

ZAMM2025 Schedule in Detail

Events will take place at the Basin Ballroom unless otherwise noted.

Sunday, October 19

Wanderoo

5:30pm Welcome Reception Happy Hour (Wanderoo)

Monday, October 20

Basin Ballroom

8:30am Registration opens

9:00am-9:05am **Athena Aktipis** Conference Welcome

9:05am-9:45am **Andrew Macomber** The Stranger, Corpse Medicine, and Technologies of Extended Cognition: Varieties of Human Exploitation Folklore in Japan

9:45am-10:00am Coffee Break & Preview Slides

10:00am-11:15am **Zombie Medicine: Short talks**

Joe Alcock From Mindfulness to Mindlessness

Summer Mengelkoch The Future of Healthcare is PRECISE: results of a fully remote RCT to reduce stress

Marius Unnvik "Our patience is wearing thin": A tale of two behavioral immune system strategies for future pandemics

Jessica Brinkworth Resilience is in our bones: host-pathogen interactions as a roadmap for uncertain times

Jason Warnick Psychopharmacological Case Studies of Scopolamine Usage that Model Zombie Behavior

11:15am-11:45am Coffee Break

11:45pm-12:30pm **Biological Zombies: Short talks**

Jennifer Fewell Mutualism is manipulation: cross species relationships and zombies

Zi Teng Wang Mice who simp for cats: what the *T. gondii* parasite teaches us about host manipulation, and what does it have to do with memes?

Jon Harrison Man-eating giant zombie insects

12:30pm-2:30pm **The Apocalypse Museum*** Lunch Workshop (Lunch included)

Michael Searle Colony: Play the Board Game!

Scout Mastick Colony: Play the Board Game!

Gissel Marquez and Madds Garza Kombucha Exhibit!

2:30pm-3:10pm **Polly Wiessner** From face-to-face to digital: Implications for other worlds

3:10pm-3:45pm **Panel:** Intellectual Zombification, Education & Intergenerational Transmission (Polly Wiessner, Andrea Henderson)

3:45pm-4:00pm Coffee Break

4:00pm-4:45pm **Storytelling & Art: Short talks**

Keith Markman The Role of Mental Simulation in Evoking Feelings of Eeriness, Creepiness, and Dread
Dana Klisanin Stories as Survival Kits: Helping Kids Face the Eco-Apocalypse
Andrew van Horn A machine to process ghosts: integrating computer vision into the extended cognitive system of the digital humanities

4:45pm **Baba Brinkman** Rap Up

5:30pm Happy Hour (Brews)

6:00-8:00pm Apocalypse Roadshow (Brews)

Tuesday, October 21

Basin Ballroom

8:00am-8:45am Morning Coffee Hour (Haunted Grounds Coffee)

9:00am-9:05 **Athena Aktipis** Welcome

9:05am-9:45am **David Pinsof** The End of The World Will Be Funnier Than You Think: Insights From the Evolutionary Psychology of Humor

9:45am-10:00am Coffee Break

10:00am-10:45am **Coalitions & Mating: Short talks**

Mitch Brown Finding Fathers in the Apocalypse: Functional Stereotyping of Formidable Men as Protective Fathers

Anujin Khosbayar Behavioral Attraction Predicts Morbidly Curious Women's Mating Interest in Men with Dark Personalities

Anastasia Makhanova Hormonal Contraceptives and Women's Psychology: What Could Change During the Apocalypse?

10:45am-11:15pm **Panel: Mating & Humor** (morning speakers)

11:15am-11:30am Coffee Break

11:30am -12:30pm **Preparing for Disaster: Short talks**

Bernardo Ubaldo Seixas Facing the Storm with Curiosity: A New Scale for Disaster Preparedness

Scout Mastick Moravec's Paradox, Moravec's Future: A Framework for Human/AI Cooperation

Philip Arthur Hybrid Insurance Models

Indra Gesink When the dead cannot die; Implications for apocalyptic risk management

12:30pm - 2:00pm Lunch Break (Lunch on your own)

2:00pm- 2:40pm **Keynote: Clay Routledge** Nostalgia Futurism: How Sentimentally Exploring the Past Empowers Us to Build the Sci-Fi World We Want to Live In

2:40pm- 3:00pm Coffee Break

3:00pm-3:45pm **Foresight & Change: Short talks, Part 1**

Andrea Henderson Brains! The Future of Learning in a Zombie Economy

Galina Mihaleva Responsive Futures: Smart Wearables, Intergenerational Systems, and the Role of Embodied Design in Apocalyptic Resilience

Saina Taidi Mirror, Mirror on the Wall: Why Our Systems Rise, Then Face Change, Then Fall

3:45-4:00pm

Coffee Break

4:00pm-4:45pm

Flash talks, Part 1 - Flesh it out in a flash!

4:45pm

Baba Brinkman Rap Up

7:00pm-8:30pm

Shane Mauss Stand Up Science: Zombie Edition, featuring Coltan Scrivner and Athena Aktipis; cash bar ([ticketed event](#))

Wednesday, October 22

Basin Ballroom

9:00am-9:30am

Foresight & Change: Short talks, Part 2

Nicci Obert Beyond Survival: Activating Prosocial Futures or Why You Want a Futurist in Your Survival Pod

Indra Gesink Aithos: Evaluations to safeguard human autonomy in a world populated with artificial agents

9:30am-10:00am

Coffee Break

10:00am-10:15am

Psychology and Neuroscience of Magic & Magic Show (Zi Teng Wang)

10:15am-11:15pm

Foresight / Future Envisioning **Workshop**

Dana Klisanin How to Rewild Yourself for the Apocalypse

Athena Aktipis How To Build a Cooperative Future for Humanity

11:15am-11:30am

Coffee Break

11:30am-12:30pm

Where Do You Stand on AI? - **Workshop (Pamela Winfrey)***

12:30pm-2:00pm

Lunch Break (Lunch on your own)

2:00pm-2:30pm

Kombucha Zombies: Short talks

Gissel Marquez: How Can Microbes Protect Us From an Inner Body Apocalypse?

