Print Reset

Artistic and Scholarly Development (ASD) Grant Application

Name(s) Charles Springwood

Department(s) or School(s) Sociology and Anthropology

Title of Project Hominin Hearths

Amount Requested $2380 **Your Email:** cspring@iwu.edu

- If your proposal is funded, would you be willing for the Mellon Center to use it as an exemplary submission in the online Handbook? ☑ Yes ☐ No

- Will you use human beings as experimental subjects? ☐ Yes ☑ No
  If yes, please submit the appropriate approval notice.
  If you have questions about whether IRB approval or exemption is required for your project, please see the pdf link on "Policies and Procedures" at https://www.iwu.edu/irb/forms/IRB_PolicyProcedure.pdf.

- Will you use animals as experimental subjects? ☐ Yes ☑ No
  If so, have you requested IRB and/or IACUC approval? ☐ Yes ☑ No
  If yes, please submit the appropriate approval notice.
  (See the IACUC link to protocol forms at https://www.iwu.edu/associateprovost)

Please complete the following checklist by placing a check mark against each item to insure that your application is complete. Incomplete and/or late applications will not be considered.

1. Project Summary included in hard copy of proposal and Word copy (emailed to chorner@iwu.edu) ☑ Yes ☐ No
2. Proposal as per format described in Handbook ☑ Yes ☐ No
3. ASD grant budget page ☑ Yes ☐ No
4. A Brief Vita ☑ Yes ☐ No
5. Reports for previous ASD grants have been filed separately with the Mellon Center ☑ Yes ☐ No ☐ NA

Signature of applicant and date

Signature of chair or direct supervisor

Please note that a recommendation letter from a direct supervisor or chair is not required for ASD grants.

Hominin[1] Hearths:
The Emergence of the Use of Fire by Human Ancestors

Chuck Frühling Springwood

Project Summary

Evolutionary anthropologists have sought to establish the earliest evidence of the use of fire, and today, it is well accepted that it was not humans (*Homo sapiens*) who first developed this skill but rather a human ancestor known as *Homo erectus*. *Homo sapiens* have existed for only 200,000 years, but evidence for the first use of fire dates to 1.9 million years ago. I seek to develop possible analytical models that explain how the overlapping processes of cultural and biological mechanisms unfolded across the evolution of *more than one species* of human ancestor, to enhance the control of fire. I apply the concept of *emergence*, a view of complex systems as dynamic, non-linear process-driven relationships characterized by autonomy. Emergent phenomena tend to self-organize into patterns whose ecology thrives on capacities, or potentials, rather than on teleological outcomes. As such, then, emergence is a critical tool for any analysis of an *adaptive capacity* for situated and distributed cognition, or in this case, for the invention of fire.

Previous ASD Grants

2016 *Locking Up Máori: New Zealand and the Global Crisis in Policing*. ($3,500). I worked with a group of activists committed to improving Máori experiences with law enforcement and to conduct interviews with once-imprisoned Máori. This research was presented at the 2018 Central States Anthropology Society conference.

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2005 *The Social Life of Guns and Beyond* ($3,500). Incorporated into several chapters of my book, Open Fire: Global Gun Cultures. (2007). Berg Publishers.

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[1] Hominin refers to bipedal human ancestors, such as *H. habilis*, *H. Erectus*, and Australopithecus.

Project narrative

A. End Product

I intend to present this work at the 2023 Central States Anthropology Society conference, and based on the reaction and feedback, I will prepare a manuscript for publication in the journal Culture and Evolution.

B. Scholarly significance

In Greek mythology, Prometheus taught human beings how to start and use fire. Sympathetic of human struggles and weakness, he stole fire from the workshop of Hephaistos and Athena on Mt. Olympus, and by hiding it in a hollow fennel-stalk then, he provided people with this invaluable gift. Indeed, most societies have folkloric narratives to explain the human ability to use and control fire, underscoring its relative importance in everyday life.

