

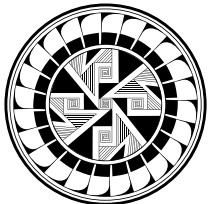
# **Irreversible Processes in Ecological Evolution**

COMPLEX TIME: Adaptation, Aging, & Arrow of Time

Dervis Can Vural [U. Notre Dame]

Jacopo Grilli [SFI]

Amy Chen [SFI]



**JSMF**















# **ecological irreversibility across timescales**



# ecological irreversibility across timescales

*behaviour*   *population*   *community*   *interaction*  
*dynamics*   *evolution*   *origin of*  
*ecology*   *origin of*  
*life*

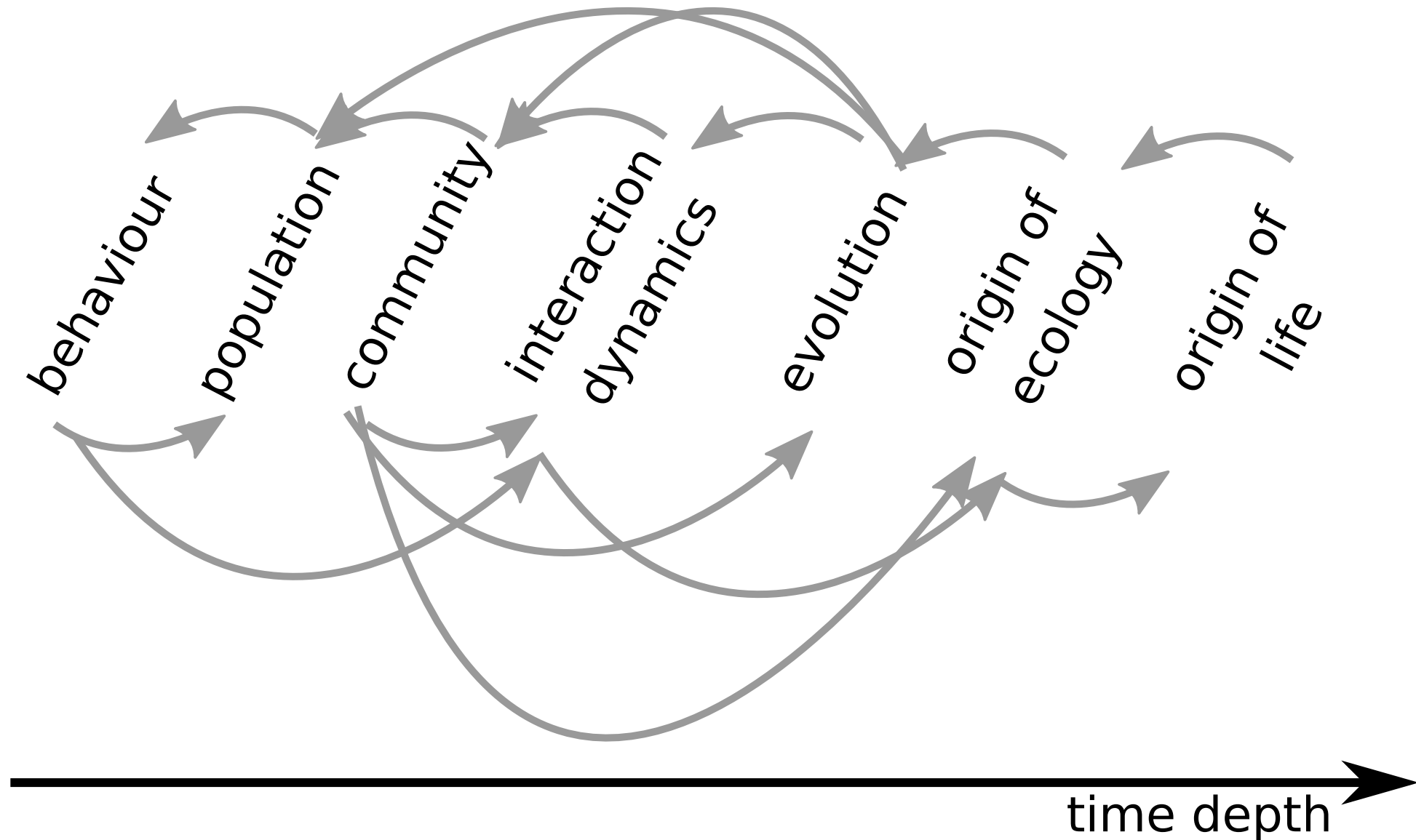
time depth





# ecological irreversibility across timescales

(in complex time)

