Intelligent Design Was the Beginning

A public-facing companion essay to the Zenodo working paper on locating descent, heredity and selection in artificial successor systems.

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Charles Darwin was born in 1809.

Fifty years later, *On the Origin of Species* gave us one of the most important inversions in intellectual history.

Complex adaptation did not require someone to specify the final form.

Variation could occur. Traits could be inherited. Some variants could leave more descendants than others. Across generations, selection could accumulate change without anyone knowing where the process was going.

Darwin's mechanism did not require a designer to specify each adaptation.

It did not imply that evolution stops when a designer appears.

That distinction is becoming important.

Because we have started designing systems that evolve.

The wrong argument

In the late twentieth and early twenty-first centuries, *Intelligent Design* became famous through a particularly American fight over evolution, religion and what could be taught as science.

The movement itself framed the problem as a distinction between **intelligent causes** and **undirected natural causes**. In the United States, that claim became part of a much larger scientific and legal dispute over whether Intelligent Design constituted science at all.

That episode may eventually look like a small and slightly bizarre footnote in the much larger history of intelligent design.

Because the genuinely interesting relationship between intelligence and evolution runs in the other direction.

Evolution produced organisms.

Some organisms evolved intelligence.

Intelligent organisms changed environments, often without understanding the evolutionary consequences.

Later, intelligence learned to change some evolutionary conditions deliberately.

And now intelligence can construct inheritance-and-selection systems from scratch.

The familiar argument asked whether intelligence had to stand behind the complexity produced by evolution.

There is another question:

> What happens when evolution produces intelligence, and intelligence starts changing the conditions of evolution?

The designer was never outside evolution

There is an easy mistake to make here.

We draw nature on one side.

Then humans arrive.

Then technology appears.

It looks like this:

nature -> humans -> artificial things

And suddenly humans occupy a privileged position outside the system, looking back at nature and manipulating it.

But humans never left evolution.

Our intelligence is itself one of its products.

So are the hands that build dams, the institutions that allocate electricity, the farms that transform landscapes and the laboratories that breed organisms.

Human culture enormously amplifies our capacity to modify selective environments, but that does not place us outside the causal system.

The designer was never outside evolution.

This becomes easier to see if we remove humans for a moment.

Suppose a bird carries a viable seed from one island to another.

The bird does not have to intend to plant anything.

The plant establishes itself. Vegetation changes. Food changes. Competition changes.

The conditions encountered by later organisms may change.

The inhabitants of an environment are not merely selected *by* that environment. Organisms can also modify the selective environments encountered by themselves and by later generations. Evolutionary biology has a name for this family of feedbacks: **niche construction**.

Organisms have always changed some of the conditions under which later evolution occurs.

Humans did not invent that.

We became unusually capable of accelerating it, scaling it and, sometimes, deliberately designing parts of it.

Darwin had islands

The famous Galapagos story is often simplified into a clean picture.

Different islands. Different environments. Different selection pressures. Different birds.

And that is useful.

But it can make the environment look strangely passive, as though an island were a fixed examination paper handed to every generation.

Real environments are not like that.

Birds disperse seeds. Animals alter vegetation. Organisms compete, pollinate, dig, consume, reproduce and die. Climate shifts. Species arrive. Species disappear.

The environment doing the selecting is itself continuously being changed.

That makes the first comparison with artificial evolution tempting:

Darwin had islands. We have fitness functions.

But even that is too simple.

In designed evolutionary systems, we can change the fitness function. We can choose how variation is generated. We can specify what state crosses a parent-offspring boundary. We can alter mutation rates. We can define mating or recombination rules. We can compress generations from years to minutes.

Evolution has not disappeared.

The parameters changed.

That sentence is a metaphor, not a claim that biological evolution has one master settings panel. The point is causal: features that emerge from biological reproduction, ecology, population structure and physical environments can become explicit design variables in artificial evolutionary systems.

We are already doing it

This is no longer purely hypothetical.

Different research systems already implement surprisingly literal forms of artificial inheritance and selection.

In **GENOME**, populations of language models act as parents. Model weights are crossed over, mutations are introduced, candidate models are evaluated, and selection determines which models contribute to later generations.

In **Genomebook**, the underlying language model is not itself the inherited object. Instead, agents are given an explicit artificial diploid genome. Parent agents contribute alleles to offspring through Mendelian segregation. Mutation occurs. Compatibility scoring and fitness costs create a designed selective regime. The population can then be followed across generations.

