

A look a agile methodologies from a biological perspective

Alastair Handley
alastair.h@shaw.ca

When I was first learning about objects I read David A. Taylor's book "Object Oriented Technology: A Managers Guide". There he compared objects to cells, nature's building blocks.

"The basic building block out of which all living things are comprised is the cell. Cells are organic packages that, like objects, combine related information and behavior"

This observation came to mind as I was contemplating what I would write about in this position paper. One thought led to another and I found myself thinking about Charles Darwin and his theory of natural selection. In a blinding, well flickering at least, moment of understanding I was able to see that parallels between the rise of agile methodologies and natural selection exist. Further consideration made me realize that software development could be viewed from a biological angle, which I did. This examination led to no answers but it did lead to more questions.

If objects can be explained in the context of cells, and if object oriented programming is more natural because it allows us to organize information in natural ways, what comes to light when agile methodologies are viewed from a natural or, biological perspective, such as natural selection and taxonomic classification.

Taxonomy is the study of the classification of all living organisms. Organisms are classified primarily on their unique and defining physical features and secondarily on other behavioral features such as feeding habits. Methodologists are still working to define the specific physical and behavioral characteristics of agile methodologies. This classification game can be played two ways. I know this isn't agile because or I know it is agile because

If we know the characteristics of heavy weight methodologies are we can use them to determine if a methodology is or isn't heavy weight. If it isn't heavy weight, we can then examine the methodology in more detail to determine if it exhibits all of the characteristics required to be classified as agile. If the methodology is deemed to be agile further study could be undertaken to determine the exact type of the methodology under examination or to determine if it is a new agile methodology. Yet the fundamental characteristics of agile methodologies are still being defined. While great strides have been made in this classification effort it is still incomplete. Precisely defining what the characteristics of an agile methodology are, or are not, is proving to be difficult.

I suspect that the difficulty being experienced clearly defining an agile methodology stems from the fact that agile methodologies are still evolving and that this process, the natural selection of agile methodologies, is not yet complete.

The basis for Charles Darwin's theory of natural selection is quite simple:

1. Organisms vary, and these variations are inherited (at least in part) by their offspring.
2. Organisms produce more offspring than can possibly survive
3. On average, offspring that vary most strongly in the directions favored by the environment will survive and propagate.

Looking at agile development methodologies we see that

1. Agile methodologies vary and these variations are inherited by the methodologists who use them and modify them
2. There are a number of agile methodologies and variants thereof and not all of them will be successful.

3. On average, the agile methodologies most suited to a development environment will survive to be used again on another project.

Species survive by continuously adapting to the environment through physical and behavioral adaptations. These adaptations, over time, may sometimes result in a new species. Software development methodologies are no different. The demands of business forced old methodologies to evolve and adapt. The rapidly changing development landscape is ensuring that this evolutionary process is still continuing. Today's current agile methodologies are a direct result of this evolutionary process, a process which is still continuing at this time.

The definitive characteristics of agile methodologies are still being discovered. With each discovery the agile landscape changes and list of common agile processes and techniques may change. The one real truth about agile methodologies is that they recognize that continual evolution is required if the methodology is to survive. The last statement in the "Principles behind the Agile Manifesto" alludes to the continual evolution of agile methodologies.

*At regular intervals, the team reflects on how
to become more effective, then tunes and adjusts
its behavior accordingly.*
<http://agilemanifesto.org/principles.html>

This leads me to question whether or not the other principles stated in the agile manifesto are written in stone. Perhaps, in time, one or more of the current principles in this manifesto will no longer be relevant. What happens then?