



Five reasons why code reviews make you a happier and healthier being

By Ulrich Kuhnhardt, Izymes

Who wouldn't want to improve code quality and be more productive as a team while increasing satisfaction and happiness at work?

It's a no-brainer that a new phone, a new gadget or whatever money can buy gives us a short-lived buzz of happiness, however *that* buzz fades quite quickly.

So what makes us humans truly happy and fulfilled? The sense of belonging to a group or being connected with others through a shared cause gives life a deeper meaning. Most people find more value and meaning in their lives when they feel connected to something greater than self.

How come, it's not all about me?

Our emotions originate in the midbrain, in the limbic system. This new region of the brain developed in mammals about 250 million years after the appearance of the hindbrain. This region is known as the paleomammalian brain, often referred to as the limbic system. This system developed in mammals which needed to bond with their young, work together in groups, and communicate in elaborate ways with one another. We are literally hard wired by evolution to work in small groups of between five and eight people. Below five, social energy is harder to generate; above eight it becomes a more formal setting and potentially inhibiting for some members. Membership of an optimally-sized herd fuels our confidence and self-respect and reassures us that our contributions are being accepted and valued.

Forming groups for code reviews and inviting a group to contribute together to a pull request review mirrors that sense of belonging and connectedness. Each individual contribution to a pull request and its review has social significance because it happens in the context of a group.

Cultivating code reviews in groups and teams means intentionally supporting the development of healthy collaboration, meaningful contribution and constructive feedback. Code reviews are not just an annoying daily chore that needs to get done as quickly and with as little effort as possible. I dare say that cultivating code reviews make or break the success of complex projects.

The ultimate success of complex projects depends on every member of the team giving their best. People give their best when they feel fulfilled, happy, connected and acknowledged through their group. We become less defensive and ready to take on more responsibility for the wellbeing of others, because we know they would do the same. Not only do the regions of our own brain become more integrated and connected, we also become more attuned to the signals we receive from other group members.

This leads to us becoming better problem solvers, experiencing increased attention and drastically reducing our burnout levels because we don't get the feeling it's all on our own shoulders any more. We become more flexible and open when accepting feedback from others.

It's not rocket science to start cultivating your pull request reviews, however the latest findings on neuroscience and interpersonal neurobiology inform this approach:

Pull Request Authors

As the pull request author describes key changes, how you did it and why. You are proud of your work and know (or will get to know soon) that your reviewer group appreciates it.

Invite five to eight reviewers, perhaps include the tech lead or team lead and ask for their feedback. Be honest - oftentimes a simple 'any thoughts on this?' comment on your changes inspires others to contribute.

If the project is relatively new or the group has been formed only recently, book a room for an informal code review meeting and invite the group. Present your changes, ask for feedback and moderate the discussion. It helps to connect the members of a group when we exchange audio-visual signals. It builds trust and safety among the members. If you're working remotely still go for it and get everyone on a webex. Not every code review needs to be held as a meeting, but it helps in the beginning to do at least one joint review for each group member.

Pull Request Reviewers

As a reviewer give positive feedback acknowledging the solutions of the author. A simple 'Cool stuff' or 'sick lambda!' means a lot. For some this may seem irrelevant and possibly a waste of time - but it's scientifically proven that 250 million years of evolution of the limbic brain can't be rolled back that easy. And seriously how good does it feel to receive the same honest praise from others?

Also, give your best constructive and emotionally balanced feedback on the pull request changesets - only then the others know that you actually care about the code and their contribution.

Share your own thoughts on comments of other reviewers in your group, again showing that you care about their contribution as well.

Atlassian Bitbucket has great features that sum up your pull request verdict: 'Approve', 'Needs Work' or 'Decline'.

Atlassian Marketplace Apps for Bitbucket offer more advanced features to stimulate group-based pull request reviews and support the review process. These work in the background by monitoring approvals and checking reviewer group related pull request merge conditions.

The modern view of self is the integration of Me and We. Small homogenous connected groups are extremely successful with complex tasks and resilient to problems. Start making your software project or product a success through connecting people by cultivating code reviews from day one of the project.

That's a great start! Want to go deeper? Take a look at your whole development, integration and deployment process. Ask yourself: Does the process *connect* people or does it get in the way for all sorts of bogus technical or organizational reasons?

Cultivating pull request reviews by forming and working with small groups is the key to success - 250 Million years of successful mammalian evolution including the rise of homo sapiens don't lie, promise!



About the Author

Ulrich is the creative and free-thinking founder of Izymes. He has been orbiting the Atlassian Ecosystem since 2007, wrote his first Jira gadget in 2008 and keeps busy re-imagining how to empower teams with apps for Bitbucket, Jira and Confluence.

[@dev_doctor](#)



About Izymes

At Izymes we are passionate about designing and creating apps that foster collaboration, create connection among users and empower teams and organizations to create products that are useful, usable, purposeful and profitable.



About Workzone

Workzone for Bitbucket allows teams to control their SCM process and how reviewers and groups are automatically added to new Pull Requests. Workzone monitors and automates the pull request merge process via customizable merge-conditions that check approval quotas for groups and individual reviewers, build results and digital signature approvals.