



From the Director

This past year has been truly remarkable. From cutting-edge workshops to a new Origins honors course to cultural events that included the likes of Werner Herzog and Stephen Hawking, the stories in this newsletter only hint at the excitement associated

with the ASU Origins Project. In an array of activities, the ASU Origins Project once again gathered the world's leading scientists and cultural innovators to push the boundaries of scientific research and engage the public in serious discussion of key issues.

Resting on our laurels, though, is not in the cards. We are already developing a number of projects for 2012. I am particularly excited about our workshop on the origins of xenophobia, planned for March 2012. This topic interests me for two reasons. First, it brings into play some of the most interesting science being done—How do we explain our tendency to develop in-groups and out-groups? But like most interesting topics in science, the topic has social relevance. As we navigate the diversity of opinion on immigration, it seems important to engage the scientific dimension of our propensity to categorize. Even if we grant its evolutionary origins, to what degree is xenophobia maladaptive in a community linked in unprecedented ways by communication technology and facing daunting global challenges?

As gratifying as these discussions are, they would mean very little and would, in fact, be impossible without your support. Thanks for your interest and we'll see you at the next Origins Project event.

—Lawrence Krauss

Students ready to chat with aliens

"Dear Aliens, My huge, beautiful planet has water, land, and an atmosphere." "Have you heard of school?" "Everybody on earth comes in peace. Please do not eat all of us."

Those were a few of the messages in hundreds of letters written by area students for a contest sponsored by the Origins Project as part of its 2011 Science & Culture Festival. Students brainstormed how they would respond to contact by extraterrestrial intelligent life. Winners attended a special event April 9 during which an excerpt from the overall winning entry was bounced off the moon into space.

Contest creator and ASU Origins Project writer-in-residence, Lucy Hawking, was amazed at the variety of responses. "Some writers described our planet, others described themselves," Hawking noted. "They wrote about school, transportation, technology, language, and jobs. There were pleas for peace and warnings of being armed if the aliens wanted to invade."

Benjamin Lee, a seventh-grader from Pardes Jewish Day School in Phoenix wrote the overall winning entry. At the ceremony, physicist Stephen Hawking read Lee's letter and each winner received a certificate signed by contest judges Lucy Hawking, Stephen Hawking, Lawrence Krauss, and SETI Post-detection Task Force Chair Paul Davies. To read more about the contest, visit http://asu.edu/20110407_dearaliens. Watch the ceremony at <http://origins.asu.edu/media/videos.php?id=3>.



Back row: Lucy Hawking, Qabas Jalil, Mason Bartelt, Benjamin Lee, Lawrence Krauss, Allison Lamountain, Tommy Walton, Madelyn Norstrem, Paul Davies. Front row: Stephen Hawking, Udayketan Mohanty, Sophia Suda, Angela Perez.

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UPCOMING EVENTS

- November 2011 **WORKSHOP: Aspects of Quantum Mechanics and Gravity**
- February 2012 **External Advisory Board Meeting**
- March 2012 **WORKSHOP: The Origins of Xenophobia**
- March 31, 2012 **Great Debate: Why do we fear other? (7 pm, ASU Gammage)**
- Fall 2012 **WORKSHOP: Sex & STEM: The Origins and Anatomy of a Challenge**

Visit our website <http://origins.asu.edu> for information about dates, times, and locations.



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1. Physicist Stephen Hawking talking about his upbringing; 2. Lawrence Krauss and Tamara Pullman performing "The Matter of Origins"; 3. Dear Aliens contest awardee, Tommy Walton; 4. Philosopher AC Grayling delivering a 'secular sermon'; 5. ASU Symphony Orchestra performing Holst's "Planets"; 6. ASU paleoanthropologist Curtis Marean, Lawrence Krauss, and filmmaker Werner Herzog discussing early human habitats; 7. Opening panelists Werner Herzog, Kimberly Marshall, Lawrence Krauss, Liz Lerman, and Hugh Downs; 8. Lucy Hawking congratulating 'Dear Aliens' contest overall winner Benjamin Lee; 9. Lawrence Krauss congratulating undergraduate essay contest winner Jessica Piper; 10. Werner Herzog speaking about his film, *Cave of Forgotten Dreams*; 11. ASU Journalism Professor Ed Sylvester with novelist Jean Auel; 12. Choreographer Liz Lerman and broadcaster Hugh Downs discussing the relationship between science and culture; 13. Novelist Cormac McCarthy on NPR's *Science Friday*; 14. Physicist Paul Davies explaining SETI.

science & culture FESTIVAL

april 7-11, 2011



Despite our desert ecosystem here in Tempe, April brought a shower of talent and creativity to our Science & Culture Festival 2011. From a symposium on the humanities and human origins to a student contest on how to communicate with aliens, from a dance about physics to a film about cave art, from music about the planets to novels about Neanderthals, the week's activities prompted all to consider the important relationships between science and culture.