Evolutionary anthropologists have long sought to establish the earliest evidence of the use of fire, and today, it is well accepted that it was not humans (*Homo sapiens*) who first developed this skill but rather a human ancestor known as *Homo erectus*. *Homo sapiens*, or humans like ourselves, have been around for only 200,000 years, yet some anthropologists assert that evidence for the first use of fire is found at archeological sites dating to 1.9 million years ago. Evidence of fire that predates 500,000 years ago is not easy to find, but Wrangham's (2009) analysis relies on a geochemical technique in which a class of polycyclic aromatic hydrocarbons [PAHs] is produced when oil, gas, or wood is burned or even heated. PAHs can be petrogenic, the result of burning fossil fuels, or pyrogenic, the result of burning biomass such as wood.

Most archeologists are confident that a site in East Turkana Basin (Ethiopia) dating to 1.9 million years ago offers evidence of fire control and usage. Fieldworkers sifted through soil layers, locating red and orange sediments, as well as packed clay, and then using PAH techniques, determined that fires had burned the ground and heated rocks. At about 1.8 million years ago, just after this early evidence of fire, *H. erectus* remains reveal enlarged brains and smaller stomachs (the latter based on rib cage size).

As such, it is clear that animal species more than 1.5 million years prior to humans were using and starting fires, at various sites in Africa (Wrangham 2009). Claims that *H. erectus* "invented" control of fire nearly 2.0 million years ago, are relatively new. Anthropologists Wrangham (2009), Chazan (2017), and Gowlett (2016) cite the significant changes in the gut size and dentition of H. erectus, significantly smaller than its predecessor *H. habilis*, as partial evidence for such claims. They argue, convincingly, that cooking makes plant foods easier to chew and digest, and as such, cooking "frees up" the metabolic energy of human ancestors, allowing for the evolution of more "expensive" physiological processes such as brain size and neurological complexity. They note the East African sites of Koobi Fora and Chesowanja, which date to around 1.6 million and 1.4 million years ago, respectively, to indicate control of fire by *H. erectus*.

Species	Geographic location	Time period	Fire control?
H. habilis	Africa	2.5-1.9 MYA	No evidence of fire control
H. erectus	Africa, Eurasia	1.9-0.5 MYA	Evidence of fire control
Archaic H. sapiens	African, Asia, Europe	0.5-0.050 MYA	Abundant evidence of fire control

The issue of the origins of fire use by human ancestors is obviously complex, and the evidence suggests that its refinement occurs over periods of time when one human ancestor is evolving, biologically, into another human ancestor, each of whom is developing and teaching the *cultural* skill of making fire. Of course, this ability (capacity) to learn and to teach culturally is a result of biological evolution. The value of this project centers on two contributions, the first of which is a clear assertion that the process of controlling fire *spans the existence of two or more species*, each of which has different abilities to live life in cultural terms. The second is the development of a model to illustrate this process by applying some relatively recent trends in social analysis, such as complex adaptive systems, emergence, and distributed cognition.

To date, the distributed cognition approach still lacks clearly defined set of methods. It draws on many disciplines and multiple methodologies, from integrating ethnographic and ecological data into dynamic models (schematic, mathematical, and network) to merge theory with empirical claims. As such, it provides a framework for examining the interactions between people, activity, and artefacts which is not possible with traditional approaches to cognitive task analyses. It privileges complex interdependencies between people and collaborative interactions between people and objects/nonhumans. According to Yvonne Rogers, then,

> A challenge for the distributed cognition approach, therefore, is how to integrate concepts from the social and organisational sciences with the cognitive analysis of 'representational states'. In particular, it is difficult to combine macro-level theories, such as organizational learning, with micro-level detailed descriptions of the intersubjectivity that goes on between two people during a two-second encounter. (1997: 4)

Obviously, since my project considers prehistoric data and interactional settings produced by now extinct non-human animals, "intersubjectivity" and microanalyses of "two-second encounters" will not even be possible. Instead, the models I seek to construct must also integrate the concept of *emergence*, a scientific notion designed to consider complex phenomena as dynamic, non-linear process-driven of dependence and autonomy. It mediates between extreme forms of *dualism*, which reject the micro-dependence of some entities, and *reductionism*, which rejects macro-autonomy.

Applying emergence avoids, first, the dualistic divide of biology and culture (see Durham 1991), and second, the vague "just-so" narratives of evolutionary psychology. Emergent phenomena tend to self-organize into patterns whose ecology thrives on capacities, or potentials, rather than on teleological outcomes. As such, then, emergence prevails as a concept that must be paired with any analysis of an *adaptive capacity* for situated and distributed cognition, spanning multiple turns and speciation events in hominin evolution.