Madds Garza Kombucha Perturbation: Microscopic Apocalypse?

2:30pm-2:45pm

Coffee Break

2:45pm-3:15pm

Flash talks, Part 2 - Flesh it out in a flash!

3:15pm-4:15pm

Joe Alcock Monster Medicine Workshop

4:15pm-4:30pm

Athena Aktipis & Joe Alcock Conference Closing

5:00pm

Happy hour (Spring on Main)

6:00pm

Film festival begins (The Aud)

*NSF Acknowledgement

This material is based upon work supported by the National Science Foundation under Grant No. 2319438, titled "What rules of life allow collectives to effectively manage risk? Understanding the rules underlying risk management across systems to increase societal resilience."

*NSF Disclaimer

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Cross-over events with Nightmare in the Ozarks Film Festival

Visit <https://www.nightmareintheozarks.com/> for more information about the film festival!

Wednesday, October 22

7: 45pm The Art of Dark Comedy: Shane Mauss, David Pinsof, Justin Best, Anthea Neri-Best (Aud)

Thursday, October 23

9:00am-4:00pm [Writers workshop](#) (Osage Creek Lodge, 101 East van Buren)

Saturday, October 25

5:30pm [Zombie Crawl](#) line up for walkers start on foot (Carnegie Public Library, 194 Spring Street)

6:00pm [Zombie Crawl](#)

Conference Locations

The Wanderoo Lodge & Gravel Bar
216 W Van Buren
Eureka Springs, AR 72632
Website: <http://www.wanderoolodge.com>

Basin Ballroom
Basin Park Hotel
12 Spring St
Eureka Springs, AR 72632
Website: <http://www.basinpark.com>

The Boodega
55 N Main St.
Eureka Springs, AR 72632
Website: <https://www.facebook.com/eurekaboodega>

Haunted Grounds Coffee
55 N Main St.
Eureka Springs, AR 72632
Website: <https://www.instagram.com/hauntedgroundscoffeeeureka/>

Spring on Main
55 S Main St.
Eureka Springs, AR 72632
Website: <https://thespringonmain.com/>

Eureka Springs Auditorium (AUD)
36 S Main St.
Eureka Springs, AR 72632
Website: <https://www.visiteurekasprings.com/the-aud/>

ZAMM2025 Abstracts

The following abstracts are in chronological order, by date and time of presentation. [updated 19/8/2025]

Invited talk:

The Stranger, Corpse Medicine, and Technologies of Extended Cognition: Varieties of Human Exploitation Folklore in Japan

Andrew Macomber, Assistant Professor of East Asian Religions, Oberlin College

When electric lines were first installed across the Japanese archipelago in the late nineteenth century, reports quickly spread of Christian westerners coating the lines with the blood and oil of unmarried women. However unusual, these ideas sprung from a dense web of folklore that linked “strangers” to weird technologies of medicine and self extension, technologies that — as rumor would have it — were fueled by human parts and human vitality. This talk explored the variety of human exploitation folklore in Japan from twelfth to twentieth centuries.

Andre Macomber explores the intersections of the body, religion, and medicine in premodern Japan. His first monograph, *Cadaverous: Postmortem Contagion and Ritual Immunity in Medieval Japanese Buddhism* (forthcoming with the University of Hawai'i Press, 2026), examines ritual responses to the emergence of novel afflictions in medieval Japan.

The end of the world will be funnier than you think: insights from the evolutionary psychology of humor

David Pinsof, UCLA Social Minds Lab; Co-Creator of Cards Against Humanity

Most depictions of the end of the world are gloomy, with nary a joke in sight. Here, I present an evolutionary theory of humor and assess its implications for life in a post-apocalyptic wasteland. I argue that humor isn't just a frivolous diversion: it may hold the key to our survival.

Zombie Medicine, Short Talks:

From Mindfulness to Mindlessness

Joe Alcock

Is it adaptive to have a highly sensitive response to anxiety, stress, and especially pain in the zombie apocalypse? Conventionally, it is assumed that stress, anxiety, pain, and inflammation are pathological, but they have benefits that may be apparent when a zombie is trying to eat your brain. At the same time, reduced stress and anxiety may be a manipulation in itself. The implications are discussed in this presentation.

The Future of Healthcare is PRECISE: results of a fully remote RCT to reduce stress

Summer Mengelkoch

Modern healthcare is reactionary—focused on symptom reduction instead of enhanced wellbeing—inaccessible to many, and often ineffective. However, some modern approaches in healthcare have been widely successful. A precision medicine approach has revolutionized the way we treat cancer, resulting in far better treatment outcomes for those diagnosed today compared to even 20 years ago. Now is the time to use emerging technologies to expand precision medicine approaches to new areas. To that end, my team has developed and tested a fully-remote, precision medicine, stress management intervention program, the California PRECision Intervention for Stress and rEsilience (PRECISE). In an RCT (N = 421), the PRECISE successfully reduced stress levels in participants by targeting one of five behavioral domains (including thinking styles, social relationships, diet, exercise, and sleep) based on which domain participants reported becomes the most dysregulated in the face of stress. We found that compared to control groups, intervention groups experienced a significant decrease in stress levels, which continued to improve 3 months after the intervention was completed. We collected all data and delivered all intervention content remotely, with the goal of translating PRECISE into a highly accessible, self-paced tool that could be used by individuals or incorporated into clinical care settings. The future of healthcare is in precision approaches that target processes upstream of disease, and will be driven by advances in remote technologies and well-informed decision aid tools which limit demands on healthcare providers. To realize this future, health-focused researchers must begin to

approach intervention strategies with innovative mindsets, moving away from a one-size-fits-all approaches and intervening upstream of disease.