ASU Origins Project director, Lawrence Krauss, explained the motivation behind the festival. "Science forces us to reassess our place in the cosmos, but so does good art, music, literature. So what better way to bring them together to celebrate these wonderful aspects of being human, in the context of Origins? And as everything the ASU Origins Project has attempted, we want to do it in an unprecedented and exciting fashion."

Highlights of the festival included an episode of NPR's *Science Friday* with novelist Cormac McCarthy, filmmaker Werner Herzog, and Lawrence Krauss discussing the interplay of art and science, Stephen Hawking's moving talk about his own path into science, wide-eyed kids rubbing elbows with world-renowned physicists, and an innovative dance piece choreographed by MacArthur Award winner, Liz Lerman.

Feedback from the festival has been terrific. In perhaps the most meaningful comment, Ann Suda, mother of Sophia Suda, one of our "Dear Aliens" contest winners, wrote: "We wanted to say thank you very much... Sophia has not stopped talking about how special it is that Stephen Hawking signed her certificate with a fingerprint. Sophia also told me that someday she wants to go into space; she has definitely been inspired!"

We hope you'll consider joining us for our next Science & Culture Festival in 2013. Email us your ideas at origins.project@asu.edu.



Visit our website for news, images, and videos about Science & Culture Festival 2011.

<http://origins.asu.edu>

(Click on "Multimedia Library" for videos and pictures.)

EXPLORING BIG QUESTIONS IN A BIG WAY

The ASU Origins Project hosted two phenomenal workshops and associated public events which addressed some of the biggest questions there are: Can science tell us right from wrong? and What is life? Both workshops took place near Arizona State University and included leading researchers in a range of fields.



Great Debate: Can Science Tell Us Right From Wrong? Panelists (l-r: Sam Harris, Patricia Churchland, Peter Singer, Roger Bingham, Lawrence Krauss, Simon Blackburn, Steven Pinker)

Great Debate series

In tandem with the invitational workshops, the ASU Origins Project initiated a public event series called the “Great Debate.”



The first Great Debate took place in November and focused on the question of whether science can tell us right from wrong. A second debate in February asked the deceptively simple question: What is life? Each debate occurred in ASU Gammage Auditorium in front of audiences of more than 2000 people. Notable workshop participants, including Steven Pinker, Craig Venter, Richard Dawkins, Patricia Churchland, Sam Harris, and Chris McKay, engaged in lively debate about these key questions.

The public and transdisciplinary nature of these events really resonated with participants. As one Great Debate attendee remarked, “These discussions are incredibly interesting and in my opinion, important. Thank you for allowing these discussions to occur in front of audiences.” Workshop participant John Sutherland, a researcher at the MRC Laboratory of Molecular Biology in the UK, praised the transdisciplinary nature of the workshops, noting that the ASU Origins Project is one of the few academic entities to “recognise the importance of a joined-up approach” to cracking the mysteries of life’s origins.

In the coming weeks, we will be planning our workshops for the next academic year, which will include more Great Debates. We hope you will consider being part of the discussion.

Workshop details

Origins of Morality, November 5-7, 2010

In partnership with the prestigious Sandra Day O’Connor College of Law, the ASU Origins Project hosted “The Origins of Morality: Evolution, Neuroscience and Their Implications (if Any) for Normative Ethics and Meta-ethics.” The workshop gathered an impressive list of neuroscientists, legal experts, psychologists, and philosophers. Read about the debate at <http://origins.asu.edu/news/greatdebate-morality/>.

Origins of Life, February 11-13, 2011

ASU Origins Project director Lawrence Krauss teamed with ASU biogeochemist Ariel Anbar and Origins Project Distinguished Visiting Professor and Nobel prize-winning chemist Sidney Altman to host “The Origins of Life: The RNA World Revisited”. With sessions on the “Early Earth and Pre-Biotic Chemistry,” “The RNA World,” “Life Elsewhere,” and “Alternatives to Life as We Know It,” the workshop included representatives from biology, chemistry, geology, cosmology, and physics, to name a few. Link to a *New York Times* article on the workshop from our website at <http://origins.asu.edu/news/origins-of-life/>.

Watch video and see images from both Great Debates on our website. <http://origins.asu.edu/media>



New Student Origins Project Club

The ASU Origins Project is thrilled to work with a new club for students interested in questions of origins. Formed through the efforts of freshman biology major Samantha Hauserman, the club will discuss books on origins issues, volunteer at events, and offer input on programming.

The club was an enormous help at the Science & Culture Festival, volunteering at a number of the events. Read about the club at <http://www.statepress.com/2011/04/04/student-club-templates-human-origins/>.



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