Methodology

Many, but not all, analyses of complexity and emergent systems utilize math-based computer models to generate data. In my effort to construct models of biological and cultural evolutionary processes spanning multiple species, my methodologies will be multiple, framed in large part by the rich compendium Handbook of Research Methods in Complexity Science, whose contributors assert:

> Complexity science is not limited to computation. [Approaches] are drawn from the biological sciences of biochemistry, thermodynamics, and ecology. When carefully operationalized, they provide very interesting opportunities to understand emergence in human organization in real time" (Lichtenstein 2018: 532).

They urge researchers to include qualitative, longitudinal analyses in efforts to unpack the ebb and flow of catalysts in emergent and complex adaptive systems of development.

I shall begin in the archives, with a critical review of research on the paleoneurology and brain structures of *H. habilis*, *H. erectus*, and archaic and contemporary *H. sapiens* (beginning with Bruner 2015 and Falk 2009), in order to plot a detailed outline of the emergent hominin cognitive capacities for creativity and invention, or in the simplest of terms, for the management and utilization of fire. Accordingly, I will review all of the archeological data of the use of fire, in order to produce a sketch of key sites – across time and space – marked by evidence of intentional burning and cooking, and the use of heat to produce tools.

Studying these sets of data, looking for correspondences and will allow me to shed light on the specific ways in which culture and biology not only interact but actually seem at key moments to coalesce. More importantly, I seek a model that can reveal how this coalescence serves to guide the natural selection of hominin neurology and cognition such that one species evolves (in a non-linear fashion) into another species.

One example of the sort of analysis that will characterize my work centers on a significant part of the left hemisphere of the human brain, Broca's Area. Located in the frontal lobe, Broca's area is central to the production of speech. Remarkable, some paleoneurologists, including Falk (2009), use cranial endocast analysis to claim that an area resembling Broca's area is found in H. habilis at approximately 2.0 million years ago (no such claims are made for Wernicke's area). This date corresponds to the first stone tools and a preference for right handedness, just prior to the earliest evidence of fire.

Thus, we see the convergence of possible lateralization (for language and for fine-motor skills), the early control of fire, evidence of cooking food, and an increase in hunting, just *as H. erectus* emerges (from some *H. habilis* animals?) under various selective pressures, in eastern sub-Saharan Africa. The analyses that will characterize my project will dig deeper than facts such as these by examining field reports of particular archeological sites, which offer maps, stratigraphic analysis, and diagrams and chemical analysis of possible burn pits. As such, these detailed spatial and temporal descriptions provide data that will be necessary for building models of distributed cognition across space, time, object, and activity.

This proposal is resubmission of a proposal FDC reviewed in the fall, when the committee expressed some concern about how the travel portion of the budget would work. I am grateful that the committee urged me to resubmit in order to address those issues. After some reflection, I have decided not request funds to visit the Harvard lab of Richard Wrangham, the "dean" of fire archeology. Although Wrangham has numerous pieces of fossil evidence revealing charred bones, reproductions of fire pits, and skeletal samples indicating evolutionary

changes influenced by cooked food (particularly dentition and rib cage specimens), I believe that my desire to visit the lab is not well-enough grounded. In truth, I was hoping that while I could examine his materials, I was ultimately looking forward to several days conversing with Wrangham about my project. In addition, the status of the covid pandemic is not as ideal as it was when I submitted the first iteration of this proposal. Therefore, I am not including any request for travel support in this proposal, although I may eventually visit Wrangham on my budget, when it is safer and more convenient.

C. Professional significance

I became interested in conducting research on the origins of fire while covering the topic in my Anth 366 course 'The Coevolution of Biology and Culture," during which students are asked to discuss whether the origins of fire use was an example more of cultural or biological evolution. Most claim it is cultural evolution, while others offer a "centrist" model, arguing that it is both. Despite their effort, in these essays students often seem to fall a bit short of what I hope to teach them. My goal is to open their eyes to the possibility that culture and biology are so imbricated, so mutually contingent, that they are almost impossible to separate. After grading the essays, I often pose the question, which leads to laughter and rich discussion, "Possoms are very intelligent indeed, but if they are really so smart, why don't they make fires to keep warm?!"