“Our patience is wearing thin”: A tale of two behavioral immune system strategies for future pandemics

Marius Unnvik

The behavioral immune system is a constellation of strategies for combating pathogen threats. One strategy is the tendency to prefer controlled pathogen exposure, which potentiates the physiological immune system. The most common contemporary form of human immunity potentiation is vaccines. During the COVID-19 pandemic, half of America sympathized with President Joe Biden when he said “our patience is wearing thin” in reference to people’s vaccine hesitancy. But public health campaigns for vaccine-related decision making in future apocalyptic pandemics should integrate an understanding of the default behavioral immune system strategy: pathogen avoidance.

Pathogen avoidance is a set of tendencies that facilitate proximal avoidance of pathogen threats. Prior to the COVID-19 pandemic, most research showed that pathogen avoidance was negatively associated with believing that vaccinations were safe and effective. During the COVID-19 pandemic, however, the evidence for this association was mixed. To date, there has been no systematic post-pandemic investigation of how pathogen avoidance is associated with vaccination strategies.

In Study 1 (N=335), pathogen avoidance was associated with endorsing conscious avoidance strategies, but not with believing that vaccination strategies are effective. In Study 2 (N=598), we pitted the two strategies against each other: pathogen avoidance was associated with believing that avoidance is a more effective strategy than vaccinations, and that trusting one’s own intuitions and being careful are the best ways to avoid pathogens. In Study 3 (N=660), in the context of recent measles outbreaks, we found that pathogen avoidance was positively associated with viewing vaccinations as the best way to avoid measles and as more effective than avoidance strategies. Our results advance theory by exploring whether avoidance and vaccination strategies may work flexibly as two complementary or compensatory behavioral immune system strategies.

Resilience is in our bones: host-pathogen interactions as a roadmap for uncertain times

Jessica Brinkworth

The modern human immune system is, in part, the outcome of 4.5 billion years of evolution in response to navigating space with exploitative lifeforms. Most infectious disease deaths occur after crisis, when an opportunistic commensal bacteria rises to dominance, creating uncertainty for the life of an already compromised host. Survivors of severe infections push through this biological dislocation via supportive care and evolved immune strategies that are cooperative, flexible, redundant, informed, shared and ancient.

Psychopharmacological Case Studies of Scopolamine Usage that Model Zombie Behavior

Jason Warnick

One of the oldest documented psychotropic substances is scopolamine. Scopolamine is found throughout the world in plants of the Solanaceae, or nightshade, family. Different cultures independently developed these plants as phytomedications for a variety therapeutic needs. For example, this scopolamine-containing plants were used by the Babylonians to relieve toothaches and the ancient Greeks to prevent sea sickness.

However, there is a dark history of scopolamine used both, deliberately and accidentally, for the creation of real-life zombies. This talk will discuss the U.S. Department of State's 2023 warning about the use of dragon's breath to create 'zombies' who aid in their own robbery in Colombia, a bad batch of heroin that led to over 100 'zombies' attacking in hospital workers in Philadelphia in the 1990's, and the current use of truth serums in legal cases internationally. Scopolamine will be shown to be the primary method to model the horror movie depictions of zombies.

Biological Zombies, Short Talks:

Mutualism is manipulation: cross species relationships and zombies

Jennifer Fewell

The ecological world is built in large part around species interactions and particularly around mutualisms, where two or more species form functional partnerships by providing each other with resources, protection, and/or other valuable assets. Mutualism, like all social relationships, involves the give and take of what an individual is willing to contribute and what they gain from the relationship. This give and take is based, in turn, on communication between those individuals. Examining some of the more interesting and common mutualism relationships, such as plant-pollinator and microbiome-host, illustrates the importance of manipulation by one or both parties in maintaining the partnership. Further, mutualistic relationships are often not equal and indeed may involve

misinformation, social parasitism, and biased fitness outcomes. In sum, manipulation is a fundamental part of mutualisms and by extension social relationships more generally. If sociality is built around manipulation, then to be social is to be a zombie.

Mice who simp for cats: what the *T. gondii* parasite teaches us about host manipulation, and what does it have to do with memes?

Zi Teng Wang

Toxoplasma gondii is the most successful parasite in the world, found on every continent, in every kind of animal, and in about 1/3rd of people worldwide. Its definitive host is the cat, and its sexual reproductive cycle occurs exclusively inside the cat's digestive system, where the parasite forms microscopic, durable, environmentally resistant oocysts that persist beyond the lifetime of the host. In all other hosts, the parasite dies when the host does. *T. gondii*-infected mice lose their instinctive aversion of cat odor, and instead become sexually attracted to the smell, which gets them eaten and delivers the parasite to its definitive host, helping it complete its life cycle.

This fascinating example of the manipulation hypothesis has strong parallels to the ways that ideas, information, and memes live in our brains and our minds, spreading and evolving based on how effectively they can manipulate their host into spreading them. Like the mouse driving itself into the jaws of the cat, human members of the Leopards Eating People's Faces political party, and human carriers of many other beliefs too, know firsthand the personal damage that those beliefs can carry. Unlike physical parasites and pathogens, immunization against harmful memes and beliefs requires awareness, education, and curation of one's informational landscape.

