>Boundaries of Place.</i> Berlin, Springer: 237- 247.	
Week 3 8/31	Population, Health, and Place The second part of a two-part discussion exploring the various ways in which geographers have used place to help frame and clarify the key relationships linking people, health and place in recent decades.	Meade (2012). The geography of life and death: Deeper, broader, and much more complex. Annals of the Association of American Geographers 102: 1219-1227. Mennis & Yoo (2018). Geographic information science and the analysis of place and health. Transactions in GIS 22: 842-854. Robertson & Feick (2018). Inference and analysis across spatial supports in the big data era: Uncertain point observations and geographic contexts. Transactions in GIS 22: 455-476. Wang (2020). Why public health needs GIS: A methodological overview. Annals of GIS 26(1): 1-12. Wilson (2019). Connecting population, health and place with geospatial tools and data. In D. Berrigan and N. A. Berger (Eds.), Geospatial approaches to energy balance and breast cancer (pp. 3-28). Berlin, Germany: Springer. Xu et al. (2020). FHIR PIT: An open software application for spatiotemporal integration of clinical data and environmental exposures data. BMC Medical Informatics & Decision Making 20: 53.	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 8/27. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 8/31.
Week 4 9/7	Labor Day Holiday No class.		
Week 5 9/14	Theory, Methods, and Data An introduction to the various ways in which theory, methods and data are woven together to construct study designs in projects that explore the connections	 Daniel et al. (2008). Framing the biosocial pathways underlying associations between place and cardio-metabolic disease. <i>Health & Place</i> 14: 117-132. Drewnowski et al. (2019). The Moving to Health (M2H) approach to natural experiment research: A paradigm shift for studies on built environment and health. <i>SSM – Population Health</i> 7: 100345. 	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 9/10. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 9/14.

	between population, health and place.	Jacquez et al. (2015). Genetic GIScience: Toward a place-based synthesis of the genome, exposome, and behavome. Annals of the Association of American Geographers 105: 454-472. Knobel et al. (2019). A systematic review of multi-dimensional quality assessment tools for urban green spaces. Health & Place 59: 102-198. Ramirez-Rubio et al. (2019). Urban health: An example of a "health in all policies" approach in the context of SDGs implementation. Globalization & Health 15: 87. Ruktanonchai et al. (2018). Using Google location history data to quantify fine-scale human mobility. International Journal of Health Geographics 17: 28. Wardrop et al. (2018). Spatially disaggregated population estimates in the absence of national population and housing census data. Proceedings of the National Academy of Sciences of the USA 115(14): 3529-3537.	
Week 6 9/21	Quantitative Methods An introduction to the various ways in which quantitative methods are used to explore the connections between population, health and place, and a discussion of some of the outstanding methodological challenges and issues.	Bozigar et al. (2020). A geographic identifier assignment algorithm with Bayesian variable selection to identify neighborhood factors associated with emergency department visit disparities for asthma. International Journal of Health Geographics 19: 9. Garcia et al. (2019). Effects of policy- driven hypothetical air pollutant interventions on childhood asthma incidence in southern California. Proceedings of the National Academy of Sciences of the USA 116(32): 15883- 15888. Johnson et al. (2020). Dealing with spatial misalignment to model the relationship between deprivation and life expectancy: A model-based geostatistical approach International Journal of Health Geographics 19: 6. Li et al. (2019). Subtypes of park use and self-reported psychological benefits among older adults: A multilevel latent class analysis approach. Landscape & Urban Planning 190: 103605. Oshan et al. (2020). Targeting the spatial context of obesity determinants via	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 9/17. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 9/21. Submit class presentation abstracts on Bb no later than 1:00 p.m. on Monday, 9/21.