Although I am a cultural anthropologist, the research outlined in this proposal falls clearly within the subdiscipline of biological anthropology, or more specifically, paleoanthropology. It is unusual for a cultural anthropologist to venture into such waters, but because of my commitment to all four of my discipline's subfields and the ability to draw upon some graduate coursework in this area, it is most appropriate at this point in my career to embark on such a project. It will clearly support many of my teaching interests. Moreover, it will allow me to join other anthropologists whose work transcends rigid sub-disciplinary boundaries, to participate in new scholarly conversations, and to work to integrate culture and biology into important biocultural models of human behavior.

D. Expenses

1) I am requesting a $2000.00 stipend to support my research over the next 6 to 9 months.

2) The following **books** promise to be so critical to my research that I would like to purchase them:

- Roebroeks, W. (2011). Guts and Brains: An Integrative Approach to the Hominin Record. Amsterdam University Press.
- Tabaczek, Mariusz. (2019). Emergence: Towards a New Metaphysics and Philosophy of Science. U. Notre Dame Press.
- Kelly, Robert. (2016). The Fifth Beginning: What Six Million Years of Human History Can Tell Us About Our Future. U. California Press.

In addition, I would like to purchase the Bruner, Falk, and Lichtenstein texts noted in the reference list. The approximate total for these six books is $380.00. My total budget request then will be $2,380.00.

E. Timetable

December 2021:

- Undertake archival research and begin preparation of evolutionary models that include plotting of significant sites and time periods of fire usage
- Map correlations with noteworthy anatomical adaptations, both of brain and post-cranial morphology
- Share models with and seek critical feedback from key paleoneurologists

April 2022

- Revise models
- Again, review literature, looking for new research on fire and hominin evolution
- Review prevailing research questions, revise and draft responses to these working questions

June 2022 and late summer

- Continue to revise and develop models, emphasizing theoretical tools such as distributed cognition and emergence
- Begin drafting manuscript for conference presentation

References

Bruner, Emiliano. (2015). Human Paleoneurology. Springer Press.

Chazan, Michael. (2017). A Long Prehistory of Fire. Current Anthropology 58(16): 351-359.

Durham, William. (1991). Coevolution: Genes, Culture, and Human Diversity. Stanford: Stanford University Press.

Falk, Dean. (2009). Finding Our Tongues: Mothers, Infants, and the Origins of Language. Basic Books.

Gowlett, J. (2016). The discovery of fire by humans: a long and convoluted process. Phil. Trans. R. Soc. B 371: 1-10.

Lichtenstein, Benyamin. (2018). Applying the 15 complexity sciences: Methods for studying emergence in organizations. In, Handbook of Research Methods in Complexity Science. Mitleton-Kelly, et al. (eds.). Pp. 525-544. UK: Edward Elgar Publisher.

Mitchell, Kevin. (2021). The Evolution of Agency. [Seminar presentation, hosted by Santa Fe Institute]. https://www.santafe.edu/events/kevin-mitchell-evolution.

Rogers, Yvonne. (1997). A Brief Introduction to Distributed Cognition. Unpublished paper.

Wrangham, Richard. (2009). Catching Fire: How Cooking Made Us Human. NY: Basic Books.

ASD Grant Budget Page

Faculty Name(s) Chuck Springwood

Project Title Hominin Hearths: The Emergence of the Use of Fire by Human Ancerstors

A. Equipment Description (please give source of recent estimate) $_____

B. Supplies and Services (please itemize) $380.00

books, as listed in project narrative

C. Travel Expenses (please itemize) $_____

D. Consultancy Fees $_____

E. Living Expenses (see proposal guidelines) $_____

F. Student Wages (see proposal guidelines) $_____

G. Faculty Stipend (maximum $2,000 per faculty Member) $2000.00

H. Publication Expenses $_____

I. Other $_____

TOTAL $2,380

(Maximum award $3,500 per individual or $5,500 for a joint proposal from two or more faculty members)

NOTE: List all expenses, even if the total exceeds the maximum grant. If your budget exceeds the maximum grant, explain how you will make up for the shortfall.

Curriculum Vita

Charles Fruehling Springwood

Professor of Anthropology
Illinois Wesleyan University
Department of Sociology & Anthropology

EDUCATION

UNIVERSITY OF ILLINOIS
Department of Anthropology
1994 Ph.D.
1991 M.A.