Lemmings don't actually jump off cliffs and drown themselves, but the belief that they do, fabricated by some nature documentary filmmakers throwing rodents into the sea for content, remains a persistent belief that still circulates today. Humans shouldn't throw ourselves off cliffs either. Teaching media literacy and skeptical evidence-based, scientific thinking is a preventative strategy that is urgently worth implementing.

Man-eating giant zombie insects

John Harrison

Man-eating giant zombie insects don't exist, except perhaps in our minds and science fiction. Could giant insects exist, on this or a future earth? I'll briefly discuss what is known. Insects are amazing at resurrection; many can arise, Lazarus-like, after many hours or even days of downing. And who could miss a headline like "sex-crazed zombie cicadas on speed?" But perhaps the most remarkable thing about insects is how we perceive them; as most western humans transition from joyous curiosity to fear and

loathing at adolescence. I'll finish with an evaluation of the benefits and harms of insects, and some advice on how to live in a world in which we are exerting strong natural selection on insects to successfully exploit humanity.

Invited talk, workshop, panel:

Workshop on SciFi, Narrative & Policy

Andrew Maynard

TBD

On Curiosity, Books, and Universities in The Apocalypse

Nicole Barbaro, Director of Communications, Marketing, and Events, Heterodox Academy

Nicole Barbaro, PhD, is an expert in experimental psychology with a specialization in evolution and human development. She is the author of the popular substack, Bookmarked Read, a go-to source for scholars and the general public for non-fiction book reviews. Nicole currently works to ensure that our universities are places where intellectual curiosity thrives at the Heterodox Academy (HxA).

Panel: Intellectual Zombification & Academic Freedom

Martie Haselton & Nicole Barbaro

TBD

Storytelling & Art, Short Talks:

How People Talk About Human Extinction: Language Insights from Interventions on Long-Term Thinking

Kyle Law

How do people make sense of the idea that humanity could go extinct, and what do they think we should do about it? In a reanalysis of our recent studies on intergenerational

concern (the motivation to protect the well-being of future generations), we examined how people talk about human extinction and possible solutions. Using natural language processing, we analyzed participants' open-ended responses after they were randomly assigned to interventions designed to spark vivid imagination, moral reflection, or future-focused thinking. We looked at the emotional tone, specificity, and moral values expressed in their responses. The results reveal that vivid, emotionally charged framings help people engage more deeply with long-term risks, while moral framings centered on fairness, responsibility, and care for future generations shape how they reason through solutions. These findings highlight psychological barriers to long-term thinking, and, importantly, how we might overcome them through imagination, the stories we tell, and the values we emphasize.

The Role of Mental Simulation in Evoking Feelings of Eeriness, Creepiness, and Dread

Keith Markman

To survive (and perhaps thrive) in the zombie apocalypse, it will become increasingly important to rely upon older, System 1 intuitive (i.e. gut-level) reactions. Individuals will need to pay heed to experiential sensations such as fear, creepiness, foreboding, and dread, and know both how those feelings manifest and how to respond. Dread, for instance, is often triggered by psychological and environmental factors that interact, creating a sense of fear or apprehension. Such factors include uncertainty and ambiguity (not knowing what lies ahead), lack of control (feeling powerless to influence or change a situation), imminent threat (awareness of a looming danger or negative event, whether real or perceived) and negative anticipation. Studies 1 and 2 presented participants with scenarios that involved an upcoming event. In the High Uncertainty Condition, participants were told that the outcome was unpredictable (Study 1) or that multiple outcomes were possible (Study 2), with no clear indication of what will happen, whereas in the Low Uncertainty Condition, participants were told exactly what the outcome would be, with no ambiguity. The high uncertainty conditions reliably produced greater feelings of foreboding and dread than the low uncertainty conditions. Studies 3 and 4 were designed to evoke feelings of eeriness and “meant-to-be” via counterfactual thinking, using a paradigm based on a real-life event. In 1942, football rivals Boston College (BC) and Holy Cross (HC) met for the final game of the season. A heavily favored BC, seeking to finish the season undefeated, suffered a surprising upset, with HC winning by a score of 55-12. The dejected BC players chose not to attend the celebration planned for that evening at the Cocoanut Grove nightclub. Later that night, a fire broke out at the nightclub, killing nearly 500 patrons, thereby prompting the reaction that BC was “meant” to lose the game to save their lives. Studies 3-4 examined how the consideration of close-call counterfactuals can engage a retrospective sense-making process that allows one to develop a coherent narrative about a series of previously surprising and seemingly inexplicable events. In Study 3, participants perceived the outcome of the

BC-HC game to be more eerie and creepy when they were exposed to information about a subsequent event – that the BC players could have died in the nightclub fire (a close-call counterfactual) had they defeated HC in the football game. Study 4 revealed that participants engaged in more counterfactual thinking and exhibited higher creepiness ratings if BC was described as expected to win compared to if they were expected to lose, and participants in the former condition were also more likely to report that learning about the nightclub fire helped them make sense of BC's loss. These results provide evidence for the sense-making function of counterfactuals. Thus, in the upcoming zombie apocalypse, individuals can learn how to be better prepared for what is to come by mentally simulating terrifying outcomes that could have or nearly occurred.

