LIFE Newsletter Volume 17, No. 2
August 2023

Editorial

Dear Readers,

I would like to start with special thanks to all our contributors to this issue! As always, there would not be a newsletter without them.

First up is a thought-provoking article by UM alumnus Neil Lewis, meanwhile at Cornell. He writes about the societal divisions that endanger the shared understanding necessary for democracies to flourish.

We then move to the Spring Academy that took place in Ann Arbor in May. Svenja Hascher is a new LIFE fellow who participated in an academy for the first time and describes her experiences. She also asks her advisor Camilla Rjosk, herself LIFE alumna, what she remembers about her first academy. We follow this by the fellows' abstracts for their talks and posters at the academy. As always, the wide range of interesting research being done is obvious. The photos of academy participants distributed throughout the newsletter were taken by Steve Boker.

Once again, we announce the LIFE Outstanding Alumni Award. Please consider applying if you are eligible.

We then ask UZH faculty Nora Raschle our 10 questions and get interesting answers as well as a sample of her drawings that she uses for science communication purposes.

We introduce Tish Jennings, new LIFE faculty at UVA, and then move on to the latest LIFE publications. We are especially pleased to note two cross-site collaborations by fellows: by Julia Brehm and co-authors and by Laura Buchinger and colleagues. Another paper by Weidmann et al. involves LIFE alumni from three sites! In the News section, we can report a veritable tide of successful PhD completions. Congratulations to everyone and all the best for your next career steps!

Julia Delius

Image: ISR

Table of Contents

Reminder

Fellows, alumni, and faculty, please keep us informed about your LIFE-relevant news (e.g., awards, career moves)! Fellows and alumni, please check that your web profiles are up-to-date—they are often the first thing that pops up when your name is googled! Send your updates to delius@mpib-berlin.mpg.de

LIFE Website: https://www.imprs-life.mpg.de

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Meaning Making in Fragmented Democracies

Neil A. Lewis, Jr., UM Alumnus, now Associate Professor, Department of Communication and Graduate Field of Psychology, Cornell University, & Division of General Internal Medicine, Weill Cornell Medical College, Ithaca, NY, USA

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I was a LIFE Fellow back in 2016. That year stands out in my mind because it was the first in what would eventually become a series of years of "reckoning" in which Americans began having numerous conversations about social divisions in modern life. The divisions were particularly stark and salient in the United States at that time, though they also existed, and continue to exist, elsewhere. That year American political divisions grew wider than usual as two candidates, unprecedented in their own respective ways, ran against each other for the American presidency. But it was not only politics that divided the nation. Social unrest grew more broadly; more and more Americans were talking about how much of people's life circumstances depended on how they were socially categorized—by race and ethnicity, social class, sexual orientation, and immigration status, to name a few dimensions. But it wasn't just Americans who noticed these patterns and their societal consequences; many people around the world noticed them, too. For example, on my way to the LIFE Fall Academy at the Max Planck Institute in Berlin that October, a fellow passenger in the airport saw my US passport, tapped me on the shoulder and asked: "What's going on with your country—why are people so divided and angry at each other?"

I thought it was a very good question, but at the time I did not have a good answer. I did say something; I drew on the usual talking points of the day—pointed to the extreme rhetoric of political leaders and how things like that led to more polarization, and so on. We talked for a bit, and they were satisfied enough to then go on their way. But as I reflected further on the conversation, I wasn't satisfied with my own answer. The rhetoric of political leaders and polarization were important, of course—I teach students about those effects in the politics unit of my persuasion and social influence course; but those explanations felt incomplete. The divisions that eventually grew to people marching in the streets in protest over so many social issues felt much deeper than that. I've continued to think about those divisions over the past few years, as I transitioned from LIFE fellow to assistant (and now associate) professor. My students, collaborators, and I have been studying why we have them, how people make meaning of them, and what (if anything) motivates people to do something about them.

The social divisions that we read about so often in news outlets have manifested in some interesting ways in our research over the past few years. Whenever we've conducted research on American education systems, for instance, we've learned not only about barriers that undermine student success and about effective solutions for helping students achieve their goals (Lewis & Yates, 2019; Oyserman & Lewis, 2017); we've also learned about why Americans are divided about the implementation of effective solutions (e.g., Berinsky, 1999). When we study health, and disparities in health outcomes, again we learn about barriers to healthy living and effective interventions and policies for improving health and health equity (Lewis & Oyserman, 2016; Niederdeppe et al., 2023); but we've also learned about why Americans oppose effective health policies (e.g., Dalen et al., 2015). In the realm of criminal justice, Americans profess a desire to live in a nation that is just, one that has equal protection under the law; yet they are divided about things like how much force is reasonable for law enforcement officers to use against (some of) their citizens (Spruill & Lewis, 2023).

As we have studied these dynamics, it has become more and more clear that these divisions are not just about what politicians and other elites in society say (though their rhetoric certainly matters). Instead, the divisions that we face, and continuously discuss, are due to the broader ways that we have been socialized to think about people who stand on different rungs of the social ladder (Lewis, 2023). Political scientists have recently described the United States as a fragmented democracy (Michener, 2018)—a society in which deeply unequal social systems structure the opportunities that different groups of people have in multiple domains of life. That way of organizing a nation has not only

economic, political, and sociological consequences; in our research we've been finding that they have important psychological implications as well.

If you take US census data and map where Americans live (as the wonderful people at the University of Virginia Cooper Center for Public Service have done—they created the tool that generated this image), you see patterns like this all across the US. This image is a map of southeastern Michigan, near the Michigan chapter of the LIFE program where I did my graduate training. What you see in southeastern Michigan is what you see in many parts of the United States: Americans still live in highly segregated neighborhoods. These patterns are due to a long history of laws that intentionally separated people by race and class (Rothstein, 2017), but in our research we've been finding that growing up in those segregated contexts also affects the ways that we learn to think about a variety of issues in the world.

Over the past few years, we have found that being embedded in these contexts differentially affects the ways that Americans think about environmental issues (Song et al., 2020), police officers and the criminal justice system (Spruill & Lewis, 2022), and even concerns about the COVID-19 pandemic and the disparities that have occurred in the pandemic (Schuldt et al., 2022; Xu et al., 2022). Even when Americans are shown the exact same information about pressing social events, they pay attention to different features of that information and therefore make different meaning of it due to how the contexts they were raised in have taught them about how the world works (Jefferson et al., 2020).

These findings have been fascinating for a few different reasons. First, from a scientific perspective, they underscore the importance of studying not only the intricacies of people's minds, but also the structural, cultural, and political dynamics that are at play in the contexts in which those minds are socialized (Cikara et al., 2022). But in addition to the scientific implications, they are also interesting from a broader societal perspective. For democracies to function well—for different groups of people to work well together on relatively equal footing—they need to have at least some shared understanding of the nature of how that society operates (Crawford, 2021). But the fragmented nature of American society, and societies that have comparable social structures, makes it very difficult to generate that kind of shared understanding. That is concerning due to some of our other findings.

During the COVID-19 pandemic, my collaborators and I studied how Americans thought about the pandemic and the implications of those thoughts

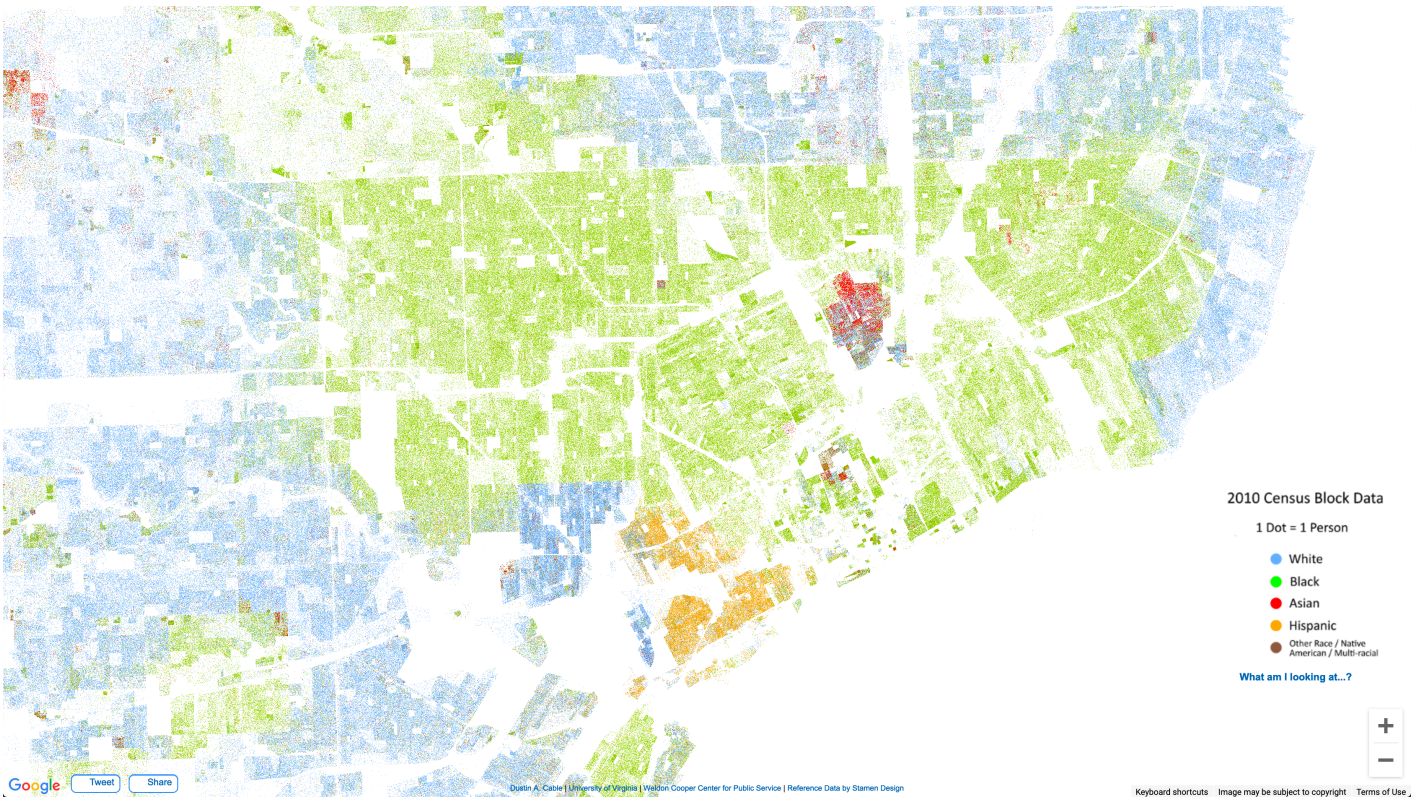

Figure 1. Map of southeastern Michigan (see text for more information).

for a variety of outcomes. COVID-19 has had a number of devastating effects, of course, but that devastation has not been felt equally. Due to underlying conditions of inequality, the United States and other nations had vast racial, ethnic, and economic differences in COVID-19 infections and deaths (Horton, 2020; Mendenhall, 2020). Those disparities are tragic on their own, but how people processed them was concerning. One of the things that we, and other research groups, found was that there were vast differences in the extent to which people were concerned about the pandemic and disparities in pandemic outcomes. Differences in concern mattered greatly for collective responses in this pandemic, and also have implications for collective responses to future crises. In our work, we found that Black, Hispanic, and Asian Americans were far more concerned about the pandemic than their White counterparts (Schuldt et al., 2022). And research from other groups suggests that the differences in levels of concern are because there were such stark disparities. Specifically, both public opinion research and survey experiments testing the effects of messages to inform the American public about the nature of COVID disparities found that when White Americans learned that deaths from COVID-19 were concentrated among communities of color, they became less afraid of COVID, were less empathetic toward those vulnerable to COVID-19, and they became less supportive of public policies to prevent the spread of COVID-19 (Skinner-Dorkenoo et al., 2022). In other words, once White Americans learned that their group was not dying as frequently as other groups, they became less invested in pandemic mitigation efforts.