PURDUE UNIVERSITY
1988 B.A. in Anthropology
Highest Distinction

LANGUAGES

Spanish
Japanese

DOCTORAL DISSERTATION

1994 From Cooperstown to Dyersville: Spatial and Historical Practices of Baseball Nostalgia. Ph.D. Dissertation. University of Illinois

MASTERS THESIS

1991 The Alcoholic Self and Family in *Danshukai*: A Japanese Lay Therapy Group. M.A. Thesis. University of Illinois

TEACHING & FACULTY POSITIONS

2006-present	Professor of Anthropology Department of Sociology and Anthropology
2017	University of Waikato, NZ Visiting Professor, Spring
2016	President-elect, Central States Anthropology Society
2014-19	Associate Director, IWU Center for Human Rights & Social Justice
2009	Director, IWU Madrid Program
2007-08	Acting Chair, Dept. of Sociology and Anthropology, IWU

MONOGRAPHS

2001 *Beyond the Cheers: Race as Spectacle in College Sport*. New York: SUNY Press. [co-authored with C. Richard King]

1996 *Cooperstown to Dyersville: A Geography of Baseball Nostalgia.* Boulder, CO: Westview Press.

EDITED COLLECTIONS

2007 *Open Fire: Global Gun Cultures*. London: Berg Publishers.

2001 *Team Spirits: The Native American Mascots Controversy.* Lincoln: University of Nebraska Press. [co-edited with C. Richard King]. *CHOICE* 2001 Outstanding Academic Title.

PUBLISHED ARTICLES & CHAPTERS

In preparation Shiny, Happy Names: A New Trend in Japanese Individualism? For, Asianetwork Exchange: A Journal for Asian Studies in the Liberal Arts. [With Payton Letko].

2020 Gun Concealment, Display, and Other Magical Habits of the Body. Essay reprinted in, *Sociocultural Anthropology: Critical and Primary Sources: Foundations, Fundamentals and Frontiers*. Barbara Miller (ed.). Routledge.

2018 The age of dwindling American Empire: Soldiers, gaming, and affective labor in warzones. *Cultural Studies – Critical Methodologies*: 1-10.

2017 Armed Angels: Defying Demons with Guns. *HAU: Journal of Ethnographic Theory*, 7(3): 61-65.

2014 Gun Concealment, Display, and Other Magical Habits of the Body. *Critique of Anthropology*, 34(4): 450-471.

2014 Tamales, Tapetes, and Baskteball: Signs of Oaxacan Ethnicity in the United States. Pgs. 183-194. In, *Beyond C.L.R. James: Shifting Boundaries of Race and Ethnicity in Sport*, J. Nauright, et al. (eds.). University of Arkansas Press.

2010 A *Yonsei* Becomes Japanese: The Shinjuku Transformations of a Transpacific Japanese American Family. In, *Japanese and Nikkei and Home and Abroad: Negotiating Identities in a Global World*, Adachi, N. (ed.). Cambria Press.

2009 If Santa Wuz Black: The Domestication of a White Myth. Studies in Symbolic Interaction 33: 239-254.

2007 Gunscapes: Toward a Global Geography of the Firearm. In, *Open Fire: Global Gun Cultures*. London: Berg Publishers.

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Studying these sets of data, looking for correspondences and will allow me to shed light on the specific ways in which culture and biology not only interact but actually seem at key moments to coalesce. More importantly, I seek a model that can reveal how this coalescence serves to guide the natural selection of hominin neurology and cognition such that one species evolves (in a non-linear fashion) into another species.

One example of the sort of analysis that will characterize my work centers on a significant part of the left hemisphere of the human brain, Broca's Area. Located in the frontal lobe, Broca's area is central to the production of speech. Remarkable, some paleoneurologists, including Falk (2009), use cranial endocast analysis to claim that an area resembling Broca's area is found in H. habilis at approximately 2.0 million years ago (no such claims are made for Wernicke's area). This date corresponds to the first stone tools and a preference for right handedness, just prior to the earliest evidence of fire.