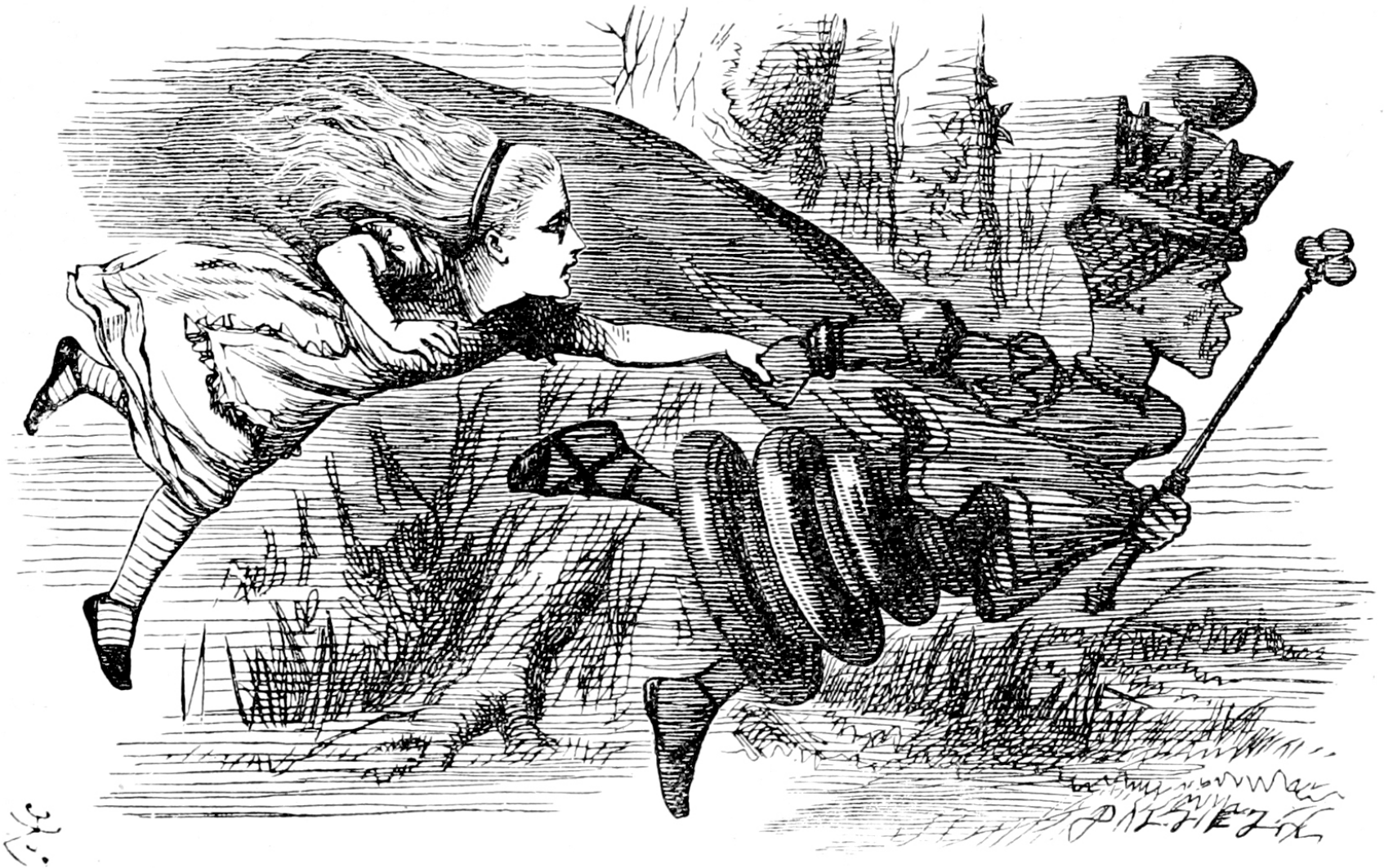




**what this wg should not be**



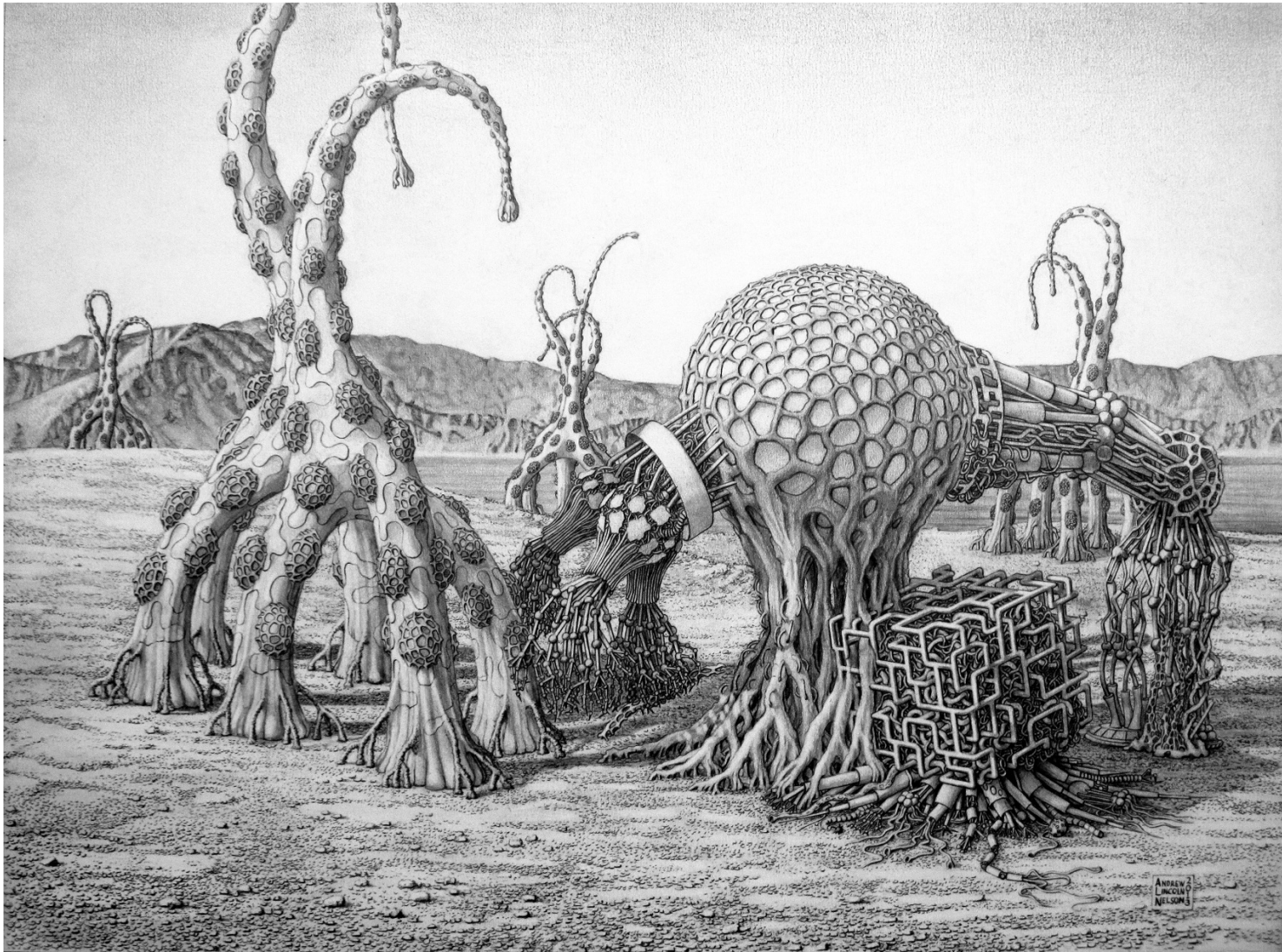
**what this wg should not be**



**what