DEVOPS FOOLS, TOOLS
AND OTHER SMART THINGS

Patrick Debois
Patrick Debois
Belgium
@patrickdebois

http://jedi.be/blog
http://devopsdays.org
Hey you know what?
These new **DEVOPS tools** are pretty **COOL!**
YOU FOOL!
It’s not about the tools, it’s about the CULTURE!!!!

Monday 10 October 2011
In the meantime a brave person with a great idea
You buy this **DEVOPS** tool and all your problems go away.
YOU FOOL!

It’s not about the tools, it’s about the CULTURE!
But I LIKE tools
Stay **calm**...
Let's think this over
It's not about the tools

Type a question, click a button.
Animal Laborans
vs
Homo Faber

humans controlling the environment through tools

Motivation & Passion
Back to reality

We don't value craftsmanship anymore! All we value is ruthless efficiency, and I say we deny our own humanity that way.

Without an appreciation for grace and beauty, there's no pleasure in creating things and no pleasure in having them! Our lives are made drearier, rather than richer.

How can a person take pride in his work when skill and care are considered luxuries? We're not machines! We have a human need for craftsmanship.

You had two days to write that paper.

Two days? Two days is nothing!

A few of the tools from my last mission

Git
Github
Maven
Java
Grails
Esper
Mysql
Redis
Mongodb
Express
Npm
Nodejs
Chef
Vagrant
Sinatra
Rvm
Ruby
Cucumber
Jquery
Flot
Python
Collectd
Nagios
Fog
EC2
ELB
Fpm
Ubuntu
Flume
Monday 10 October 2011
Automation
Craftsman vs Artist

Reproducible results

Stradivarius/No more Bob’s Directory
Configuration Management

Repeatable Results
Faster
Ironies of Automation

aka NOOPS

http://www.bainbrdg.demon.co.uk/Papers/Ironies.html
We should **not compete** against the machine…

The way to use a machine is to judge its powers, fashion its uses, **in light of our own limits** rather than the machine’s potential.
“A poor craftsman blames his tools”

Upon donning my new attire and my new bicycle, I will be magically transformed into a cyclist that can hold his own with Lance Armstrong, right?

http://journal.bitshaker.com/articles/2011/06/10/the-importance-of-good-tools/
Novice learners

typically don’t plan, monitor, and reflect on their learning

typically don’t generate a number of potential solutions

engage in ‘knowledge telling’ vs. ‘knowledge transformation’

http://theconstructionzone.wordpress.com/2010/03/03/scaffolding-for-deep-understanding/
Expert learners

use ‘multiple representations’
make multiple passes at knowledge
view ‘mistakes’ as opportunities to learn
able to transfer learning to other domains
realize ‘context’ is important to learning

Tool chain, Tool belt
Learn a few tools, programming language, editors per year
Chef vs. Puppet, Source vs Packaging, Vim vs Emacs

http://theconstructionzone.wordpress.com/2010/03/03/scaffolding-for-deep-understanding/
“It’s about the behaviors the tools enable”

Think how cloud, virtualization, nosql, config mgt has changed the way we work/think
“It’s not about tools. It’s about change”
“Effects with Technology & Effects of Technology”

Effects with are the changes that take place while one is engaged in intellectual partnership with peers or with a computer tool, as, for example, is the case with the changed quality of problem solving that takes place when individuals work together in a team. On the other hand, effects of are those more lasting changes that take place as a consequence of the intellectual partnership, as when computer-enhanced collaboration teaches students to ask more exact and explicit questions even when not using that system.

http://theconstructionzone.wordpress.com/2010/03/07/deep-understanding-the-issue-of-transfer/
“We don’t need a window dressing solution when the house needs to be renovated”
“It’s not the tools, it’s about the Craftsman”
“We shape our tools and afterwards our tools shape us”

Marshall McLuhan
Tools as objects to think with

Like TDD is not about tests, but think about better design

“Problem Space evolves with the solution”
Give me API
or
Give me death

@littleidea
Collaboration
“It’s not about the tools, it’s about the relationship”
“from activity-centric to relationship-centric collaboration”

Vagrant allowed us to share setups across team
“Individuals and interaction over process and tools”
“More interaction doesn’t mean a better party”