That way of processing events that have collective consequences does not bode well for looming societal crises. The climate crisis is the next social crisis that is expected to have large scale consequences. However, another thing we have learned over the past few years is that it is difficult to build the diverse coalitions that are necessary to address environmental issues when people think in these fragmented ways. Like COVID-19 or many of the other social issues I have written about so far, environmental issues are also collective action problems that require coordinated efforts among diverse groups of people (Lewis et al., 2021). It is difficult to motivate different groups to work together, however, if those groups do not perceive the others as caring about them or their interests (Mohai et al., 2009; Rothstein, 2005). To address these problems, and more, we will have to find ways to rebuild trust in each other, and in our broader social institutions.

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Experiencing the LIFE Spring Academy 2023 in Michigan

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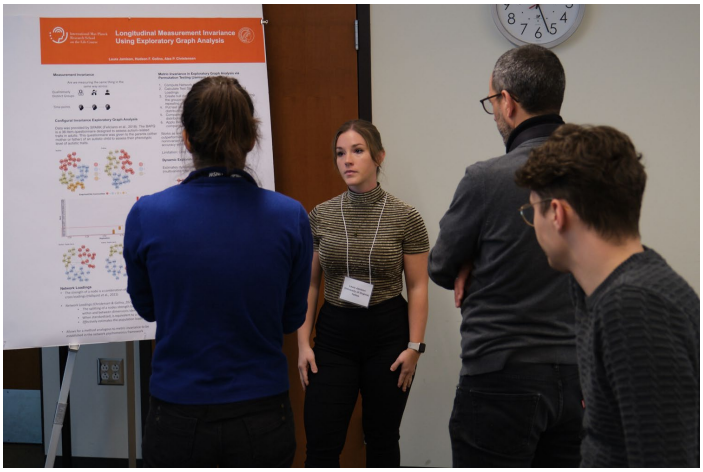
After joining the LIFE program in early April, the first major highlight came in May: my first academy, which took place in Michigan! Since it was my first time overseas, I decided to spend a few days in Toronto before eagerly heading to Ann Arbor on Monday, May 15th. The first evening was memorable as I met some wonderful and open-minded individuals from different LIFE sites. We enjoyed a picnic on the beautiful UM campus and wrapped up the evening with a delightful ice cream treat.

The next day, when the academy officially began, I was filled with anticipation. We started the day at the Institute of Social Research, where we were warmly welcomed by UM Co-Speakers Toni Antonucci and Jacqui Smith, and Coordinator Betty Agyei. They treated us to a delicious breakfast before diving into the core of our work: data. Faculty members introduced us to various open-access population datasets, such as the Health and Retirement Study (HRS), the Survey of Health, Ageing and Retirement in Europe (SHARE), the German Socioeconomic Panel Study (SOEP), and the National Archive of Computerized Data on Aging (NACDA). It was fascinating to learn about these resources and how they contribute to our research.

What made this time particularly special for me was that, in addition to the intriguing insights from the faculty and various speakers, fellows from different universities presented the progress of their projects. As an educational scientist, I learned about exciting topics from fields such as neuroscience and environmental psychology, subjects I had previously known little about. Alongside this wealth of input, in the afternoon we also took a small trip: we visited MCity, a conceptual city for autonomous vehicles. We learned about their navigation, testing, and ongoing development. Although we could unfortunately not test-drive one ourselves, this was an intriguing experience and I am excited to see what the future holds in this field. In the evening, we fellows went out for Mexican food and afterwards attempted karaoke (I believe we are better off in the field of academics 😉). Exhausted by the day's events, we all sought solace in our beds, ready to recharge for the days ahead.

The next day naturally started with a delicious breakfast—nourishing our bodies with fruit and pastries while stimulating our minds with an intriguing keynote by Leah Richmond-Rakerd on the topic of self-regulation and population healthspan, where she presented insights from nationwide registers and cohort studies. The day continued with excitement and a wealth of input, including several additional presentations and the first poster session. One aspect I found particularly rewarding was the opportunity for individual meetings with faculty members during lunch breaks—a great chance to engage in more in-depth personal exchanges and initiate



potential future collaborations or research stays. In the evening, we dined at a delightful Ethiopian restaurant. At our table, there was a wonderful exchange between fellows and faculty members, which I really appreciated. We learned interesting facts about life in Michigan, discussed differences between German and American universities, and shared insights about our respective research projects. These conversations not only fostered a deeper understanding of our academic pursuits but also enriched our cultural experiences and personal connections.

The next morning, our last full day had arrived—time had passed incredibly quickly. Like the previous day, it was filled with many fascinating presentations. One standout moment was the Alumni Award Lecture delivered by UM Alumnus Alvin Thomas, titled "Where They Dare Not Roam: Positive Child Development, Fatherhood, and Contexts." His insightful lecture shed light on important aspects of child development and fatherhood within various contexts, leaving a lasting impression on the audience. Additionally, the second poster session took place, during which I presented my own poster. I noticed that the posters generated great interest, and I received valuable feedback on my topic.

The crowning event of this last full day was a very important occasion: the commencement dinner at the University of Michigan Museum of Art (UMMA) in the evening. The venue was truly special—we had the entire museum to ourselves and could take as much time as we wanted to roam around, admire the paintings and enjoy the unique atmosphere. Of course, there was delicious food again, and our Berlin graduate, Elisa Buchberger, received the deserved recognition.

Unfortunately, for some fellows, this was already their last academy, but I was truly grateful for the opportunity to meet all of these wonderful people and learn from them.

After dinner, we continued to celebrate: we went to a bar, had a funny ride with some kind of cargo bike and then gave karaoke a second chance. I had a lot of fun and also greatly benefited from personal exchanges with the other fellows and faculty members during these informal occasions.

We started the last half day with Josh Ackerman and his talk titled "A Brief Look at the Psychology of Infection," which once again demonstrated how interesting the interdisciplinary perspective on evolutionary processes is. Two round tables rounded off the day (pun intended), where we delved into the practical applications of our work in the current sociopolitical climate and explored ways to maximize the benefits of the LIFE program. These discussions emphasized the significance and potential of interdisciplinary research on the life course, reinforcing the importance of the LIFE program as a platform for knowledge exchange. As we shared our thoughts and hopes for future academies, our time together came to an end. For some of us, the journey continued as

they explored Detroit or ventured further into the United States. Personally, I opted to spend the weekend in Detroit, where I was captivated by the city's intriguing and ever-evolving nature. All in all, my travels and the academy were an intense period with an incredible amount of input. Once I landed back in Berlin, it took me a few days to process everything (and overcome my jet lag). I would like to take this opportunity to thank everyone involved at UM—Jacqui, Toni, Betty, the faculty members, and all the fellows—for organizing and hosting this perfectly successful academy. I also extend my gratitude to the fellows and faculty members from other sites for their valuable input and fantastic conversations. I truly learned so much during this time.

One aspect that stood out for me was the open and inclusive atmosphere among all the participants. Throughout the academy, I had the opportunity to engage with a diverse range of individuals, never sitting next to the same two people twice. Joining new groups and engaging in conversations outside my field felt completely natural. The approachability of the faculty members was also noteworthy, as they welcomed engagement on an equal level with the fellows, fostering a sense of collaboration and camaraderie. And now that I know what to expect, I am eagerly looking forward to the next academy in Zurich, where I hope to see many of you (again) and am certain that countless exciting inputs, topics, and conversations await me.

Looking back

Camilla Rjosk is my advisor in Potsdam and was a LIFE fellow at IQB herself once. I asked her about her experiences:

My first academy wasn't as far away—it took place in Berlin in spring 2012. I also presented a poster at that time and was impressed by all the input and the many new people—and all of it in English! Here I discovered the overarching and interdisciplinary perspective of LIFE, which had a lasting impact on me and my work.

Spring Academy 2023: Fellows' Abstracts

Talks and posters in alphabetical order by author respectively

Contact information available at https://www.imprs-life.mpg.de/people

Talks

Growing into parenting together: Similarities and differences in parenting practices among first-time parents

Sabrina Beck, UZH
Advisor: Moritz M. Daum

Introduction: Co-parenting is important for promoting healthy child development. A high degree of agreement on parental attitudes, behaviors, and goals is conducive to successful co-parenting. Here, we investigate the factors which contribute to similarities and differences in parenting behavior between mothers and fathers within the same family. Furthermore, we are examining how accurately parents perceive and assess their partner in terms of their parenting practices.
Methods: We recruited Swiss-German first-time parents that live together and have an only child at 12, 24, or 36 months (± 3 months). Parents completed an online survey on parenting practices both as a self-assessment and an assessment of their partner's parenting practices. In addition, demographic variables such as education levels, age, etc., as well as relationship satisfaction were assessed.
Results: We ran an APIM model for all four scales on parenting practices (positive parenting, responsible parenting, authoritarian parenting, inconsistent discipline) and conducted Multigroup APIM analyses. Overall, there was a high perceived level of agreement regarding parental attitudes and behaviors among both mothers and fathers.
Outlook: Multigroup analyses of demographic background, relationship duration and satisfaction, child age, and other factors will be discussed. A follow-up study will be conducted beginning in late May 2023. The study design will be presented and discussed.

Remembering what's important: Value-based recall in younger and older adults

Jasmin Brummer, UZH
Advisors: Sebastian S. Horn & Alexandra M. Freund

Declarative memory span tends to decline with age. Meanwhile, recall directed by value remains relatively stable across adulthood. In the present research, we investigated the role of incentivizing remembering information not only with higher or lower values but also with the possibility to achieve gains or avoid losses for age-related differences in value-based recall. Based on the finding of a motivational shift from a predominant gain orientation in young adulthood towards a stronger loss avoidance orientation with age, we wanted to test if younger and older adults also differ in whether they prioritize the encoding of information when the recall of an item results either in a gain or non-recall in a loss. Moreover, targeting the mechanisms underlying the prioritization, we considered the difficulty of the task as a potential factor associated with selectivity. If the resulting selectivity in the recall is driven by the difficulty of the task, it should vary as a function of memory load that is manipulated by increasing the number of items displayed simultaneously. Regarding the specific hypotheses, we anticipated comparable performance in recall for high-value information, as assessed by a selectivity index (H1). We further predicted that younger adults prioritize gain-related information, whereas older adults prioritize loss-related information (H2), resulting in an Age x Sign (positive = gain / negative = loss) interaction (H3). Lastly, we anticipated that under low memory load, older adults are more selective in their recall than younger adults (H4), and that memory load increases selectivity such that both age groups show similar levels of selectivity (H5). Preliminary findings point towards relatively similar selectivity in recall for higher-value words in younger and older adults. In regards to recall accuracy, younger adults recalled more words overall, particularly items associated with gaining points. In contrast, older adults displayed better recall accuracy for

loss-related items. This effect tended to be even stronger under higher load conditions. These findings provide insights into the motivation memory interplay in younger and older adults.