Week 7	Qualitative Methods	multiscale geographically weighted regression. International Journal of Health Geographics 19: 11. Vodonos et al. (2018). The concentration- response between long-term PM2.5 exposure and mortality; A meta- regression approach. Environmental Research 166: 677-689. Budig et al. (2018). Photovoice and	Submit briefs on Bb no
9/28	An introduction to the various ways in which qualitative methods are used to explore the connections between population, health, and place, and a discussion of some of the outstanding methodological challenges and issues.	 empowerment: Evaluating the transformative potential of a participatory action research project. <i>BMC Public Health</i> 18, 432. Klocker (2015). Participatory action research: The distress of (not) making a difference. <i>Emotion, Space & Society</i> 17: 37-44. Mennis et al. (2013). Qualitative GIS and the visualization of narrative activity space data. <i>International Journal of</i> <i>Geographical Information Science</i> 27: 267- 291. Murrietta-Flores et al. (2015). Automatically analysing large texts in a GIS environment: The Registrar General's reports and cholera in the nineteenth century. <i>Transactions in GIS</i> 19: 296-320. Oyebode (2010). The medical humanities: literature and medicine. <i>Clinical Medicine</i> 10(3): 242-244. Veitch et al. (2020). Exploring children's views on important park features: A qualitative study using walk-along interviews. <i>International Journal of</i> <i>Environmental Research & Public Health</i> 17: 4625. 	later than 11:59 p.m. on Thursday, 9/24 Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 9/28.
Week 8 10/5	Spatial Analysis and Modeling Methods An introduction to the various ways in which spatial analysis and models are used to explore the connections between population, health and place, and a discussion of some of the outstanding methodological challenges and issues.	 Breen et al. (2014). GPS-based microenvironment tracker (MicroTrac) model to estimate time–location of individuals for air pollution exposure assessments: Model evaluation in central North Carolina. Journal of Exposure Science & Environmental Epidemiology 24: 412-420. Cochran et al. (2020). Earth observation- based ecosystem services indicators for national and subnational reporting of the sustainable development goals. Remote Sensing of Environment 244: 111796. Dennis et al. (2020). Relationships between health outcomes in older 	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 10/1. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 10/5.

		 populations and urban green infrastructure size, quality and proximity. <i>BMC Public Health</i> 20: 626. Kamel Boulos & Geraghty (2020). Geographical tracking and mapping of coronavirus disease COVID-19/severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) epidemic and associated events around the world: how 21st century GIS technologies are supporting the global fight against outbreaks and epidemics. <i>International Journal of Health</i> <i>Geographics</i> 19: 8. Mitchell et al. (2000). <i>Inequalities in life</i> <i>and death: What If Britain were more</i> <i>equal?</i> Bristol, UK, The Policy Press. O'Sullivan et al. (2020). Spatially explicit models for exploring COVID-19 lockdown strategies. <i>Transactions in GIS</i> 24(4): 967- 1000. Stieb et al. (2019). Using maps to communicate environmental exposures and health risks: Review and best-practice recommendations. <i>Environmental</i> <i>Research</i> 176: 108518. 	
Week 9 10/12	Human Environments A discussion of the various ways in which the role of the human environment has been conceptualized and measured in research projects exploring the connections between population, health and place.	Ajayakumar et al. (2019). Addressing the data guardian and geospatial scientist collaborator dilemma: How to share health records for spatial analysis while maintaining patient confidentiality. International Journal of Health Geographics 18: 30. Cerin et al. (2020). How urban densification shapes walking behaviours in older community dwellers: A cross-sectional analysis of potential pathways of influence. International Journal of Health Geographics 19: 14. Higgs et al. (2019). The Urban Liveability Index: Developing a policy-relevant urban liveability composite measure and evaluating associations with transport mode choice. International Journal of Health Geographics 18: 14. Jones et al. (2017). A step-by-step approach to improve data quality when using commercial business lists to characterize retail food environments. BMC Research Notes 10: 35. Keralis et al. (2020). Health and the built environment in United States cities:	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 10/8. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 10/12. Submit final project abstracts on Bb no later than 1:00 p.m. on Monday, 10/12.

		Measuring associations using Google Street View-derived indicators of the built environment. <i>BMC Public Health</i> 20: 215. Mueller et al. (2017). Urban and transport planning related exposures and mortality: A health impact assessment for cities. <i>Environmental Health Perspectives</i> 125(1): 89-96. Tatem et al. (2012). Mapping populations at risk: Improving spatial demographic data for infectious disease modeling and metric derivation. <i>Population Health</i> <i>Metrics</i> 10(1): 8.	
Week 10 10/19	Natural Environments A discussion of the various ways in which the role of the natural environment has been conceptualized and measured in research projects exploring the connections between population, health and place.	 Abhijith et al. (2017). Air pollution abatement performances of green infrastructure in open road and built-up street canyon environments: A review. <i>Atmospheric Environment</i> 162: 71-86. Kheirbek et al. (2016). The contribution of motor vehicle emissions to ambient fine particulate matter public health impacts in New York City: A health burden assessment. <i>Environmental Health</i> 15: 89. Masiol et al. (2019). Spatial-temporal variations of summertime ozone concentrations across a metropolitan area using a network of low-cost monitors to develop 24 hourly land-use regression models. <i>Science of the Total Environment</i> 654: 1167-1178. Parmes et al. (2020). Influence of residential land cover on childhood allergic and respiratory symptoms and diseases: Evidence from 9 European cohorts. <i>Environmental Research</i> 183: 108953. Wild (2005). Complementing the genome with an "exposome": The outstanding challenge of environmental exposure measurement in molecular epidemiology. <i>Cancer Epidemiology, Biomarkers & Prevention</i> 14(8): 1847-1850. Wild (2012). The exposome: From concept to utility. <i>International Journal of Epidemiology</i> 41: 24-32. Wolf et al. (2020). Urban trees and human health: A scoping review. <i>International Journal of Environmental Research and Public Health</i> 17, 4371. 	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 10/15. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 10/19.