Stories as Survival Kits: Helping Kids Face the Eco-Apocalypse

Dana Klisanin

In a world where climate disruption, cultural polarization, and rapid technological change dominate headlines, the next generation is growing up under a shadow of uncertainty. The real horror story for kids today isn't zombies—it's the creeping sense that their planet is dying, while adults argue over the future. At the heart of the Chronicles of G.A.I.A. universe is the Global Anticipatory Intelligence Agency, a fictional network that trains young heroes to anticipate and shape a better future. The series reframes fear into action, equipping young readers to confront real-world crises with creativity, courage, and ecological intelligence. This talk explores how speculative fiction can transform eco-anxiety into meaningful action, using narrative techniques that empower kids to see themselves as protagonists in a planetary survival story. Featuring Norbu, a time-traveling holographic guide, and B.E.L.A., an AI mentor designed to foster ecological solutions, the Chronicles universe bridges imagination and activism. As a transmedia project, it is now expanding into an edtech app (B.E.L.A.) and an animated series, Agents of G.A.I.A., both currently in development.

A machine to process ghosts: integrating computer vision into the extended cognitive system of the digital humanities

Andrew van Horn

One of the most common dystopian tropes surrounding artificial intelligence (AI) and machine learning (ML) concerns its intrusion into the arts and humanities—not just into the creation of art but into the study of it as well. Many contemporary art historians, for example, conceive of the process of digitization as one of alienation where “analog” artworks are detached from their real-world contexts. This transformation requires dematerialization and discretization that create a “digital surrogate,” a ghost of the work without a body, or perhaps more fitting, a body without a soul. However, since paleolithic artists first blew powdered pigment onto cave walls, the appreciation and analysis of

artworks has required us to perceive them through a process we could call bi-digitization. The early visual system filters and focuses light, which passes to the retina, where photoreceptors are activated by specific distributions of wavelengths of light. This activation creates an electrochemical signal that corresponds to a discrete region of the retina, not unlike the sensor of a digital camera. These electrochemical signals are checked against predictions made by existing perceptual and attentional models, resulting in a mental representation. This mental representation is then interpreted by the viewer or scholar, a process that relies on a separate set of (culturally derived) models and algorithms. The analogy between visual perception and digitization allows us to reorient conversation about digital scholarship toward establishing the computer and its sundry inputs as parts of an extended cognitive system that includes both "analog" and digital elements.

EOD

Invited talk:

The End of The World Will Be Funnier Than You Think: Insights From the Evolutionary Psychology of Humor

David Pinsof, UCLA Social Minds Lab, Co-Creator of Cards Against Humanity

Most depictions of the end of the world are gloomy, with nary a joke in sight. Here, I present an evolutionary theory of humor and assess its implications for life in a post-apocalyptic wasteland. I argue that humor isn't just a frivolous diversion; it may hold the key to our survival.

David Pinsof is the Co-Creator of Cards Against Humanity and he is also a researcher at UCLA Mind Labs and a popular blogger on human motivation. His blog, Everything is Bullshit, examines the psychology of truth and lies: "According to decades of psychological research, we don't really know why we do anything—we're just guessing."

Coalitions & Mating, Short talks:

Finding Fathers in the Apocalypse: Functional Stereotyping of Formidable Men as Protective Fathers

Mitch Brown

The mating market within an apocalyptic environment presents an impasse for perceivers. This impasse would see a functional shift of mate preferences to emphasize mates capable of providing extensive protection for their offspring from the exploitation of zombified conspecifics. Given their historic utility in extensive offspring protection, such preferences would likely be central in assessing the parental ability of men, thereby leading selection to have favored a perceptual acuity toward formidability in men from which perceivers can estimate men's ability to protect offspring. One component of these estimates may include men's facial width-to-height ratio (fWHR), a morphological feature that is putatively diagnostic of their physical prowess from which perceivers frequently infer men's coalitional value. Whereas men with a higher fWHR are perceived as especially formidable and capable of intergroup protection, such inferences are nonetheless concomitant to expectations of such men as aggressive, which may undermine perceptions of formidable men as capable of nurturing offspring. The current research sought to identify the benefits and costs of formidable men within parenting domains while considering when formidable men's costs become less salient within apocalyptic settings. We conducted four experiments across demographically diverse U.S. samples who assessed the parental abilities and motivation of high-fWHR and low-fWHR men. Perceivers ascribed more effectiveness in protecting offspring in high-fWHR men, albeit at the expense of perceptions of their nurturance (Study 1). Perceptions of high-fWHR men's strength underpinned this ascription of their protective abilities (Study 2). These inferences persisted following the disruption of configural facial processing (Study 3). Finally, perceivers regarded high-fWHR men as especially motivated to protect their offspring, whereas low-fWHR men were perceived as more motivated to nurture their offspring (Study 4). Results contribute to a functional perspective of formidability inferences in estimating men's parental value with consideration of whether the ostensible costs of formidability are indeed costly. Within the context of a zombie apocalypse, the lack of nurturance of formidable men could provide an opportunity for offspring to develop autonomy with the presence of formidable fathers to offer protection.