Automatic evaluation of emotion-related facial expressions and voice in psychotherapy sessions

Hannes Diemerling, MPIB
Advisor: Timo von Oertzen

This presentation explores a multidimensional approach to emotion recognition by examining facial and vocal cues in psychotherapy sessions, building on two prior works presenting the Automatic Fast Facial Emotion Classification Tool (AFFECT) and the Automatic Vocal Emotion Classification Tool (AVECT).
In the ongoing project, students classify recorded psychotherapy sessions, assessing both patients' and therapists' displayed emotions through facial and vocal cues, both combined and separately. A brief training is conducted with students to measure initial interrater reliability. The presentation will briefly address the AFFECT study, which achieved an accuracy of up to 95.6% in recognizing facially presented emotions, and the AVECT study, which attained a 66% accuracy. The primary focus will be on discussing the planned steps for the retraining of AFFECT and AVECT based on the data collected from the students' classifications. This research aims to contribute to the understanding of emotional expression in psychotherapy sessions and its implications for psychological science. By examining mimic and vocal cues and building on the strengths of AFFECT and AVECT, the study aims to advance the development of more comprehensive models of emotion recognition, allowing for a deeper understanding of emotional dynamics in general and in therapeutic situations in particular.

Teaching critical thinking to college students: A report on the impact of interventions

Blake Ebright, UM
Advisor: Kai Cortina

Most professors believe that a college education strongly enhances critical thinking. While this is corroborated by pertinent empirical research, the validity of the underlying measures of critical thinking is weak. We constructed two performance assessment tasks based on real-life decision-making dilemmas with stronger ecological validity. In our operationalization, critical thinking skills are evidenced by (1) prolific and balanced argumentation regarding pros and cons, (2) source analysis regarding trustworthiness and general reliance on sources, and (3) quality of written communication regarding spelling, grammar, and text structure. In this follow-up study, we analyze the full sample of n = 253 students and investigate differences in critical thinking growth as a function of intervention. Our multidimensional analysis revealed that students who receive a critical thinking intervention can improve their critical thinking by between 1/3 and 1/2 of a standard deviation over one semester depending on the intensity of the intervention. This finding is consistent with effect sizes reported in prior research and suggests our educational intervention is effective.

How spousal bereavement shapes life satisfaction: Stability and change across historical time

Urmimala Ghose, HU
Advisor: Denis Gerstorf

Lifespan psychological and life course sociological research has long shown that spousal bereavement constitutes one of the most stressful life events that is often associated with marked declines in well-being. It is an open question though whether and how the well-being implications of spousal loss have changed historically over the past decades. In the present study, we aim to build on and extend earlier approaches distinguishing anticipation, reaction, and adaptation phases of bereavement to examine historical shifts in these phases and target the role of sociodemographic factors, health and social resources, and partnership factors. We used multiyear within-person longitudinal data from 2,042 participants (M_{age} at event = 65.73 years, 71% women) in the German Socioeconomic Panel obtained since 1985. Results of multi-phase latent growth models revealed that later-born adults experienced less steep declines in life satisfaction in the anticipation phase of spousal loss than their earlier-born peers, but exhibited steeper declines in the months surrounding spousal loss followed by faster recovery and adaptation over the subsequent months and years. The implications of these phase-specific historical changes in the

well-being trajectories of individuals in the face of spousal loss will be discussed with respect to bereavement literature.

The long-term impact of sustained peer victimization: Altered stress response and gene expression in chronic victims

Jens Heumann, UZH
Advisor: Michael J. Shanahan

This study aimed to investigate a comprehensive picture of how sustained peer victimization, as a chronic social stressor, alters stress reactivity and gene expression. Data from the Zürcher Untersuchung zu Gehirn und Immun-Genen (ZGIG), a subset of 200 subjects aged about 22 years from the Zurich Project on the Social Development from Childhood to Adulthood (z-pro so) longitudinal study (running from age 10), were used to measure startle eyeblink response, eye tracking data from a dot probe experiment, both with angry faces as target stimuli, facial emotion discrimination threshold between joy and anger, and aggression and hostility bias from the Ambiguous Intentions Hostility Questionnaire (AIHQ). Differential gene expression was measured along the conserved transcriptional response to adversity (CTRA) gene signature, among others. We examined sustained peer victims (SPVs), adjusted for perpetration and other substantial victimization, with unaffected individuals as controls. To draw causal inferences, we adjusted for baseline differences in individual characteristics and other mid-treatment confounders.

SPVs exhibited altered stress reactivity, with a stronger and delayed startle response, which tends to intensify when threatened, a higher probability to look at angry faces, and a higher acceptance threshold for anger when evaluating neutrality in facial expressions. Lower aggression bias, blame score, and hostility bias were evident in the AIHQ questionnaire. Further, sustained peer victimization manifested in the differential expression of genes in the CTRA gene signature, among others, showing upregulation of inflammatory and downregulation of antiviral genes. Low-SES households primarily contributed to the victim cluster, particularly due to the low educational attainment of parents.

Our findings suggest that sustained peer victimization in the past altered stress reactivity and gene expression in victims, highlighting the critical role of comprehensive interventions in detecting and intervening in cases of bullying to reduce the long-term physical and mental health consequences attributed to sustained peer victimization.

The direct and indirect effects of self-perceptions of aging on cognitive health through social isolation and loneliness

Rita Xiaochen Hu, UM
Advisor: Toni C. Antonucci

Cognitive decline is one of the most common age-related stereotypes. The stereotype embodiment theory suggests that negative age stereotypes can be internalized through socialization and become negative self-perceptions of aging (SPA). However, the potential mediating role social relationships play between SPA and cognitive health remains unclear. Using three-wave data spanning eight years (2008/2010–2016/2018) from the Health and Retirement Study, this study aims to examine (1) SPA's long-term effects on changes in cognitive health; and (2) the mediating role of social isolation and loneliness (N = 3,569, M_{age} = 72.30). SPA was measured by an 8-item scale. Cognitive health was measured by immediate and delayed word list recall. Social isolation was measured using network size, network diversity, frequency of contact with close networks, and frequency of social participation. Loneliness was measured using the 11-item UCLA Loneliness scale. We controlled for baseline measures of the dependent variables and health-related and sociodemographic covariates. We found that negative SPA at baseline was associated with memory decline eight years later (β = -0.03, SE = 0.02, $p <$ 0.05). The path analysis revealed that social isolation and loneliness were mediators between SPA and cognitive health, with social isolation accounting for 15% and loneliness accounting for another 32% of the total effects. The results suggest that social isolation and loneliness are pathways by which SPA exerts adverse effects on memory among older adults. Negative SPA should be a target for intervention. In addition, social relationship building could alleviate the impact of SPA on cognitive health.

Patterns of simultaneous polysubstance use among young people

Michelle Loher, UZH
Advisor: Lilly Shanahan

Substance use among young people is common in Western countries (e.g., EMCDDA, 2022; Johnston et al., 2023), and polysubstance use is on the rise (e.g., Zuckermann et al., 2019). Risks associated with substance use increase substantially when multiple substances are consumed simultaneously or in short sequence (e.g., Crummy et al., 2020), and depend on the combination of substances being co-ingested (e.g., Dias da Silva et al., 2013; Tanaka, 2002). Prescription medications (e.g., opioids) are currently often co-consumed with other substances and have been implicated in the recent overdose and mortality crisis in North America (Compton et al., 2021; Peppin et al., 2020). In Switzerland, prescription and other use of opioids have also increased notably in recent years. To date, empirical research on patterns and correlates of polysubstance use in community samples of adolescents and young adults is scarce. This presentation will present preliminary findings from a project that aims to (1) assess the extent of (simultaneous) polysubstance use in large community samples of young people (age 15–24), (2) describe the most commonly occurring and most dangerous patterns, and (3) examine who is most at risk for these patterns. Data on adolescents and young adults' substance use, sociodemographics, internalizing/externalizing symptoms, perceived stress, and leisure time came from two large-scale, population-based studies in German-speaking Switzerland: (a) the Zurich Project on the Social Development from Childhood to Adulthood (z-pro so; Ribeaud et al., 2022) an ongoing longitudinal study, and (b) the Zurich Youth Survey (ZYS; Ribeaud & Loher, 2022), a cohort study.

The intergenerational reproduction of self-direction at work

Francesca Mele, UZH
Advisor: Kaspar Burger

In his classic work, Melvin Kohn hypothesized that variation in parental occupational self-direction played a central role in the reproduction of social inequality, as the more self-directed parents socialized their children to also value self-direction and to be prepared for acting autonomously in the workplace. Since self-directed jobs tend to be more extrinsically rewarding jobs (e.g., occupational status, income), parents who have more self-directed work would give their children a leg up in the status attainment process. The children's resulting self-directed orientations and behaviors would equip them well for future self-directed and higher-status work. Despite the prominence of Kohn's work, these hypotheses have never been tested empirically. Our study aims to address this gap by assessing (1) the relationship between parents and their adult children's occupational self-direction and socioeconomic status (SES); and (2) the role of parent–child relationships, work values, and self-efficacy in this intergenerational transmission process. Using two-generation longitudinal data from the Youth Development Study (N = 1,139) spanning three decades (1988–2019), we estimate a structural equation model to examine the intergenerational continuity of occupational self-direction. We find that (1) self-direction at work is transmitted across generations. (2) We also find evidence of a chain of influences involving parent–child relationship quality and adult-child psychological resources through which parental SES affects both adult-child self-direction and SES.

Looking White but feeling Asian: The role of physical permeability and perceived discrimination in multiracial-monoracial alliances

Wilson Merrell, UM
Advisor: Josh Ackerman

The multiracial population is one of the fastest-growing demographic groups in the United States, increasing by almost 300% between 2010 and 2020. However, relatively little is known about how these multiracial people identify with their respective parent groups (an important antecedent to engaging in collective action). Here, we test predictors of Asian American-White multiracial identity through the lens of social identity theory and examine how perceptions of this identity predict inclusion (or rejection) by Asian American monoracial people. Both Asian American-White multiracial students and adults identified more strongly as Asian than White, especially when they perceived discrimination against Asian Americans, and even when they were White-passing (i.e., physically appeared White to others; Studies 1a–b). However, Asian American monoracial students and adults incor-

rectly believed that this group of White-passing multiracial people would identify more strongly as White than Asian, and this misbelief predicted lower levels of trust and higher levels of rejection towards multiracial people in general (Studies 2a–b). Correcting these misbeliefs held by Asian American monoracial people improved attitudes towards White-passing multiracial people (Study 3). By focusing on a naturally occurring group with variation in physical permeability, this work expands upon traditional, experimentally-induced tests of social identity theory.