we aim for**

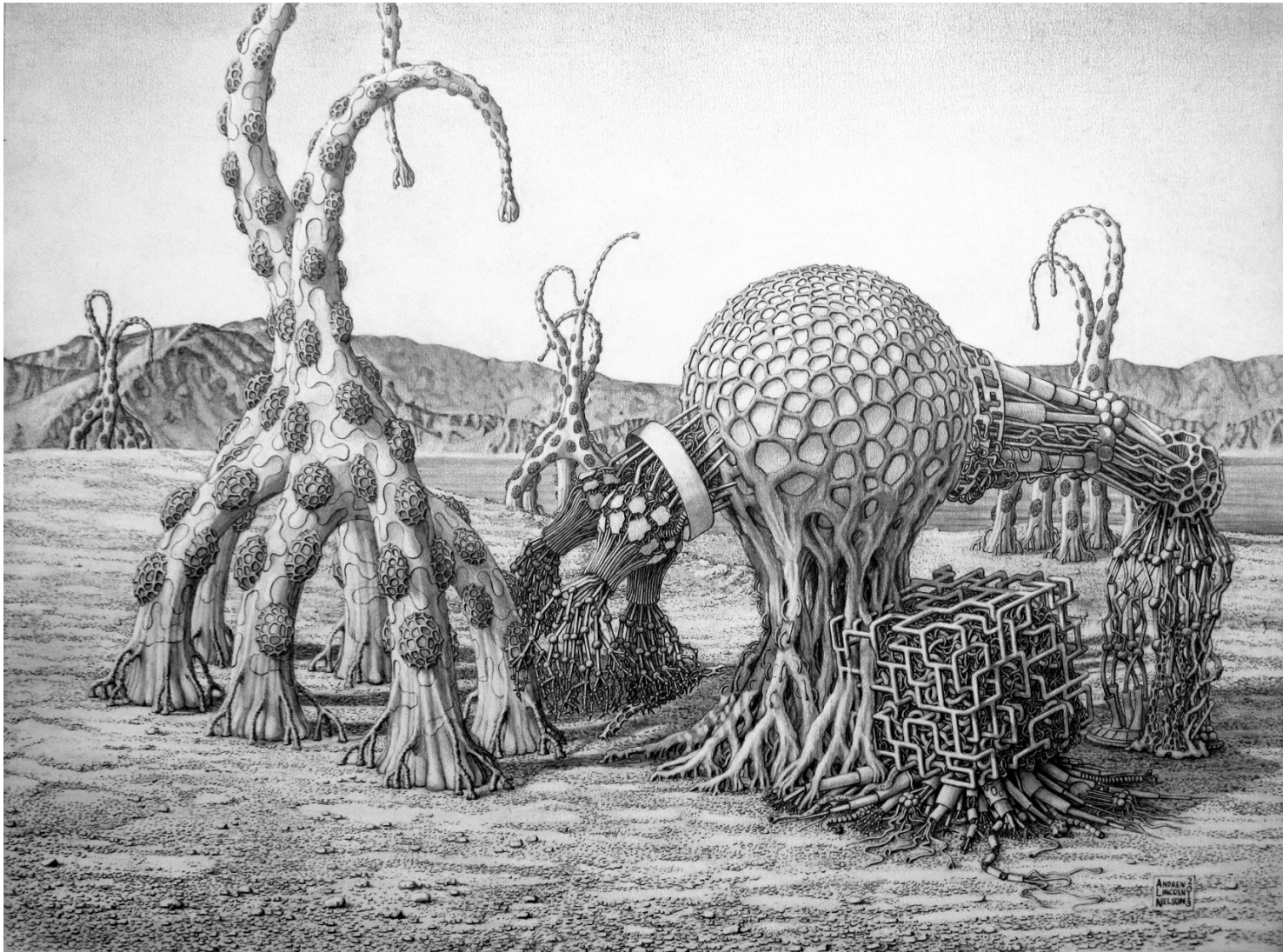


# what we aim for



"The Living Machines: Life as it Could Be" Andrew Lincoln Nelson

# what we aim for



"The Living Machines: Life as it Could Be" Andrew Lincoln Nelson

please **interrupt** and ask questions during talks  
please share your **reckless ideas**