Thus, we see the convergence of possible lateralization (for language and for fine-motor skills), the early control of fire, evidence of cooking food, and an increase in hunting, just *as H. erectus* emerges (from some *H. habilis* animals?) under various selective pressures, in eastern sub-Saharan Africa. The analyses that will characterize my project will dig deeper than facts such as these by examining field reports of particular archeological sites, which offer maps, stratigraphic analysis, and diagrams and chemical analysis of possible burn pits. As such, these detailed spatial and temporal descriptions provide data that will be necessary for building models of distributed cognition across space, time, object, and activity.

This proposal is resubmission of a proposal FDC reviewed in the fall, when the committee expressed some concern about how the travel portion of the budget would work. I am grateful that the committee urged me to resubmit in order to address those issues. After some reflection, I have decided not request funds to visit the Harvard lab of Richard Wrangham, the "dean" of fire archeology. Although Wrangham has numerous pieces of fossil evidence revealing charred bones, reproductions of fire pits, and skeletal samples indicating evolutionary

changes influenced by cooked food (particularly dentition and rib cage specimens), I believe that my desire to visit the lab is not well-enough grounded. In truth, I was hoping that while I could examine his materials, I was ultimately looking forward to several days conversing with Wrangham about my project. In addition, the status of the covid pandemic is not as ideal as it was when I submitted the first iteration of this proposal. Therefore, I am not including any request for travel support in this proposal, although I may eventually visit Wrangham on my budget, when it is safer and more convenient.

C. Professional significance

I became interested in conducting research on the origins of fire while covering the topic in my Anth 366 course 'The Coevolution of Biology and Culture," during which students are asked to discuss whether the origins of fire use was an example more of cultural or biological evolution. Most claim it is cultural evolution, while others offer a "centrist" model, arguing that it is both. Despite their effort, in these essays students often seem to fall a bit short of what I hope to teach them. My goal is to open their eyes to the possibility that culture and biology are so imbricated, so mutually contingent, that they are almost impossible to separate. After grading the essays, I often pose the question, which leads to laughter and rich discussion, "Possoms are very intelligent indeed, but if they are really so smart, why don't they make fires to keep warm?!"

Although I am a cultural anthropologist, the research outlined in this proposal falls clearly within the subdiscipline of biological anthropology, or more specifically, paleoanthropology. It is unusual for a cultural anthropologist to venture into such waters, but because of my commitment to all four of my discipline's subfields and the ability to draw upon some graduate coursework in this area, it is most appropriate at this point in my career to embark on such a project. It will clearly support many of my teaching interests. Moreover, it will allow me to join other anthropologists whose work transcends rigid sub-disciplinary boundaries, to participate in new scholarly conversations, and to work to integrate culture and biology into important biocultural models of human behavior.

D. Expenses

1) I am requesting a $2000.00 stipend to support my research over the next 6 to 9 months.

2) The following **books** promise to be so critical to my research that I would like to purchase them:

- Roebroeks, W. (2011). Guts and Brains: An Integrative Approach to the Hominin Record. Amsterdam University Press.
- Tabaczek, Mariusz. (2019). Emergence: Towards a New Metaphysics and Philosophy of Science. U. Notre Dame Press.
- Kelly, Robert. (2016). The Fifth Beginning: What Six Million Years of Human History Can Tell Us About Our Future. U. California Press.

In addition, I would like to purchase the Bruner, Falk, and Lichtenstein texts noted in the reference list. The approximate total for these six books is $380.00. My total budget request then will be $2,380.00.

E. Timetable

December 2021:

- Undertake archival research and begin preparation of evolutionary models that include plotting of significant sites and time periods of fire usage
- Map correlations with noteworthy anatomical adaptations, both of brain and post-cranial morphology
- Share models with and seek critical feedback from key paleoneurologists

April 2022

- Revise models
- Again, review literature, looking for new research on fire and hominin evolution
- Review prevailing research questions, revise and draft responses to these working questions

June 2022 and late summer

- Continue to revise and develop models, emphasizing theoretical tools such as distributed cognition and emergence
- Begin drafting manuscript for conference presentation

References

Bruner, Emiliano. (2015). Human Paleoneurology. Springer Press.

Chazan, Michael. (2017). A Long Prehistory of Fire. Current Anthropology 58(16): 351-359.

Durham, William. (1991). Coevolution: Genes, Culture, and Human Diversity. Stanford: Stanford University Press.

Falk, Dean. (2009). Finding Our Tongues: Mothers, Infants, and the Origins of Language. Basic Books.