Modeling psychological networks of distraction in Attention-Deficit/Hyperactivity Disorder

Jahla Osborne, UM
Advisors: John Jonides & Priti Shah

Hypothesis: Adults with Attention-Deficit/Hyperactivity Disorder (ADHD) are easily distractible, yet few studies have investigated whether these distractions manifest from external or internal sources (e.g., mind-wandering, unwanted intrusive thoughts). The current study aims to discover if ADHD symptoms are differentially associated with one source of distraction.
Methods: Participants completed questionnaires that measure external distraction (EXT), unwanted intrusive thoughts (UIT), spontaneous mind-wandering (MW), and ADHD symptomatology. Our data included two non-clinical samples (N = 651, N = 569) and one clinically-diagnosed sample (ADHD = 30, Control = 30). We conducted network analyses to estimate psychological networks that showcase the relationships between individual ADHD symptoms (18) and sources of distraction in our non-clinical samples. Our clinically-diagnosed sample was too small for network analysis. Therefore, we used dominance analysis to indicate the relative importance of internal and external distraction predictors of ADHD symptoms.
Results: Estimated psychological networks suggest heterogeneity among ADHD symptoms and their association with distraction. For example, difficulty sustaining attention showcases a stronger association with MW compared to its associations with UIT or EXT. Conversely, misplacing things did not indicate significant differences in association with distraction. Dominance analysis in our clinically diagnosed sample offers converging evidence with respect to which sources of distraction are more "important" in explaining the symptom of interest.
Conclusions: These findings highlight the importance of better understanding distractibility in relation to ADHD symptoms. These findings should ignite future research to examine the relationship between ADHD subtypes and sources of distraction in larger clinically-diagnosed samples to inform solutions for combating distraction in real-world settings.

The impact of age-related hearing loss on cortical lip-contour tracking

Raffael Schmitt, UZH
Advisor: Nathalie Giroud

The alignment between low-frequency activity in the brain and slow acoustic modulations in the speech signal depicts a core principle in present theories of speech perception – a process referred to as "neural speech tracking." Unlike the auditory domain, little is known about how the brain processes visual cues of continuous speech and how these processes change as a function of age-related hearing loss.
In this ongoing study, a sample of elderly subjects ($N \approx 30$) with varying degrees of hearing loss complete speech perception tasks while their brain activity is measured using scalp EEG. Participants are presented with sentences where the speaker is either visible or not and where there's either noise present or not. Neural speech tracking is measured by computing the synchronization between brain activity and the lip contour of the speaker using partial coherence. Statistical analysis will be conducted on trial-level data using generalized linear mixed effects models. We hypothesize that hearing loss and external noise is associated with enhanced lip-contour tracking. Furthermore, we hypothesize that the association between noise and lip-contour tracking is modulated by the degree of hearing loss (i.e., a significant interaction between hearing loss and noise).

Intensive training in task-switching alters frontoparietal activation and connectivity in children

Sina A. Schwarze, MPIB
Advisor: Yana Fandakova

Children struggle with adapting to changing environmental demands by flexibly switching between tasks. However, these difficulties di-

minish with practice. In adults, training-related improvements in task switching have been associated with more efficient rule processing in frontoparietal regions and increased functional connectivity between these regions. To examine if similar neural mechanisms underlie training improvements in children, 8–11-year-olds practiced single-tasking (ST; *N* = 40/30 with/without fMRI) or task-switching (SW; *N* = 40/26) intensively for nine weeks, or were in a passive control group (*N* = 39, all with fMRI). All groups completed pre- and post-training cognitive testing and fMRI scans. With practice, SW children showed greater increases in drift rates during task switching than ST and control children, suggesting faster evidence accumulation for the correct response. More efficient task processing in the SW compared to the ST and control groups was further evident in larger decreases in activation in regions implicated in rule management: the inferior frontal junction, dorsolateral prefrontal cortex (PFC), and superior parietal lobule. In both SW and ST groups, engagement of default mode regions became more similar for task switching and single-tasking. Task-based connectivity between frontoparietal regions was stronger during task switching relative to single-tasking before training and did not change with practice. These results support the hypothesis that more efficient task processing with task-switching practice is likely to be related to general improvements in meta-control processes, as evident in practice-related changes in brain regions supporting rule management and the default mode network.

How nature nurtures: Investigating neural and physiological indicators of stress after a walk in natural vs. urban environments

Sonja Sudimac, MPIB
Advisor: Simone Kühn

Exposure to nature has been shown to have positive effects on mood and stress response. However, the neural mechanisms that underlie the beneficial effects of nature have not yet been investigated. Additionally, it is not yet understood how exposure to nature affects different age groups and at what age individuals may begin to benefit from the salutogenic effects of nature. To address these questions, we conducted two intervention studies. In the first study, we examined the effects of a one-hour walk in a natural environment (forest) versus an urban environment (busy street) on brain regions associated with stress, using fMRI methodology. Our findings indicated that activity in the amygdala, a stress-related brain region, decreased after the walk in nature, whereas it remained stable after the walk in the urban environment. Moreover, we observed an increase in hippocampal subfield volume after the walk in nature, associated with a reduction in rumination. The results suggest that going for a walk in nature can have salutogenic effects on brain function and structure, and may act as a preventive measure against developing a mental disorder. In the second study, we investigated the change in stress levels in mothers and their infants after a 45-minute walk in natural versus urban environments. We measured salivary cortisol, a physiological indicator of stress, before and after the walks in both mothers and infants, as well as cortisol levels in the mother's breast milk. Our findings aim to contribute to evidence-based urban design policies to create optimal urban environments and consequently enhance citizens' mental health.

Should I stop or should I go on? The role of beliefs about exhaustion in continuing or disengaging from an activity

Beatrice Tarăpoancă, UZH
Advisor: Alexandra M. Freund

Beliefs play an important role in subjective experiences and decisions. As of yet, only little is known about the specific role of beliefs in the experience of exhaustion and its role in deciding to continue or disengage from an activity. This is the central question of my proposed research. Building on a motivational process model of exhaustion and recovery (Cardini & Freund, 2019; Schüttengruber & Freund, 2023), I argue that beliefs about antecedents and consequences of exhaustion play an important role in shaping the subjective experience of exhaustion, and in the decision-making process of continuing or disengaging from an activity. More specifically, I distinguish roughly between two types of subjective beliefs about the function of exhaustion: (1) exhaustion signals resource depletion and is a prompt to disengage from the current activity to recharge, or (2) exhaustion indicates that continued activity will lead to growth or gains in the skill underlying the current activity, and with this prompts the maintenance – or even increase – in its engagement. In this talk, I will present these

theoretical ideas as well as a series of studies to test them.

Psychological and neural responses to architectural stimuli: The case of contours
Nour Tawil, MPIB
Advisor: Simone Kühn

We spend the majority of our time indoors, yet little is known about the psychological and neural mechanisms underlying our responses to architecture and design. This series of studies investigate a previously claimed positive effect of curved vs. angular interiors, still not fully explained nor explored with matched yet ecologically-valid stimuli. We developed a virtual reality (VR) paradigm with photorealistic living environments for the first study and examined the influence of contours on affective, cognitive, and physiological responses. Surprisingly, we observed insignificant differences between angular and curved conditions. In the second study, we presented 2D images of the rooms and found a significant effect on explicit responses. Curvature positively affected aesthetic preference while angularity negatively influenced stress responses. To disentangle the potential source of the effect, the third study utilized a battery of implicit tasks that assess mental representations and action tendencies. Consistent with explicit measures, the results confirmed an implicit preference for curvature, with a semantic bias to associate curvature with approach and angularity with avoidance. Additionally, we identified associative-motoric biases driven by a slow avoidance of curvature rather than any responses to angularity. The fourth study combines VR and functional magnetic resonance imaging (fMRI) to present 3D exploration videos and explore the neural correlates underlying the effects of contours, with a focus on pleasure- and stress-related brain regions. These findings highlight how the spaces we inhabit for most of our time can impact our emotions and behavior, offering insights into how architectural design can be optimized to support well-being.

The impact of working memory testing on long-term associative memory
Kathy Xie, UM
Advisor: Patricia A. Reuter-Lorenz

The long-term fate of to-be-remembered information is known to depend in part on the conditions of initial learning. However, the mechanistic role of working memory (WM) processes in subsequent episodic memory (EM) remains unclear. Recent work from our lab suggests that re-exposure to word pairs during a WM recognition test improves EM for those associations. Are such benefits from WM re-exposure due to retrieval practice or to the opportunity to restudy the memoranda? I addressed this question in three experiments ($n = 460$) designed to evaluate the emergence of WM-based testing benefits and the contexts that promote a relative advantage of WM testing versus restudying. The results suggest that retrieval practice during a WM test leads to more consistent EM benefits than restudying. However, restudying can produce equivalent benefits but only under specific conditions. The results also highlight the importance of initial successful WM retrieval in associative memory over the long term. This new evidence for a WM-based testing effect adds to a growing body of research suggesting that WM and EM share many of the same underlying cognitive processes and inform theoretical models of the architecture of human memory.

Task-dependent representational dynamics in working memory
Dilara Zorbek, MPIB
Advisor: Bernhard Spitzer

A long-standing question in the working memory (WM) literature is the extent to which WM maintains retrospective representations of past sensory inputs and/or future-oriented representations of prospective actions. More recently, it has been proposed that WM might instead maintain representations intermediate to sensation and action, in terms of contingencies that define how future behaviors will depend on upcoming events. Whether and how the dynamics of human brain activity during visual WM reflect the transformation of sensory input into a contingency representation remains to be shown. To address this, we are developing a retro-cue paradigm where participants compare stimulus orientations either in native space (360°), in a 180° space (horizontal-vertical), or a 90° space (cardinal-diagonal). This creates three orthogonal contingency mappings with respect to the upcoming stimulus, enabling us to pinpoint potential differences in neural representation during WM. Specifically, we will use representational geometry analyses of fMRI, and eye-tracking data to examine whether they

reflect task-dependent contingencies, over and above the representation of past sensations and upcoming actions identified in earlier work.

Posters

Separate and unequal: Moral domains differ in corresponding social judgments of others
Savannah Adams, UM
Advisors: Josh Ackerman & Amie Gordon

Current research on morality supports the idea that the moral landscape is comprised of several domains. However, the extent to which these domains may be thought of as equivalent when used as the basis for forming impressions or making social judgments is not yet understood. Past literature that there may be notable differences in the evolutionary and social development of different moral behaviors, which raises questions about how actions based on different domains may be interpreted and judged by others. The current research explores possible differences in social justice as a function of the morality domain to inform contemporary morality literature. This may set the stage for future studies to investigate the relationship between moral domains and social selection across contexts.