# of deploys doesn’t tell you everything

Black Hole theory

“Absorbs the light, to see the \textit{effects} you need to look at nearby objects”
Complex design problems require more knowledge than any single person possesses because the knowledge relevant to a problem is usually distributed among stakeholders.
The map is not the territory
Tragedy of the commons

“A dilemma arising from the situation in which multiple individuals, acting independently and rationally consulting their own self-interest, will ultimately deplete a shared limited resource, even when it is clear that it is not in anyone's long-term interest for this to happen.”

http://en.wikipedia.org/wiki/Tragedy_of_the_commons
“The clashing point of two subjects, two disciplines, two cultures ought to produce creative chaos”

Symmetry of Ignorance

Group think is especially harmful if some groups believe that their way of thinking is on top, rather than on tap.

(Turkle and Papert, 1991).
“Create spaces and places that serve as boundary objects
(shared objects to talk about and think with)

where different cultures can meet and collaborate”

Great places to start the conversation
Deployment, packaging, monitoring, testing, post-mortem
“They have the potential to lead to an increase in socially shared cognition and practice”
Boundary objects can give way to Toxic Technical Debt

Levels of Interaction

activities
collectives
organization
networks

Just Sysadmin or Dev
Devs/Ops/... interaction
Understanding Business
Interacting outside company (opensource, open recipes, open datacenters)

Shift to Social

Craftsman Swaps:
A couple of companies conducted craftsman swaps. This is where 2 companies swap an employee for a week. The employees learn the practices of another company and come back and try to improve their own environment.

Craftsman Journeys:
Similar to a craftsman swap, this is where you just go to a company for a week and learn what they do

http://www.infoq.com/presentations/Software-Craftsmanship-Beyond-The-Hype
Bringing **different** and often **controversial** points of view together to create

**a shared understanding** among these stakeholders can lead to new **insights**, **new ideas**, and new artifacts.

Domain Shift
reach across borders - traveling
Design
“collaborative relationships shifts the focus from tools to design”
“Design used to be collaborative activity”

think guilds
Co-creation of design

http://www.tandfonline.com/doi/full/10.1080/15710880701875068

Monday 10 October 2011
Get back to design

fuzzy front end

design criteria

ideas

concept

prototype

product

co-designing
“Automation frees up time to do more design”
You can try to perform operational tasks without any ingenuity or creative thought.

Automation of routine work has freed us to innovate even more

Ernest Mueller

An “honest architecture,” one in which there is no deceit in its construction.

John Ruskin

http://en.wikipedia.org/wiki/The_Seven_Lamps_of_Architecture
Abstraction should be based on experience

Theory is for everybody, craftsmanship to those trained fast, new tool set (keep up)

http://c2.com/cgi/wiki?TooMuchAbstraction
Dude’s Law: Value = Why / How

\[ V = \frac{W}{H} \]

Architect vs. Master of craft

http://devjam.com/dudesblog/dudes-law/
http://www.slideshare.net/YvesHanoule/the-agilemindset
When you drive a car, thinking about how the engine works is a **distraction**.

When you repair a car, thinking about how the engine works is **essential**.
repair or taking things apart and understand how they work, helps people rethink how to do things”

Post-Mortem learning
Sennett

Metrics for learning and feedback
Difficult tools can challenge you.
Path of least Resistance
How do we avoid getting stuck in group think?”

This includes seeing controversy as an asset rather than as a limitation;

Traveling Craftsman conferences - online communities
“How do we eliminate sources of exclusion?”

Not only avoid exclude people, but ways of thinking and organizing that make them reluctant to join in.
“Unlearn & Learn”
How can we encourage individuals to *contribute* to the good and progress of all of us?”
Sharing

Ideas, Blogs, Tools, Stories
Failsafe
Great Sources

devops café
devopsdays
devops weekly
#devops
“It’s not about the tool - a naïve myth”

Peter Skillen
“Tools can connect people so we can share and learn from each other and improve”

http://www.brandtology.com/blog/social-media-it%E2%80%99s-not-about-the-tools-it%E2%80%99s-about-the-people/
“Tools can enable change in behavior and eventually change culture”
I think the importance of tools is **under-rated**
Thoughts?
Questions?
Some homework

The craftsman
Richard Sennet

Design Thinking
Nigel Cross

Web operations
Allspaw & Robins
Go have **fun**
with your **tools** now