Gowlett, J. (2016). The discovery of fire by humans: a long and convoluted process. Phil. Trans. R. Soc. B 371: 1-10.

Lichtenstein, Benyamin. (2018). Applying the 15 complexity sciences: Methods for studying emergence in organizations. In, Handbook of Research Methods in Complexity Science. Mitleton-Kelly, et al. (eds.). Pp. 525-544. UK: Edward Elgar Publisher.

Mitchell, Kevin. (2021). The Evolution of Agency. [Seminar presentation, hosted by Santa Fe Institute]. https://www.santafe.edu/events/kevin-mitchell-evolution.

Rogers, Yvonne. (1997). A Brief Introduction to Distributed Cognition. Unpublished paper.

Wrangham, Richard. (2009). Catching Fire: How Cooking Made Us Human. NY: Basic Books.

Curriculum Vita

Charles Fruehling Springwood

Professor of Anthropology
Illinois Wesleyan University
Department of Sociology & Anthropology

EDUCATION

UNIVERSITY OF ILLINOIS
Department of Anthropology
1994 Ph.D.
1991 M.A.

PURDUE UNIVERSITY
1988 B.A. in Anthropology
Highest Distinction

LANGUAGES

Spanish
Japanese

DOCTORAL DISSERTATION

1994 From Cooperstown to Dyersville: Spatial and Historical Practices of Baseball Nostalgia. Ph.D. Dissertation. University of Illinois

MASTERS THESIS

1991 The Alcoholic Self and Family in *Danshukai*: A Japanese Lay Therapy Group. M.A. Thesis. University of Illinois

TEACHING & FACULTY POSITIONS

2006-present	Professor of Anthropology Department of Sociology and Anthropology
2017	University of Waikato, NZ Visiting Professor, Spring
2016	President-elect, Central States Anthropology Society
2014-19	Associate Director, IWU Center for Human Rights & Social Justice
2009	Director, IWU Madrid Program
2007-08	Acting Chair, Dept. of Sociology and Anthropology, IWU

MONOGRAPHS

2001 *Beyond the Cheers: Race as Spectacle in College Sport*. New York: SUNY Press. [co-authored with C. Richard King]

1996 *Cooperstown to Dyersville: A Geography of Baseball Nostalgia*. Boulder, CO: Westview Press.

EDITED COLLECTIONS

2007 *Open Fire: Global Gun Cultures*. London: Berg Publishers.

2001 *Team Spirits: The Native American Mascots Controversy.* Lincoln: University of Nebraska Press. [co-edited with C. Richard King]. *CHOICE* 2001 Outstanding Academic Title.

PUBLISHED ARTICLES & CHAPTERS

In preparation Shiny, Happy Names: A New Trend in Japanese Individualism? For, Asianetwork Exchange: A Journal for Asian Studies in the Liberal Arts. [With Payton Letko].

2020 Gun Concealment, Display, and Other Magical Habits of the Body. Essay reprinted in, *Sociocultural Anthropology: Critical and Primary Sources: Foundations, Fundamentals and Frontiers*. Barbara Miller (ed.). Routledge.

2018 The age of dwindling American Empire: Soldiers, gaming, and affective labor in warzones. *Cultural Studies – Critical Methodologies*: 1-10.

2017 Armed Angels: Defying Demons with Guns. *HAU: Journal of Ethnographic Theory*, 7(3): 61-65.

2014 Gun Concealment, Display, and Other Magical Habits of the Body. *Critique of Anthropology*, 34(4): 450-471.

2014 Tamales, Tapetes, and Baskteball: Signs of Oaxacan Ethnicity in the United States. Pgs. 183-194. In, *Beyond C.L.R. James: Shifting Boundaries of Race and Ethnicity in Sport*, J. Nauright, et al. (eds.). University of Arkansas Press.

2010 A *Yonsei* Becomes Japanese: The Shinjuku Transformations of a Transpacific Japanese American Family. In, *Japanese and Nikkei and Home and Abroad: Negotiating Identities in a Global World*, Adachi, N. (ed.). Cambria Press.

2009 If Santa Wuz Black: The Domestication of a White Myth. Studies in Symbolic Interaction 33: 239-254.

2007 Gunscapes: Toward a Global Geography of the Firearm. In, *Open Fire: Global Gun Cultures*. London: Berg Publishers.