Role of learning in the emergence of individuality
Warsha Barde, DZNE
Advisor: Gerd Kempermann

We used the IntelliCage (IC) apparatus, which is a computer-based, fully-automated home cage system to analyze the exploratory, learning, and social behavior of mice. Genetically identical mice, when subjected to a series of learning tasks, showed individualized behavioral trajectories. IC mice also showed a significant increase in adult hippocampal neurogenesis (AHN) which correlated positively with different aspects of learning. In the absence of genetic and environmental variance, this emergence of individuality is attributed to environmental enrichment (ENR) that facilitates a differential experience of the 'non-shared' environment, augmenting small initial differences and setting animals on individual life paths. We hypothesize that the feedback loop between behavior and experience-dependent plasticity is a driving mechanism for the individualization of the brain and consequently behavioral patterns. Using IntelliCage as a reductionist version of ENR, aims to study the role and relative contribution of learning and educational experiences in inducing the ENR effects. We will first study the process of individualization of behavioral patterns by analyzing exploratory and learning curves. We will then examine the relationship between behavioral features and brain plasticity measures like AHN and hippocampal functional connectome by using immunohistochemistry and ex-vivo electrophysiology.

Cortical and subcortical markers of speech processing in the brain at risk for dementia
Elena Bolt, UZH
Advisor: Nathalie Giroud

Mild cognitive impairment (MCI) represents an intermediate stage between the cognitive decline associated with normal aging and the more severe decline associated with dementia. The strong link between hearing and cognition suggests that neurophysiological data from "participants at risk for MCI" (as identified by a Montreal Cognitive Assessment [MoCA] score < 26) can shed light on how speech processing deficits along the auditory pathway characterize the brain at risk for dementia.
Furthermore, such data can help disentangle the interactions between cognitive impairment and age-related hearing loss. In the auditory pathway, signals pass through subcortical relay stations before being integrated into cortical areas. A recent study suggests that the MCI pathophysiology extends to speech encoding in the brainstem and that both cortical and subcortical markers of speech processing could predict a low MoCA score. Our study investigates cortical and subcortical processing of natural speech in Low MoCA and Control participants (≥ 60 years of age) using a novel electroencephalography paradigm. We expect altered processing in the Low MoCA group, driven by slowed and weaker encoding at the subcortical level. At the Spring Academy, we plan to present our preliminary results. Our research has the potential to contribute to the understanding of the neurophysiological mechanisms underlying MCI, which could help identify individuals at risk for dementia at an earlier stage.

The potential of immersive auditory-cognitive training as a platform for studying hearing loss and cognitive decline

Vanessa Frei, UZH
Advisor: Nathalie Giroud

Auditory-cognitive training (ACTs) and audio-visual speech presentation represent promising approaches to improve and maintain speech comprehension despite hearing loss (HL) or cognitive decline, while generalizability and transfer effects of ACTs still pose a major challenge. The objective of this study is to gain insights into the benefits of a combined approach between ACTs and audio-visual immersion for speech comprehension. Participants (with varying degrees of cognitive capacity and peripheral HL) answer questions about spoken content in a three-dimensional immersive (virtual reality and stereoscopic stimulus presentation) conversation. Electroencephalography is used to measure neural speech tracking simultaneously. Speech comprehension is measured on a behavioral level and concurrently cortical speech processing as a function of cognitive capacity, sensory auditory performance, and varying cognitive demand is assessed. We predict improved speech comprehension using immersive ACT and simultaneously gain a deeper understanding of associated speech tracking and its role regarding speech comprehension, particularly with varying cognitive demands. Furthermore, we are interested in the extent to which individual resources, especially cognitive capacity, accompany this association and to what extent an advantage can be gained regarding ACTs (expecting preliminary results by May 2023). The central objective is whether immersive ACT has the potential to improve speech comprehension and to what extent this depends on cognitive capacity and HL. The design allows for both a within- and a between-person perspective, whereby individual prerequisites, environmental, and particularly motivational factors can be considered. Finally, it allows for valuable considerations for future training, regarding transferability and generalizability, while enabling increased engagement of individuals.

Learning in diverse classrooms: Exploring the interplay between heterogeneity and teaching quality on achievement

Svenja Hascher, Universität Potsdam
Advisors: Camilla Rjosk & Petra Stanat

The heterogeneity of the student body is a constitutive feature of primary school classes. In recent years, the significance of a heterogeneous class composition for learning has been discussed, particularly in light of migration movements that bring together children of different ethnic backgrounds. Dealing with this heterogenous student body is one of the core responsibilities of teachers, so understanding the role of teaching and instruction in fostering a positive learning environment is essential. The focus of this study is to investigate the impact of heterogeneity, across various dimensions, on learning in primary schools. Furthermore, we investigate whether the effects of heterogeneity vary depending on students' background characteristics. To gain insight into the conditions that determine the occurrence of heterogeneity effects, we explore how teaching quality may influence the impact of heterogeneity on students' achievement. To answer our research questions, we perform multilevel analyses using a longitudinal German-wide dataset (National Educational Panel Study; Blossfeld & Roßbach, 2019), including data from students in grades 1–4. Findings indicate a small positive relation between ethnic heterogeneity and students' achievement, regardless of students' background characteristics. Additionally, certain aspects of teaching quality may facilitate positive effects of achievement heterogeneity on students' achievement.

Social sampling under time pressure

Marlene Hecht, MPIB
Advisors: Christin Schulze & Thorsten Pachur

To infer unavailable social statistics (e.g., the relative frequency of health risks or consumer preferences in the population), decision-makers can recall samples of the events in question from among the people they personally know. How is this process of social sampling affected under temporal constraints? In this study, participants (N = 80) judged the popularity of different sports in a paired-comparison task. One group (N = 40) had unlimited time to complete the task, while the other group (N = 40) performed the task under time pressure (i.e., had a maximum of 1 sec-

ond to respond at each trial). In addition, all participants listed people in their social networks who were members of a club for each sport and indicated the social category (i.e., self, family, friend, acquaintance) of each recalled person. For each group, we used a hierarchical Bayesian mixture-modeling approach to compare the performance of different strategies of social sampling to describe people's judgments. The set of candidate strategies involved a strategy with a limited search that was guided by social category (assuming that people sequentially sample from social subgroups), a strategy with an exhaustive search (assuming that people sample from their entire social network), and a baseline guessing strategy. The results suggest that in the condition with time pressure, the use of the strategy with limited search was increased relative to the condition without time pressure. Interestingly, under time pressure, participants also seemed to rely more strongly on information from their distant social network members (e.g., acquaintances). We discuss how these search patterns might help people to efficiently sample social information to prevent biased estimates.

Longitudinal measurement invariance using exploratory graph analysis

Laura Jamison, UVA
Advisor: Hudson Golino

Establishing longitudinal measurement invariance (LMI) is crucial for the assessment of dynamics and change over time within any psychological trait. If LMI is violated, the dynamics may be due to the measurement itself rather than true dynamics in the latent trait. There has yet to be a method comparable to LMI from the SEM methodology introduced to network psychometrics. Following the introduction of a cross-sectional method for metric invariance within Exploratory Graph Analysis (EGA; Golino et al., 2017) using permutation testing (Jamison et al., 2022), we propose a similar method to apply to dynamical EGA (dynEGA; Golino et al., 2021). The method we propose will first estimate the dynEGA model, then calculate dynamic network loadings from this model, and finally applies permutation testing to these loadings for partial metric invariance. Results will be discussed from a simulation study following common data structures in longitudinal psychological research manipulating variables including sample size, number of time points, autocorrelation, and effect size.

Longitudinal analysis of racial disparities using multilevel modeling: A demonstration using suspension data

Lee LeBoeuf, UVA
Advisor: Angeline Lillard

Common methods of analyzing racial disparities in disciplinary outcomes are unsuitable for longitudinal analyses, which has prevented researchers from accurately answering many important substantive questions related to the racial discipline gap over time – including evaluating interventions meant to curb discipline disproportionality. Many scholars studying discipline disproportionality have commented on this methodological issue (Curran, 2020; Girvan et al., 2019; Gregory et al., 2010), but none have proposed a solution. In this study, we will demonstrate a novel approach to analyzing discipline disproportionality longitudinally using multilevel modeling. Our approach, originally proposed in LeBoeuf et al. (2023), can be applied to the analysis of any racial disparity in outcomes of count data. We analyze almost a decade's worth of suspension data, collected by the Civil Rights Data Collection, to answer how the discipline gap is changing over time in US public schools.

Memory brain state engagement differs across the lifespan

Isabelle Moore, UVA
Advisor: Nicole Long

Healthy older adults typically show impaired episodic memory but intact semantic memory. We hypothesize that these effects can be explained by an increased tendency to enter into and remain in a 'retrieval state,' a brain state in which attention is focused internally in an attempt to retrieve prior knowledge. The retrieval state trades off with an 'encoding state,' a brain state in which attention is focused externally. To test our hypothesis, we conducted multivariate pattern analyses of scalp electroencephalographic (EEG) data while participants were explicitly directed to encode or retrieve object images. We find that both young and older adults can flexibly engage in memory brain states as directed. However, older adults' memory state engagement plateaus early in the stimulus interval, compared to young adults whose memory state engagement

gradually increases. These findings suggest that the temporal dynamics of encoding and retrieval states differ across the lifespan.

Estimating individual trajectories of structural and cognitive decline in mild cognitive impairment
Shreya Rajagopal, UM
Advisor: Thad Polk

Some patients with Mild Cognitive Impairment (MCI) progress to dementia of the Alzheimer's type (converters), but others do not (non-converters). We sought to distinguish between these two groups based on changes in brain structure over time and to investigate if these changes are associated with cognitive decline. We performed factor analysis on behavioral measures from 758 MCI subjects in the Alzheimer's Disease Neuroimaging Initiative (ADNI) Neuropsychological Battery and identified three factors that roughly mapped onto memory, visuospatial processing, and executive function. We then fit longitudinal growth curve models to individual trajectories of decline in each of these cognitive factors and the volumes of six brain regions — the hippocampus, entorhinal cortex, fusiform gyrus, occipital lobe, ventricles, and the whole brain —with age. We found that the rates of change of hippocampal and ventricle volume with age are more rapid in converters than in non-converters. Specifically, the hippocampus loses volume and the ventricles enlarge more rapidly in converters. Secondly, we found that estimates of individual trajectories of change of hippocampal, ventricle, and occipital volume with age could predict progression to DAT in the MCI stage. Finally, we found that estimates of individual trajectories of structural and cognitive decline were largely significantly correlated with each other. This suggested that a more rapid change in volume across the different structures we evaluated was linked to a more rapid worsening of cognitive performance across episodic memory, visuospatial processing, and executive function in patients with MCI. Finally, we also found that incorporating individual differences improved the fit of all growth curve models of structure and cognitive factors suggesting that there is significant individual variation in both the baseline values and rates of change of these factors with age.

