News from the Editor

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This issue introduces some new developments in the journal's editorial structure. Most significant of these is that Charles Taylor has decided to step down as Editor in order to concentrate on some new professional commitments. Chuck has been a prominent member of the artificial life community ever since he participated in Chris Langton's first *Artificial Life* workshop at Los Alamos in 1987. He helped Chris create this journal as a founding Associate Editor, and in the middle of volume 3 he joined Chris as one of the journal's editors. Chuck's sound and thoughtful judgment, his decisive action, and his vision for future opportunities provided the consistent creative energy that helped the journal to grow into a mature scientific periodical over the next four years. Not least among his important contributions were his pioneering efforts to create a professional organization that would provide a stable, democratic, and genuinely international foundation for the journal's future. I know that journal's readers will want to join me in thanking Chuck for his years of service as our Editor, and I want to express my personal appreciation for the opportunity to work alongside him as Co-Editors-in-Chief for the past year.

The journal's editorial structure will continue to evolve for a while as the International Society for Artificial Life grows into its new role as the journal's governing body. Some of these changes also occur in this issue. David Stork is stepping down as the journal's Book and Software Review Editor, and I want to warmly thank him for filling this role admirably right from the journal's inception. I am pleased to announce that those responsibilities will now be shouldered by Inman Harvey of Sussex University, who has been an active and influential member of the artificial life community for many years. Readers are invited to suggest books that we might review to Inman by email (inmanh@cogs.susx.ac.uk). I am also pleased to announce that Philip Husbands, also of Sussex University, has agreed to join the journal's Editorial Board, thus further strengthening the journal's representation in Europe and its expertise in both theoretical and applied aspects of genetic algorithms and evolutionary robotics.

The articles and reports published in this issue nicely reflect the interdisciplinary breadth of contemporary artificial life. In "Mutualism promotes diversity and stability in a simple artificial ecosystem" Elizaveta Pachepsky, Tim Taylor, and Stephen Jones address how ecological interactions among organisms affect the dynamics of a spatially explicit agent-based artificial ecosystem. While theoretical ecologists have given the issue of ecosystem stability much insightful analysis over the past generation (e.g., [4]), the primary aim of Pachepsky et al. is complementary: to understand how evolutionary dynamics can sometimes introduce drives for ongoing evolution rather than stasis.

The artificial life community has increasingly included efforts to apply agent-based evolutionary algorithms to a variety of issues concerning the self-organization and evolution of social and cultural systems. An illustration from linguistics is Henry Brighton's paper in this issue, "Compositional syntax from cultural transmission." Traditional explanations of the origin and structure of language appeal to the biological evolution of an innate language acquisition device. But this does not account for how language as a cultural phenomenon can evolve in the absence of biological evolution. Brighton argues that compositional structure—one of the syntactic hallmarks of human language—can be explained by the dynamics of cultural evolution. This work

advances our understanding of one of the fourteen key open problems emphasized at the last *Artificial Life* conference: the relationship between biological and cultural evolution [1].

The journal has started to publish more surveys of special topics of interest to the artificial life community. Issue 7:3 included a survey of artificial chemistry [2], and in "Agent-based computational economics: Growing economies from the bottom up" in this issue Leigh Tesfatsion reviews how the agent-based approach is being used in economics today—another example of how artificial life methods are applied in social sciences. Glancing over the raft of references cited in this paper, it is striking the extent to which agent-based computational economics is now accepted as part of mainstream economics and published in traditional economics journals. This pattern is repeated in other areas of inquiry touched by artificial life. Agent-based methods were initially controversial, placed on the fringes of allied disciplines such as biology and psychology, but they are now accepted within the mainstream of those disciplines. This signals the success of the methods pioneered and developed within artificial life.

Satellite workshops at artificial life conferences often explore tangential issues and pursue current controversies, but this work is often omitted from the published conference record. The work at two such workshops at the most recent European Conference of Artificial Life, ECAL'01 [3], is reported in this issue. Eleonora Bilotta, Eduardo Miranda, and Peter Todd describe the variety of new work presented in a workshop on artificial life approaches to the study of music—one illustration of how artificial life methods are of use in the arts. Another workshop at ECAL'01 organized by Michael Wheeler, Seth Bullock, Ezequiel Di Paolo, and Jason Noble concerned an ongoing controversy: how artificial life is and should be connected to traditional disciplines. The workshop organizers and four invited workshop participants (Mark Bedau, Philip Husbands, Simon Kirby, and Anil Seth) review the different perspectives presented at the workshop, including the open discussion and debate with which the workshop culminated. Discussions on these issues will no doubt continue and evolve as artificial life methods and results becomes an increasingly recognized and accepted component of traditional disciplinary investigations.

Many readers of this journal already know that the International Society for Artificial Life (ISAL) was established in May of 2001 as a nonprofit organization dedicated to promoting scientific research and education relating to artificial life, including sponsoring conferences, publishing scientific journals and newsletters, and maintaining web sites related to artificial life. This journal is now the official publication of ISAL, and the continuing series of *Artificial Life* conferences are now the official scientific gatherings sponsored by the Society. The Society is now proceeding through the many steps required to become fully operational. ISAL membership benefits include a subscription to this journal, reduced registration fees at the International Artificial Life Conferences, reduced registration fees at certain associated conferences such as European Conferences on Artificial Life (ECAL), International Conferences on the Simulation of Adaptive Behavior (SAB), and International Symposia on Artificial Life and Robotics (AROB). The Society plans to provide a variety of other services to the artificial life community, such as priority notice of small, focused meetings of interest to the artificial life community, receipt of ISAL newsletters and other important announcements, an up-to-date directory of ISAL members, and facilitation of informal scientific exchange with leading researchers in the artificial life community. The Society is holding its inaugural meeting for members in Sydney, Australia, at the end of *Artificial Life* VIII, which will occur during 9–13 December 2002. (Up-to-date information about all aspects of the *ALife* VIII conference is available at http://alife8.alife.org.) ISAL intends to transact its affairs through new web pages that will appear at http://www.alife.org. One sign of this new electronic presence is that the journal's old email address (editor@alife.santafe.edu) has

been supplanted with a new address: editor@alife.org. We are also creating a new web environment to handle electronic submission and distribution of manuscripts easily and seamlessly. Stay tuned to these pages in upcoming issues for announcements of further innovations in the journal. The underlying aim of all these new developments is to keep the journal as interesting and useful as possible to the whole artificial life community. Suggestions for new features, or comments about existing features, are always welcomed and encouraged.

References

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