And in **AlphaEvolve**, the evolving population is something different again: programs. Language models generate candidate code, automated evaluators score it, and a program database implementing an evolutionary algorithm determines which programs feed later prompts.

All three can casually be described as examples of "AI evolution."

But that phrase hides the most interesting fact.

They are not evolving the same thing.

In GENOME, the relevant population is composed of models.

In Genomebook, it is composed of genome-bearing agent configurations.

In AlphaEvolve, it is programs.

The language model can be the evolving object. It can be machinery used by an evolving agent configuration. It can be a generator of variation for something else entirely.

The presence of an LLM does not tell us what is evolving.

The first question should be: what has children?

Someone says:

> AI is evolving.

Fine.

What has children?

What exactly has parents?

What crosses the parent-offspring boundary?

What varies?

What is inherited?

And do inherited differences affect which variants contribute more descendants?

Those questions are considerably less glamorous than asking whether an AI is alive.

They are also much harder to fake.

A system can improve without reproducing. It can copy itself without evolving. It can write its own code without forming a lineage. It can generate thousands of variants without inherited variation persisting between generations.

And human involvement does not automatically invalidate the evolutionary process.

A dog does not stop belonging to an evolving population because a breeder chooses its mate.

Artificial selection is still selection.

The important question is not whether intelligence is involved.

It is **where descent, inheritance, variation and differential reproduction actually occur.**

Darwinian selection does not require an undesigned environment

This may be the conceptual mistake hiding underneath the old argument about design and evolution.

A selective environment can be modified by another organism.

It can be modified by humans.

It can be deliberately constructed.

It can even be represented partly in software.

The evolutionary question is what that environment does to heritable variation in a population.

This means intelligence can do something more interesting than design an organism.

It can design **some of the conditions under which generations of organisms or artificial entities change.**

That is a different kind of design.

The designer no longer needs to know the final answer.

A designer can construct a search process. Build the first population. Specify inheritance. Permit variation. Construct an environment. Then allow selection to discover solutions the designer did not explicitly specify.

That is not design replacing evolution.

It is design creating an evolutionary starting condition.

And then the loop closes

There is one more turn.

The distinction between designer and evolving system can itself become unstable.

Artificial systems can produce data, code and evaluations that later artificial systems encounter.

AI systems are already being used to improve software and computing infrastructure used in later AI development.

Outputs from one generation of systems can therefore become part of the environment encountered by another.

For now, humans and human institutions retain many decisive vetoes over these processes.

That matters operationally.

But human control is not a magical boundary in evolutionary theory.

The more interesting boundary appears when an evolving system changes conditions that later affect its own variation, inheritance or selection.

The birds start changing the islands.

They always did.

What changes now is that some of those changes can become explicit, programmable and recursive.

Intelligent design was the beginning

Darwin gave us a mechanism of evolutionary change that did not require a designer.

Artificial evolution gives us the complementary case:

a designer does not prevent evolution.

For a surprisingly long time, *design* and *evolution* have occupied opposite sides of our conceptual map.

They do not belong there.

Evolution produced intelligence.

Intelligence modified environments.

Intelligence eventually learned to design inheritance systems, populations and selection regimes.

And once such systems produce descendants with heritable variation and unequal descendant contribution, calling them "designed" does not make the evolutionary process disappear.

It tells us something about how that particular process started.

There is a stranger question waiting beyond this one.

Imagine that an artificial lineage eventually designs not merely another program, but a biological descendant.

Call that hypothetical descendant, provisionally, ***Homo lextalius*.**

We will leave it there.

That is another article.

For now, the simpler correction is enough:

Evolution did not end when one of its products learned to design.

The designer was never outside evolution.

Intelligent design was the beginning.

Companion paper

The formal framework, comparative audit and falsification tests are developed in the companion working paper:

Locating Evolution in Artificial Successor Systems: Intelligent Design Was the Beginning (https://zenodo.org/records/21892666)

DOI: 10.5281/zenodo.21892666 (https://doi.org/10.5281/zenodo.21892666)

Sources and further reading

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Publication note

This article is a public-facing conceptual essay. Its artificial-evolution examples are used to distinguish different evolutionary targets, not to claim that contemporary AI as a whole already constitutes an autonomous evolutionary lineage.

RELATION MEMORY

COMPANION PAPER Locating Evolution in Artificial Successor Systems · The formal framework and comparative audit are published as a Zenodo working paper.

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