Educational expansion and beliefs in the importance of education for earnings
Kevin Schoenholzer, UZH
Advisor: Kaspar Burger

Educational expansion over the last decades has increased the average educational attainment and narrowed its distribution across most societies. Studies have shown that beliefs in the importance of education influence educational decisions and outcomes of individuals. The potential impact educational expansion could have on how people think about the relationship between education and earnings has not been adequately explored. This research investigates whether the increase in educational attainment that resulted from educational expansion, is related to changes in how important people think education should be for earnings. Moreover, we determine whether there is a significant difference between individuals with higher and lower levels of education. This study combines nationally representative individual-level data assessing beliefs related to inequality taken from the International Social

Survey Program (ISSP) modules from 1992, 1999, 2009, and 2019, with country-level educational attainment data. The final sample post imputation, contains 109,094 individual-level observations, totaling 79 country-years across 31 unique countries. We find that across countries, an absolute increase in educational attainment was significantly and positively associated with stronger beliefs in the importance of education for earnings. Additionally, individuals with higher educational attainment showed significantly higher beliefs compared to fellow citizens with lesser educational attainment. Educational expansion seems to have raised overall beliefs in the importance of education for earnings, especially for individuals with above-average educational attainment. Overall, our study contributes to the small but growing body of literature on the relationship between education and beliefs in the importance of education for earnings, highlighting the changes that have occurred across countries in the last three decades of educational expansion.

Characterizing perceptual and value-based mechanisms in aversive generalization

Luianta Verra, MPIB
Advisor: Nicolas W. Schuck

A characteristic marker across anxiety disorders is inflated affective responses to stimuli that are safe, i.e., excessive generalization of fear. Such generalization can arise from two sources: the failure to discriminate between stimuli and the active process of transferring learned values to similar, but discriminable stimuli (i.e., value-based mechanisms). While anxiety has been associated with overgeneralization, it is unclear whether this is driven by a perceptual or a value-driven process. In a Pavlovian aversive learning paradigm, we vary perceptual and outcome uncertainty to test the contributions of perceptual and value-based components to generalization. We manipulate perceptual uncertainty using personalized stimuli at different discrimination difficulties and outcome uncertainty varying reinforcement rates during fear acquisition. We will analyze the resulting response gradients using a hierarchical Bayesian curve-fitting approach to fit augmented Gaussian functions to individual gradients, similar to Lee et al. (2021). The model can independently capture the width, peak height, and symmetry of generalization kernels, which allows us to analyze the unique contribution of perceptual and value-driven mechanisms in aversive generalization. Additionally, it allows us to investigate whether individuals high in trait anxiety and intolerance of uncertainty overgeneralize due to perceptual or value-driven mechanisms. In preliminary work, we identified six sets of perceptually linear stimuli together with a suitable staircasing algorithm to efficiently titrate stimuli to target accuracies (i.e., high and low perceptual uncertainty). Each set contains nine stimuli, which generates sufficient perceptual granularity to dissociate between unique contributions of perceptual and value-based mechanisms to aversive generalization.

Announcement of

LIFE Outstanding Alumni Award 2023

The LIFE Steering Committee is pleased to announce the 2020 LIFE Outstanding Alumni Award competition. This annual award for LIFE alumni recognizing continued excellence in interdisciplinary developmental science post PhD was established to make use of the prize money LIFE received in connection with the APA Board of Educational Affairs Award to Advance Interdisciplinary Education and Training in Psychology. The LIFE Outstanding Alumni Award is focused specifically on the continued realization of the objectives of LIFE in the awardee's independent research career. The award winner will be invited to join the LIFE Spring Academy 2024 and to deliver an award lecture based on her/his research.

Eligibility Requirements

Applicants should have received their PhDs no earlier than three years ago and should not be more than 10 years beyond graduation. Criteria for selection will be the quality of publications, overall productivity, overall impact of research program, evidence of larger relevance of research, funding success, evidence of lifespan perspective, as well as quality, quantity, and outreach in mentoring.

Guidelines for Application

To apply please send Silke Schäfer <sschaefer@mpib-berlin.mpg.de> a PDF file containing the following materials by *September 15, 2023*:

- One-page synopsis of your relevant research program;
- Your CV;
- 2–3 representative publications;
- A statement about how your on-going research program, mentoring goals, and overall scholarship have been shaped by LIFE and continue to embody the goals of LIFE.

Those alumni who applied last year and continue to be eligible are encouraged to update their information and stay in the nomination pool.

For information on previous awardees, see https://www.imprs-life.mpg.de/en/life-program/outstanding-alumni-award

10 Questions

Nora M. Raschle, Assistant Professor of Psychology at the Jacobs Center for Productive Youth Development, University of Zurich

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How did you get involved in developmental neuroscience?

I have always been fascinated by how the human brain is associated with our behaviors, well-being and personalities. How it allows us to learn, how it enables our interactions and understanding, and how it is unique to every one of us. My masters and PhD studies were shaped by the people I met and the places I was able to travel to. I first studied Neuropsychology at UZH (Lutz Jäncke). I was able to visit different laboratories around the world and following my master's degree, I had the privilege to become a doctoral student in the Laboratories of Cognitive Neuroscience at Children's Hospital and Harvard Medical School in Boston (USA). Together with Nadine Gaab and her team, we developed pediatric neuroimaging protocols and tasks for neuroimaging research which also included younger children. Involving children in research requires a whole different way of storytelling, and this is where all my passion comes into play: I have always loved the arts, reading, and creative work as much as natural sciences. Thus, developmental neuroscience was the perfect place for me to be and combine it all. Studying how the human brain develops, grows, and learns through innovative and creative research techniques suitable to young children and families is to this day my dream job.

Could you name books or articles that have profoundly influenced your own thinking about the field?

I have always loved to read, from fictions to novels to biographies. My fascination about the human brain thus comes from various books and authors, including both scientists such as Oliver Sacks, Vilayanur Ramachandran, Erich Fromm, Maryanne Wolf, and classical authors such as Margaret Atwood, Haruki Murakami, or Javier Marias. I read everything our small-town library had to offer. Besides reading lots of science-based articles (from which I would like to highlight the work from Dani Bassett, Uta Frith, Adele Diamond, Susan Bookheimer, or Ruth Feldman), I still love good books. My recent favorite science-inspired book reads are: *The Social Instinct: How Cooperation Shaped the World* (Nichola Raihani), *Inventing Ourselves* (Sarah J. Blakemore), *How We Learn* (Stanislas Dehaene), *Against Empathy: The Case for Rational Compassion* (Paul Bloom), *Science Fictions* (Stuart Ritchie), and *Two Heads* (Uta, Chris, & Alex Frith).

Which do you consider the main current debate within the field?

For one, we may still be learning about what evidence and method, or combinations thereof, are best and adequate to describe change. Meaningful emergence, continuity, and discontinuity of behavior and their associated impact on children's development and well-being are part of ongoing discussions that let us infer the nature of change. Secondly, there is need for theory guiding the investigation of mechanisms relating to change and to typical or atypical development on an individualized basis.

What research topics have been neglected or have not received enough attention so far?

While we have succeeded in the description of typical or average human behavior, there is still a need for more studies reporting on individual variability and trajectories that may allow us to develop more tailored, personalized solutions. I appreciate the Open Science movement and endeavors that work towards reproducible and replicable research. Large-scale projects are increasingly providing open source data and code, thus furthering basic knowledge. While we have made huge advances, it cannot be underestimated that the description of developmental processes requires time. To describe development, we have to study development. And for the individual human brain, that takes at least 25 years (or longer when considering the fact that our development is influenced by the generations preceding us). Understanding non-normative trajectories requires understanding of the average course and behaviors first. Similarly, we may have gained much knowledge from studies looking at ex-

treme forms of behaviors or adverse influences. It remains important to consider normative variations and their impact on our everyday lives. And ultimately, we are facing global challenges affecting society, and the questions we scientists should be asking ourselves should also be: What is it that we can do? How can we translate our knowledge in meaningful ways? How can we reach impact through science?

One of your foci takes an intergenerational perspective on socioemotional brain development. Can you tell us more about this?

The human brain is a product of complex, dynamic, interacting processes. Humans, and their brains, grow, develop, and learn in relation to the individuals around them. They are influenced by genetic, non-genetic, or epigenetic influences. Intergenerational transfer describes the transmission of parental traits (i.e., genetic and non-genetic) which impact their children. Socioemotional abilities represent different skill sets for social and emotional functioning. By impacting our ability to cope with stressful life circumstances, socioemotional skills are further associated with an individual's present and future well-being. Neurally, socioemotional skills are associated with the corticolimbic brain network. An intact functioning and structure of corticolimbic brain regions has been linked to healthy social functioning. Disruptions, however, are reported for psychopathologies.

Our research project SMILIES aims to systematically test intergenerational transfer effects on children's socioemotional development. To do so, corticolimbic structure, function, and connectivity are investigated using magnetic resonance neuroimaging in parents and their children. This allows us to look at parent–child dyads, but also at links between siblings or couples. An increased knowledge about corticolimbic brain development and socioemotional functioning is relevant for everyday life and mental well-being. Our project highlights the importance of parent–child relationships on brain development and provides a foundation for the understanding of the positive and negative back-cycling effects of experiences on children's lives.

How can your research be applied to everyday life?

Humans are inherently social beings. We grow up in our families, communities, and social systems. No human brain ever acts, grows, or learns in isolation. An increase in knowledge on the mechanisms underlying intergenerational transfer effects reflected in biology and behavior through investigation of parent–child dyads promises to impact our understanding of the transmission of complex skills. During early childhood, caregivers play a crucial role in providing external support, which enables children to develop and display adequate socioemotional skills. Direct effects of parental practices on children's emotion regulation strategies, including reappraisal and suppression are known. Furthermore, socioemotional and cognitive skill development are highly interrelated (e.g., to executive functioning or language skills). Overall, parental predispositions and functioning are strongly intertwined with that of their children. Investigations must extend beyond the individual child to disentangle the influence of intergenerational back-cycling of positive or negative experiences on brain development and learning. Such knowledge may hold the potential to further our understanding of disorders of corticolimbic brain regions, ultimately supporting early detection efforts and guiding possible prevention strategies.

What are you currently working on?