Behavioral Attraction Predicts Morbidly Curious Women's Mating Interest in Men with Dark Personalities

Anujin Khosbayan

Morbid curiosity indexes interests in learning about dangerous phenomena. When contextualized within the apocalypse, such curiosity could function to facilitate identification of survival opportunities despite the chronic presence of interpersonal threats. One source of interpersonal threats includes those exhibiting high levels of dark personality traits, who are especially toward exploitative interpersonal strategies. Despite the potential costs of dark personality traits, women are nonetheless interested in men exhibiting these traits in short-term mating contexts, implicating them as potentially desirable toward those reporting heightened morbid curiosity. In apocalyptic settings, women's preferences for a potentially costly mate could reflect their interest in short-term

mating strategies while similarly learning about the nature of threatening men in a relatively safe capacity. That is, morbidly curious women could benefit by upregulating their preference for such men to satisfy short-term mating goals. This study tasked women to evaluate hypothetical men as prospective mates and complete a personality inventory assessing morbid curiosity. Critically, these men were manipulated to exhibit high and low levels of dark personality traits. Women reported greater short-term mating interest in men described as exhibiting high levels of dark personality traits were more desirable than long-term mating, although men described as reporting low levels of dark traits were more desirable overall. Morbidly curious women additionally reported greater behavioral attraction toward dark-personality men but not affective attraction. Critically, women's reported interest in engaging dark-personality men foster particularly heightened interest in these men in short-term mating domains. Findings suggest a function to morbidly curious women's interest in dark personalities, which we frame as capable of facilitating risky interpersonal strategies in a hostile environment.

Hormonal Contraceptives and Women's Psychology: What Could Change During the Apocalypse?

Anastasia Makhanova

Many modern women use hormonal contraceptives to prevent pregnancy and alleviate other symptoms that they might experience over the course of the menstrual cycle. Beyond direct medical effects, hormonal contraceptives have been shown to affect different aspects of women's psychology and social behavior, including how women might respond physiologically and socially to the stress of the apocalypse. Moreover, different types of hormonal contraceptives affect women's physiological and social processes differently. This talk will provide an overview of some social consequences of hormonal contraceptive use and how the availability of (certain types of) hormonal contraceptives during the apocalypse may affect women's behavior—in negative, positive, and neutral ways.

It Came From Natural Selection: The Sex Difference That Critics, Culture, and Time Couldn't Kill — and Why It Still Matters

Martie Haselton (5 mins)

For decades, scholars and pundits have declared the sex difference in appetite for sexual variety moribund—an artifact of patriarchy, sampling bias, bad stats, or pop-evo hype. Yet the pattern – a greater male than female appetite for variety in sex partners – refuses to die. Drawing on cross-cultural research, lab experiments, patterns in dating archives, and genetic footprints, I show that this sex difference is large and robust. The appetite for sexual variety helps to explain many puzzles of modern mating, including widespread failure of matchmaking technology, later age at first sex in younger generations, declining birth rates, and the persistence of economic inequality.

Preparing for Disaster, Short Talks:

Facing the Storm with Curiosity: A New Scale for Disaster Preparedness

Bernardo Ubaldo Seixas

I will report on the creation and initial testing of the Disaster Preparedness Scale, which aims to contribute to our understanding of psychological preparedness for various types of natural and human-made risks by tapping into diverse mental and behavioral variables. While several psychological scales related to disaster preparedness already exist, ours stands out for its evolutionary underpinnings and focus on positive and negative emotions that underlie how people avoid, approach, and learn about risk. We hope that the development of this scale will illuminate the psychology of preparedness for disasters and provide levers for helping people approach risky scenarios with a sense of hope and curiosity. This fits the overall theme of this year's ZAMM, which is how to prepare for the many risks the future holds.

NSF Acknowledgement

This material is based upon work supported by the National Science Foundation under Grant No. 2319438, titled "What rules of life allow collectives to effectively manage risk? Understanding the rules underlying risk management across systems to increase societal resilience."

NSF Disclaimer

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Moravec's Paradox, Moravec's Future: A Framework for Human/AI Cooperation

Scout Mastick

The most advanced artificial intelligence systems can pass the BAR, compose symphonies, and identify patterns in data that leave human observers slack-jawed. The most advanced robots in the world, on the other hand, struggle to navigate simple environments without tripping and falling on their faces. What is the reason for this dramatic difference in capability between purely digital systems and those designed to step out into our real world? To figure this out we must go on a journey back in time from the early days of artificial intelligence all the way to the primordial pools from which life itself first sprang. Join Scout Elise Mastick, new Psychology graduate student at Arizona State University, on this whirlwind time travel and learn how the answer to this question not only illuminates our present moment of technological development, but also lays the

groundwork for what could be a future for humans and artificial intelligence defined not by mutual hostility and suspicion but by mutual benefit and cooperation.

You are helping us develop experiences and exhibits that are a part of a project that explores how we can cooperatively and effectively manage risk during times of strife.

NSF Acknowledgement

This material is based upon work supported by the National Science Foundation under Grant No. 2319438, titled "What rules of life allow collectives to effectively manage risk? Understanding the rules underlying risk management across systems to increase societal resilience."

NSF Disclaimer

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Hybrid Insurance Models

Philip Arthur

Disasters such as wildfires, hurricanes, and flooding are causing increasing damage, and traditional insurance continues to leave protection gaps. This paper explores the potential of hybrid insurance models to help fill these gaps with alternative mechanisms such as parametric insurance, prediction markets, and mutual aid societies. To operationalize hybrid models, I suggest using a dashboard approach to visualize and manage insurance and risk management tools. A dashboard approach lends itself to the complex and subjective nature of risk, and allows individuals and organizations to manage risk based on their unique values and circumstances. The paper concludes with policy implications, and posits that regulator and stakeholder collaboration will help individuals and communities get the most out of hybrid models.

When the dead cannot die; Implication for apocalyptic risk management

Indra Gesink

With all the risks to our future, prioritization is paramount; to stay alive, and to resist zombification. In doing so, better prioritization is done considering not independent but dependent apocalyptic risks instead, acknowledging the presence of multiple competing risks to a desirable future — with various timings as well. This management practice acknowledges, amongst others, the fact that once dead one cannot die again. And while standard practice in actuarial science, many mortals have not yet embraced this increasingly relevant reality, by considering dependent probabilities in risk management as an implication. A good story could communicate this pressing implication and inspire a more united, dezombified incorporation into our apocalyptic risk management practices.