Week 11 10/26	Human Behavior A discussion of the various ways in which the role of the human behavior has been conceptualized and measured in research projects exploring the connections between population, health and place.	 Benarous et al. (2016). Ecological momentary assessment and smartphone application intervention in adolescents with substance use and comorbid severe psychiatric disorders: Study protocol. <i>Frontiers in Psychiatry</i> 7: 157. Cattell et al. (2008). Mingling, observing, and lingering: Everyday public spaces and their implications for well-being and social relations. <i>Health & Place</i> 14: 544-561. Clary et al. (2017). Between exposure, access and use: Reconsidering foodscape influences on dietary behaviors. <i>Health & Place</i> 44: 1-7. Jankowska et al. (2015). A framework for using GPS data in physical activity and sedentary behavior studies. <i>Exercise and Sports Sciences Reviews</i> 43: 48-56. Jankowska et al. (2017). Kernel density estimation as a measure of environmental exposure related to insulin resistance in breast cancer survivors. <i>Cancer Epidemiology, Biomarkers, & Prevention</i> 26(7): 1078-1084. Mennis & Mason (2011). People, places, and adolescent substance use: Integrating activity space and social network data for analyzing health behavior. <i>Annals of the Association of American Geographers</i>, 101: 272-291. Mmako et al. (2020). Green spaces, dementia and a meaningful life in the community: A mixed studies review 	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 10/22. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 10/26.
		community: A mixed studies review. Health & Place 63: 102344.	
Week 12 11/2	Role of Place in Shaping Inequalities A discussion of the ways in which place affects different groups of people in different ways, and how a deeper understanding of place might contribute toward meaningful social change.	Abramovitz & Albrecht (2013). The Community Loss Index: A new social indicator. Social Service Review 87: 677- 724. Arias et al. (2018). U.S. small-area life expectancy estimates project: Methodology and results summary. Hyattsville, MD: National Center for Health Statistics, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Minh et al. (2017). A review of neighborhood effects and early child development: How, where, and for whom, do neighborhoods matter? Health & Place 46: 155-174.	Submit briefs on Bb no later than 11:59 p.m. on Thursday, 10/29. Comment on at least one other brief on Bb no later than 1:00 p.m. on Monday, 11/2.

		 Namin et al. (2020). The legacy of the Home Owners' Loan Corporation and the political ecology of urban trees and air pollution in the United States. <i>Social</i> <i>Science & Medicine</i> 246: 112758. Peña (2011). Structural violence, historical trauma, and public health: The environmental justice critique of contemporary risk science and practice. In Burton et al. (eds.) <i>Communities,</i> <i>Neighborhoods and Health: Expanding the Boundaries of Place.</i> Berlin, Springer: 203- 218. Sasson et al. (2014) The HANDDS program: A systematic approach for addressing disparities in the provision of 	
		bystander cardiopulmonary resuscitation. Academic Emergency Medicine 21: 1042- 1049. Spencer et al. (2011). Environmental justice and the well-being of poor children of color. In Burton et al. (eds.) Communities, Neighborhoods and Health: Expanding the Boundaries of Place. Berlin, Springer: 219-233.	
Week 13 11/9	Final Presentations Students will present their final projects, summarizing the insights gathered from their research of the specific problem context they chose.		Students present their projects and answer questions from audience. Allow 20-25 minutes per student assuming students work alone and no more than 6 students in the class.
FINAL 11/23			Final research papers to be uploaded to Blackboard no later than 11:59 p.m. on Monday, 11/23.

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" <u>https://policy.usc.edu/scampus-part-b/</u>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <u>http://policy.usc.edu/scientific-misconduct</u>.

Support Systems

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. https://engemannshc.usc.edu/counseling/.

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <u>http://www.suicidepreventionlifeline.org</u>.

Relationship & Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call Free and confidential therapy services, workshops, and training for situations related to genderbased harm. <u>https://engemannshc.usc.edu/rsvp/</u>.

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <u>http://sarc.usc.edu/</u>.

Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086 Works with faculty, staff, visitors, applicants, and students around issues of protected class. <u>https://equity.usc.edu/</u>.

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <u>https://studentaffairs.usc.edu/bias-assessment-response-support/</u>.

Student Support & Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <u>https://studentaffairs.usc.edu/ssa/</u>.

Diversity at USC – <u>https://diversity.usc.edu/</u>

Tabs for Events, Programs and Training, Task Force (including representatives for each school), Chronology, Participate, Resources for Students.