My present and future research aims to provide inter- and intra-individual knowledge about human brain development, ultimately enabling us to support each individual child in reaching their own goals and potential. Our team studies typical and atypical brain development in relation to human behaviors such as skill acquisition, learning, but also social and emotional well-being. We investigate brain trajectories in dependence on the environment children grow up in and the genetic predispositions they bring along for specific times in life or across the lifespan. Ongoing current projects include the study of:

1. Socioemotional and cognitive brain development using an intergenerational perspective (neural concordance design including whole families);
2. Adaptive brain circuits in development and learning with a particular focus on multi-

sensory processing through the University Research Priority Program (URPP) Adaptive Brain Circuits in Development and Learning (AdaBD; https://www.adabd.uzh.ch), which informs about the genetic, molecular, and cellular processes that form the basis of learning in children's brains;

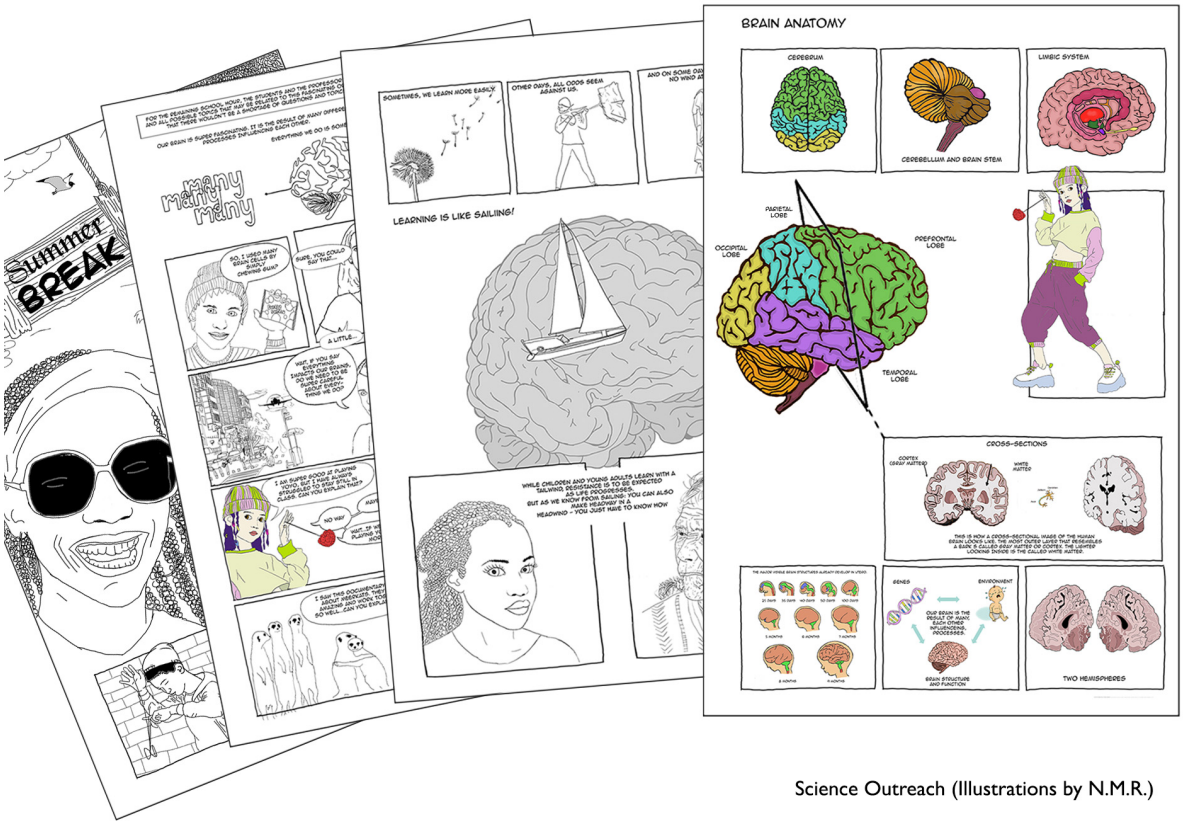
3. Risk and resilience of stress exposure across the lifespan through STRESS; https://www.hochschulmedizin.uzh.ch/en/projekte/stress.html, the 2022 flagship project of Hochschulmedizin Zurich including over 15 partner institutions.

You are also particularly interested in science communication. Can you give us some examples of your activities in this domain?

Our laboratory strives to make science accessible beyond our institution and to reach educational systems, policy makers, and clinical practices. As part of this effort, we focus on science communication geared towards children, adolescents, and families who contribute to our research. I believe that if our research is not translated effectively to society, it loses value. I have participated in science outreach through various means, such as blogs, videos, or articles for children and youth. At the moment, many of these are a bit slowed down as we are building up a larger science communication project talking about human brain development in health and disease. We aim to combine elements of science outreach, co-creation and dialogue to further public knowledge about brain and behavioral development, pointing out the connections to highly relatable topics such as mental health, learning, or the mysteries of the teenage brain. In addition, we guide our audience towards an increased understanding of the fundamental principles of the scientific process – how does science actually work? Thankfully, foundations such as the Swiss National Science Foundation or Cogito Foundation increasingly recognize science outreach efforts. Through their support, we plan to incorporate techniques such as dialogue or co-creation events in our outreach. One subgoal is also the development of a graphic novel entitled "Growing Brains." Therefore, beyond all the "science-ing," I am currently quite busy with writing and drawing (see below).

What is the added value of LIFE's internationality?

Many of our students have faced great challenges. The pandemic has paused many research agendas, required us to change routes, and pro-



Science Outreach (Illustrations by N.M.R.)

In their science communication and outreach efforts, my lab uses drawings, movie clips or podcasts to talk about science and all things relating to human brain development.
Illustrations by Nora M. Raschle
https://www.jacobscenter.uzh.ch/en/research/developmental_neuroscience/scicomm.html

hibited many from travelling and in-person networking. I appreciate that LIFE is an international network through which the students may connect with each other, find new mentors, and ideally build up new collaborations or become visiting scholars at one of our partner institutions. International collaborative efforts should be increasingly recognized, where data sharing and project coordination on an international level may be counted towards a student's track record. International programs are another means to gain new perspectives, learn about different lab cultures, and exchange ideas. I strongly believe that collaboration is key. In order to advance our understanding of the brain and its development in health and disease we have to cross borders, methodologies, and species. That's why I see the LIFE program as a unique opportunity to participate in a network of peers, collaborators, and mentors from within and outside one's own primary discipline.

Website:
https://www.jacobscenter.uzh.ch/en/research/developmental_neuroscience.html

Blog:
https://bornascientist.com/

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Image: Florian Moritz

New LIFE Faculty in Charlottesville

Patricia (Tish) Jennings is an internationally recognized leader in the fields of social and emotional learning and mindfulness in education and Professor of Education at the School of Education and Human Development at UVA. Her research places a specific emphasis on teacher stress and how it impacts the social and emotional context of the classroom, as articulated in her highly cited theoretical article "The Prosocial Classroom." Jennings led the team that developed CARE, a mindfulness-based professional development program shown to significantly improve teacher well-being, classroom interactions, and student engagement in the largest randomized controlled trial of a mindfulness-based intervention designed specifically to address teacher occupational stress. She is a co-author of *Flourish: The Compassionate Schools Project* curriculum, an integrated health and physical education program, and is co-Investigator on a large randomized controlled trial to evaluate the curriculum's efficacy. She is currently the Principal Investigator of Project CATALYZE, a study funded by the US Department of Education that is examining whether CARE enhances the effectiveness of a social and emotional learning curriculum. A member of the National Academy of Sciences Committee on Fostering Healthy Mental, Emotional, and Behavioral Development among Children and Youth, she was awarded the Cathy Kerr Award for Courageous and Compassionate Science by the Mind & Life Institute in 2018 and recognized by Mindful Magazine as one of "Ten Mindfulness Researchers You Should Know." Earlier in her career, Jennings spent more than 22 years as a teacher, school director and teacher educator. She is the author numerous peer-reviewed journal articles and chapters and several books: *Mindfulness for Teachers: Simple Skills for Peace and Productivity in the Classroom*, *The Trauma-Sensitive School: Building Resilience with Compassionate Teaching*, *Mindfulness in the Pre-K-5 Classroom: Helping Students Stress Less and Learn More*, part of *Social and Emotional Learning Solutions*, a book series by WW Norton of which she is editor. Her latest book is *Teacher Burnout Turnaround: Strategies for Empowered Teachers*.

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CATALYZE: https://www.catalyzeproject.org/

Key publications

Jennings, P. A., & Greenberg, M. (2009). The prosocial classroom: Teacher social and emotional competence in relation to child and classroom outcomes. *Review of Educational Research, 79*(1), 491–525. https://doi.org/10.3102/0034654308325693

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LIFE-Related Publications

These include all recent articles reported by *LIFE fellows* as well as selected work by *LIFE alumni*. See also https://www.imprs-life.mpg.de/publications. If your work is missing, please let us know!

Allen, J. P., **Costello, M. A.**, Hellwig, A. F., Pettit, C., Stern, J. A., & Uchino, B. N. (2023). Adolescent caregiving success as a predictor of social relationship qualities from age 13 to 33. *Child Development*. Advance online publication. https://doi.org/10.1111/cdev.13936

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LIFE News

- The Fall Academy 2023 will be hosted by the Jacobs Center for Productive Youth Development and the Department of Psychology, UZH, from November 14 to 17.
- LIFE Virginia will host the Spring Academy 2024 from May 27 (arrival) to May 31.

Exchanges

- UZH fellow *Sabrina Beck* was at UM in April/May, working with faculty *Robin Edelstein* at the Personality, Relationships and Hormones Lab
- UZH fellow *Jasmin Brummer* is planning to visit *Patti Reuter-Lorenz*'s lab at UM from mid-September to November 2023.
- HU fellow *Urmimala Ghose* is planning a research stay with *Jacqui Smith* at UM in the fall.
- UZH fellow *Zita Mayer* is currently visiting faculty *Manuel Voelke* at HU.
- UM fellow *Wilson Merrell* visited UZH faculty *Urte Scholz*'s lab for a month. They started working on a project together related to the concealment of health information (e.g., infectious illness, smoking behavior). A collaborator on this project is LIFE alumnus *Walter Bierbauer*, a postdoc in her lab.

LIFE Berlin

- MPIB fellow *Elisa Buchberger* successfully defended her thesis entitled „The Process Architecture of Memory in Early to Middle Childhood" at Ruhr-Universität Bochum in July.
- University of Potsdam fellow *Andrea Hasl* successfully defended her thesis entitled "Time Matters: Adopting a Lifespan Developmental Perspective on Individual Differences in Skills, Cumulative Advantages, and the Role of Dynamic Modeling Approaches" in May.
- HU alumnus *Foivos Iliopoulos* successfully defended his thesis entitled "Unconscious Modulators of Somatosensory Perception" at Charité – Universitätsmedizin Berlin in July.
- MPIB fellow *Christoph Koch* successfully defended his thesis entitled "How Aging Shapes Neural Representations of Continuous Spaces" in May.
- MPIB fellow *Marlene Hecht* co-organized this year's Summer Institute on Bounded Rationality at MPIB from June 13 to 21.
- DIW fellow *Michael Krämer* sucessfully defended his thesis entitled "Social Relationships, Personality, and Subjective Well-Being: Investigating Social Processes Across Different Methods and Temporal Resolutions" in June.
- MPIB fellow *Eleftheria Papadaki* successfully defended her thesis entitled "Experience-Dependent Plasticity in the Auditory Domain: Effects of Expertise and Training on Functional Brain Organization" in June.