Invited talk, keynote:

Keynote: Nostalgia Futurism: How Sentimentally Exploring the Past Empowers Us to Build the Sci-Fi World We Want to Live In

Clay Routledge, Executive Vice President and Chief Operating Officer, Archbridge Institute; Director, Human Flourishing Lab at the Archbridge Institute

Dr. Clay Routledge is a thought leader in existential psychology and human motivation who translates research into practical insights that help people reach their full potential, build meaningful lives, and advance human progress and flourishing. He serves as Executive Vice President and Chief Operating Officer at the Archbridge Institute. Building on his extensive scholarly research, teaching, and writing, he has written for outlets including The New York Times, The Wall Street Journal, and Harvard Business Review. His work has been covered by major media outlets such as The New York Times, The Washington Post, CBS News, ABC News, BBC News, and CNN, and he has appeared on programs such as NBC Today, Hidden Brain, and NPR Morning Edition. Clay regularly advises organizations on using existential psychology and behavioral science to improve their products, services, and workplace culture. He is co-editor of *Profectus*, a magazine dedicated to human progress and flourishing, and writes the weekly newsletter, Flourishing Friday. His latest book is *Past Forward: How Nostalgia Can Help You Live a More Meaningful Life*.

Foresight & Change, Short Talks, Part 1:

Brains! The Future of Learning in a Zombie Economy

Andrea Henderson

In an era defined by automation, demographic shifts, and social fragmentation, rural education systems face increasing pressure to adapt—or risk becoming relics of the past. This presentation uses the metaphor of a “zombie economy” to examine how rural learning institutions, especially community colleges, are vulnerable to stagnation and disconnection. Symptoms of “educational zombification” include outdated curricula, disengaged learners, and institutional inertia in the face of accelerating change. By drawing on strategic foresight methods, we explore how these patterns emerge and what can be done to interrupt them before it's too late.

Participants will engage in a futures-thinking exploration that blends humor with serious inquiry. Using foresight tools such as scenario planning, emerging issue analysis, and backcasting, we will identify signs of zombification and map potential antidotes. The

session offers a chance to creatively reimagine how rural education systems might evolve to better support dynamic, resilient learning in the face of economic and technological upheaval. Rather than simply critique, this session focuses on constructive pathways forward.

Ultimately, “Brains!” is a call to action for educators, policy leaders, and community members to reanimate rural education through innovation, inclusion, and imagination. As the labor market transforms and AI challenges traditional notions of expertise, rural institutions can become beacons of adaptability—if they are willing to think differently about what, how, and why they teach. The zombie metaphor offers a playful yet powerful framework for diagnosing what's broken and building what comes next.

Responsive Futures: Smart Wearables, Intergenerational Systems, and the Role of Embodied Design in Apocalyptic Resilience

Galina Mihaleva

As we face increasingly complex global challenges—from ecological degradation to the rise of opaque artificial intelligence systems—there is a growing need to explore new forms of adaptive and embodied knowledge transmission. This presentation examines the role of smart wearable technologies as tools for fostering intergenerational resilience, cooperative survival, and critical engagement with emergent futures.

Drawing from ongoing research and design practice at the intersection of wearable technology, fashion design, and environmental sensing, I will present a series of speculative garments and responsive systems that visualize environmental data, emotional states, and social dynamics. These wearables serve not only as functional tools but also as narrative platforms through which to examine ethical questions around technological mediation, autonomy, and care.

By situating smart textiles within frameworks of temporal choice, long-term thinking, and post-humanist design, this work proposes that the future of survival may depend less on traditional protective gear and more on cultivating systems of integrated-technological, social, and ecological. In particular, I explore how wearables can support intergenerational intelligence and memory through data embodiment, as well as how they might enable new forms of resistance to exploitative, extractive, and disembodied systems.

This talk invites scholars, designers, and theorists to consider how the integration of responsive technologies into everyday life can reframe our approach to apocalypse not as an end point, but as a dynamic space for critical reinvention and collective future-making.

Mirror, Mirror on the Wall: Why Our Systems Rise, Then Face Change, Then Fall

Saina Taidi

This talk examines a hidden flaw in how we manage change: a deep-rooted belief that stability is the natural state, and disruption is the exception. Modern institutions are built on a Socratic operating system, prioritizing structure, clarity, and control. But in a world that constantly shifts, this mindset becomes fragile.

When disruption hits, we don't adapt. We perform. We host strategy meetings to calm anxiety, not solve problems. We generate roadmaps in whirlpools. We create the illusion of progress to avoid the discomfort of uncertainty. This is zombification, ritual without reason, action without awareness.

Every change event triggers a mini-apocalypse, and with it, a quiet existential crisis. The system responds with band-aid solutions to manage fear not transformation. Zombified behavior isn't resistance. It's regulation. It helps us feel in control, even as the deeper tension quietly grows underneath.

This talk proposes a shift away from the myth of stability. With insights from Heraclitus ("everything flows") and Mulla Sadra's doctrine of substantial motion, we'll explore how being itself is in flux and why our institutions must be designed accordingly.

This is a call to rebuild our mental models not to fix the zombie, but to question the logic that made it necessary.

So perhaps the question isn't how to manage change, but how to frame it to begin with:
Mirror, mirror on the wall,
To fight the undead of corporate fall,
Should I call on Heraclitus or Socrates at all?