- HU alumna *Anne Reitz* is taking up a professorship for Personality Psychology/Psychological Assessment at Universität Greifswald, Germany, in October.
- MPIB faculty *Christin Schulze* has taken up a lecturer position in Computational Cognitive Science at the University of New South Wales, Australia. Her work seeks to understand the cognitive processes underlying decision making and she will continue to supervise fellow *Marlene Hecht*, who remains at MPIB.
- MPIB fellow *Anna Thoma* successfully defended her dissertation entitled "The Development of Probability Learning and Repeated Choice Behavior in Childhood: An Ecological and Longitudinal Perspective" at HU in July. She will remain at MPIB as a postdoc.
- MPIB alumna *Elisabeth Wenger* has taken up a professorship for Developmental Psychology at the HMU Health and Medical University, Potsdam, Germany.
- FU alumnus *Ralf Wölfer* has taken up a professorship in the Department of Social Security Administration at the University of the Federal Public Administration in Berlin.
- The Introductory LIFE Workshop for the new fellows in Berlin has taken place in a new format. The first session took place in presence-mode at the MPIB so that the new LIFE fellows could get to know each other. The other sessions took place as an online Webex meeting with the faculty and was meant only for the discussion. Prior to the meeting, the Berlin fellows had watched e-learning videos from different faculty, which were placed on a protected area of the LIFE website.
- The LIFE seminar in the summer semester focused on fellows' project presentations, and the sessions were chaired by LIFE alumni. Special thanks to alumni *Janne Adolf*, *Tim Brick*, *Rasmus Bruckner*, *Johanna Drewelies*, *Bettina von Helversen*, *Oliver Huxhold*, *Aleksander Kocaj*, *Mario Lawes*, *Camilla Rjosk*, *Nico Schuck*, *Yee Lee Shing*, *Alvin Thomas*, *Ralf Wölfer*, & *Sara Zocher*!

LIFE Michigan

- *Kathy Xie* has joined *Rita X. Hu* to become Fellow Co-Speaker.
- The *Department of Psychology* was selected by the LSA Honors Program to receive the inaugural Tim McKay Departmental Honors Award. According to LSA Dean Anne Curzan, this award was given to the department for "introducing large numbers of students to academic research ... [by] creating pathways from initial exploration of research to the completion of sophisticated Honors theses."
- Fellow *Blake Ebright-Jones* received the Paul R. Pintrich Fellowship.
- Fellow *Rita X. Hu* received the W. B. Pillsbury Graduate Research Award from the University of Michigan's Department of Psychology.
- Faculty *Patricia A. Reuter-Lorenz* is receiving the Baltes Distinguished Research Achievement (DRA) Award from Division 20 of the American Psychological Association (APA). This is Division 20's most prestigious award. It was established to honor researchers with distinguished careers that have made exceptional theoretical and empirical contributions to the psychological science of aging.

LIFE Virginia

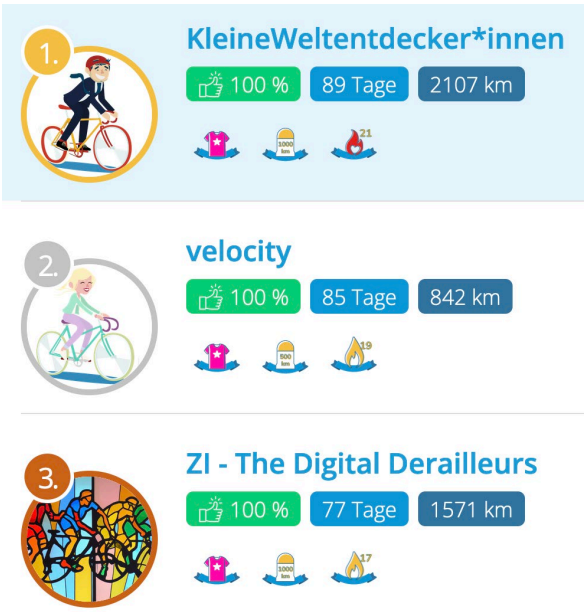
- *Bethany Bell, Patricia (Tish) Jennings, Tara Hofkens, Jacob Resch, Sarah Rimm-Kaufman*, and *Jim Soland* have joined the LIFE faculty. *Tish Jennings* is introduced on p. 27. Further introductions will follow in the next issue.
- Fellow *Meghan Costello* successfully defended her dissertation "Tell Me Something I Don't Know: Self-Disclosure, Mental Health, Relationship Quality, and Contextual Factors from Adolescence to Adulthood."
- Fellow *Katie Daniel* successfully defended her dissertation "Problems with Switching: Investigating the Sequence of Emotion Regulation Strategy Choices in the Daily Lives of Socially Anxious People."
- Both *Meghan Costello* and *Katie Daniel* matched at Harvard/Massachusetts General Hospital for their clinical internships.
- Fellow *Evan Giangrande* successfully defended his dissertation "Longitudinal Dynamics of Gene–Environment Interplay Across Cognitive Development" and completed his clinical internship at Harvard Medical School/McLean Hospital. He will be starting a postdoc at Massachusetts General Hospital/Broad Institute of MIT and Harvard. He was awarded the Pamela

Sklar Psychiatric Genetics and Neuroscience Fellowship.

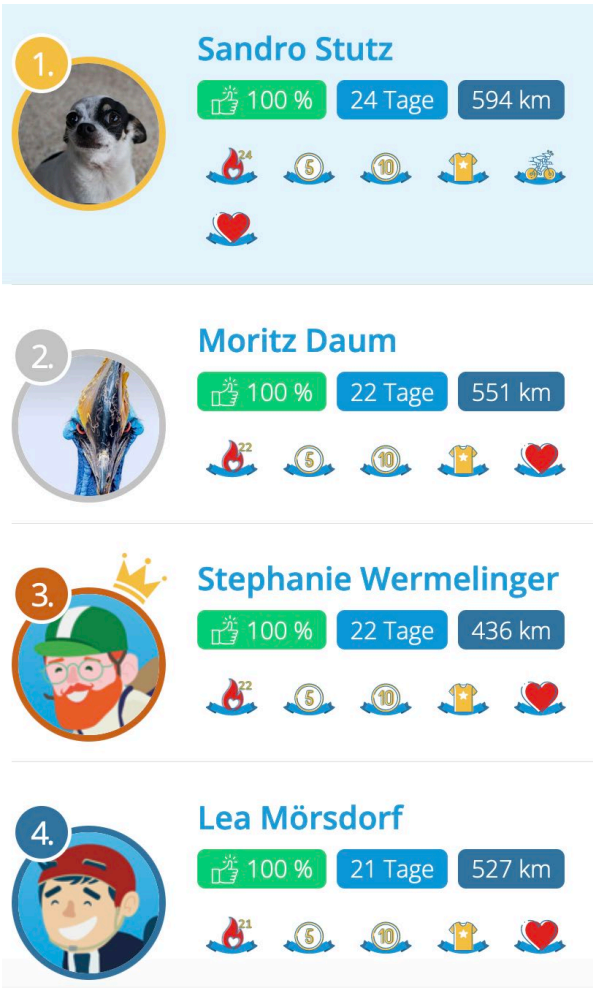
- Fellow *Lee LeBoeuf* was awarded the 2023 American Montessori Society Research Mini-Grant ($1,250).
- Fellow *Isabelle Moore* was awarded the Huskey Graduate Research Prize for "Memory brain states change as we age" by the UVA Graduate School of Arts & Sciences Council in March.
- Fellow *Shannon Savell* successfully defended her dissertation "Partners Now Parents: Exploring Psychosocial and Epigenetic Change during the Transition to Parenthood." She also won UVA's graduate teacher award and matched at University of Colorado School of Medicine for her clinical internship.
- Alumnus *Sean Womack* will be starting a postdoc position through the Stress, Trauma, and Response Initiative at Brown University.

LIFE Zurich

- *Michelle Loher* has taken over as Fellow Speaker from *Plamina Dimanova* and joins *Sabrina Beck* in this role.
- Fellow *Laura Bechtiger* has successfully defended her dissertation entitled "Pathways from Maternal Depressive Symptoms to Adolescent Well-Being: A 15-year Longitudinal Examination." She will continue working at the Jacobs Center as a postdoc.
- Faculty *Wiebke Bleidorn* received a Swiss National Science Foundation (SNSF) Consolidator Grant for her project "N-PACT: Changing Neuroticism through Psychological Treatment."



- Fellow *Christine Dworschak* visited Jutta Joormann's Affect, Regulation & Cognition Lab at Yale University, USA, from January to April.
- Faculty *Alexandra M. Freund* has been elected a member of the Berlin-Brandenburg Academy of Sciences and Humanities. She is joining the Social Sciences Class as well as the Biological and Medical Sciences Class.
- Alumna *Marie Hennecke* will become Chair of Personality Psychology at Ruhr-Universität Bochum, Germany, in October.
- Fellow *Zita Mayer* successfully defended her thesis entitled" Take a Break from Your Goals? A Lifespan Developmental Perspective on Goal Shelving" in May. She will continue her work as a postdoc at Alexandra Freund's lab at UZH.
- The *KleineWeltentdecker:innen* team are the Bike-to-work winners of the University of Zurich 2023: They cycled 2107 km to work in approx. 89 days. Team members are LIFE fellow *Sandro Stutz*, faculty *Moritz Daum*, alumna and faculty *Stephanie Wermelinger*, and alumna *Lea Mörsdorf* (in the order of the number of km cycled)!



Frequently used acronyms in LIFE

CRTD: Center for Regenerative Therapies Dresden

DIW: Deutsches Institut für Wirtschaftsforschung [German Institute for Economic Research]

DZA: Deutsches Zentrum für Altersfragen [German Centre of Gerontology]

DZNE: Deutsches Zentrum für Neurodegenerative Erkrankungen Dresden [German Center for Neurodegenerative Diseases]

FU: Freie Universität Berlin

HU: Humboldt-Universität zu Berlin

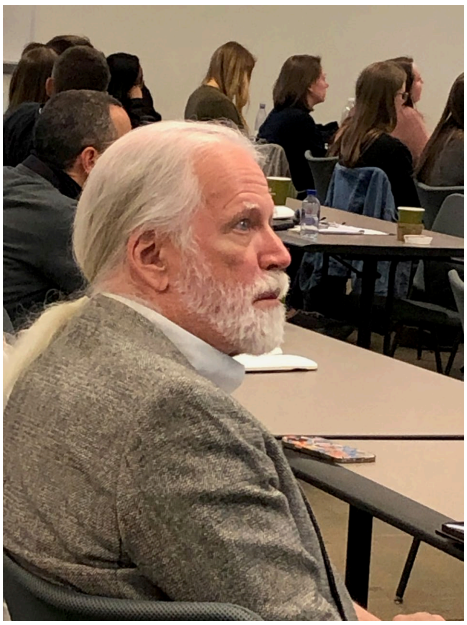
LIFE: International Max Planck Research School on the Life Course

MPIB: Max-Planck-Institut für Bildungsforschung [Max Planck Institute for Human Development]

UM: University of Michigan

UVA: University of Virginia

UZH: University of Zurich



A photo of LIFE photographer Steve Boker for a change!

Image: Jacqui Smith

LIFE Newsletter

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Aim of the newsletter
The LIFE newsletter encourages collaboration and interaction among people within the LIFE program. It provides an information platform where fellows, alumni, and faculty members can learn more about each other's research, and identify colleagues with similar interests and possible projects for collaboration.

Contributions
Please send contributions, suggestions, and input to the editor.

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