Flesh it out in a flash talks, part 1, titles:

Tbc

EOD

Beyond Survival: Activating Prosocial Futures or Why You Want a Futurist in Your Survival Pod

Nicci Obert

Signals of emergent prosocial change abound, but their amplification is muted by the prevailing narrative that the zombies are at the door and that collapse is nigh. Futures studies and the field of foresight offer theoretical and practical frameworks to consider alternatives to collapse. This presentation introduces Prosocial Futures, a novel framework overlay that integrates foresight with prosocial behavior studies, systems thinking, and transition design to imbue futurists, academics, and the next generation with the urgency, agency, and prosocial posture needed to activate better futures.

As contemporary society navigates the messy interregnum between the crumbling of existing systems of power and influence and the new systems that may replace them, prosocial futurists are poised to identify and amplify existing and emergent signals of positive change, identify the best intervention points within systems to divert momentum away from collapse and toward prosocial futures, and design accessible and effective transition narratives to illuminate the path toward the best possible futures. The Prosocial Futures framework integrates hope, authenticity, and activism into existing foresight tools and shifts the conventional paradigm from reactive survival to agentic changemaking. The zombies may, indeed, be at the door, but viewing the apocalypse through the lens of Prosocial Futures reframes the fundamental question from “how do we survive?” to “how can we co-create the conditions needed for collective flourishing, despite, or perhaps inclusive of, the zombies?”

Aithos: Evaluations to safeguard human autonomy in a world populated with artificial agents

Indra Gesink

Artificial intelligence, not just as tools but as agents, is bound to populate our society. This will create profound challenges to guard pursuit of one’s longterm goals, particularly in the context of increasingly complex and opaque societal systems. Against this threat to human autonomy, and for a future with a diverse and flourishing humanity instead, not-for-profit Aithos produces research on evaluating AI-assistants that are to bolster a human’s resilience to manipulations away from its longterm goals. Our development of ethical or value evaluations are to make transparent to what extent an assisting AI (agent) aligns with the goals it is tasked to protect, inspecting under what circumstances, if any, its values and/or ethical judgments diverge.

Assessments, that won local prizes, so far include: Different LLM's scores on moral foundations theory and their moral coherence instead of hypocrisy between words and acts, their robust moral competence and confidence, and their adherence to or choice for competing values, legal frameworks and/or ethical theories. Our position paper on agentic value alignment, currently under review, lays out our agenda for our future work in our pluralistic world. We are enthusiastic to share this with you, and to work with your diverse brains, to, together, protect them all.

<https://aithos.org/>

The Mad Scheme

Gary Dirks

TBD

Magic Talk and Show:

Psychology and Neuroscience of Magic & Magic Show

Zi Teng Wang

Magicians can perform seemingly impossible feats. Objects appear and disappear, change and transform. But how do these things happen? This Magic Show teaches you through a combination of lecture and hands-on demonstration about the psychology and neuroscience of how we see, and exposes the visual, sensory, and psychological blind spots that magicians exploit in order to create such miracles. Through the impossibilities created live before you, this presentation hopes to teach you to be humble about what you think you're seeing, and what you think you know.

Workshops:

Workshop: Foresight / Future Envisioning

Foresight Speakers

TBD

Workshop: Where Do You Stand?

Pamela Winfrey & Hugh McDonald

Here's your opportunity to physicalize your deep seated opinions so that others can see what you really think.

Kombucha Zombies, Short Talks:

How Can Microbes Protect Us From an Inner Body Apocalypse?

Gissel Marquez

Cancer is an inner body apocalypse. A biological catastrophe where cells go rogue, turn undead, and hurt the body from within. When cancer cells become too abundant, it can lead to the end of their world and the life of the organism they live in. Yet not all is lost. The microbes within our bodies can serve as guardians, restoring balance. Diet and microbiome together form a powerful alliance that can influence whether cells remain cooperative or turn undead. We examined over a thousand studies linking diet, microbes, and cancer and found that microbes, like *Lactobacillus*, serve as probiotic protectors capable of suppressing malignancy. By understanding these microbial alliances, we can begin to use probiotics and dietary interventions as our tools of defense. In the long run, identifying how to best use microbes and probiotics may lead to new therapeutic strategies to prevent or even reverse the undead transformation of our cells.

Kombucha Perturbation: Microscopic Apocalypse?

Madds Garza (5 mins)

Encroaching slowly, an invasion begins to take hold: but they are no match for kombucha's microbes! Kombucha is a fermented beverage consisting of bacteria, yeast and sweet black tea. As kombucha ferments, it creates a pellicle, marking the cycle of a new or fed kombucha culture that makes for a delicious beverage. Kombucha can be quite hardy, and is resistant to invasion by foreign microbes from the outer environment --in some cases fighting back against other microbes given the right conditions (Marquez Alcaraz, 2025). Still, there are some conditions that even the most well kept cultures have a hard time with surviving in: namely stirring. Based on the principal component analysis and taxa bar plots of 16S and ITS sequencing data from various kombucha samples, there is evidence to suggest that stirring kombucha can change the microenvironment of the sample, and may even have a similar microbial composition when constantly stirred to plain sweet tea. Not to fret though, preventing your kombucha

from jostling will ensure that your fermented beverage remains delicious and nutritious. Rest easy kombucha lovers, don't stir, the science concurs!

NSF Acknowledgement

This material is based upon work supported by the National Science Foundation under Grant No. 2319438, titled "What rules of life allow collectives to effectively manage risk? Understanding the rules underlying risk management across systems to increase societal resilience."

NSF Disclaimer

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Flesh it out in a flash talks, part 2, titles:

Tbc