

Psychopolitics of Test Management

Managing Testing without Going Crazy



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Psychology and Politics Collide

- ❖ Why do psychology and politics matter for testing?
 - ❖ Testing is about evaluating the quality of other people's work
 - ❖ Testing gets onto the critical path at the end of a project or sprint, potentially forcing hard choices
 - ❖ Sometimes, testers and test managers are tone-deaf about how they come across
- ❖ Let's see how to recognize and manage the psychological and political factors...



Psychological Factors Affecting Testing

- ✚ Causality confusion
- ✚ Blaming the victim
- ✚ Cognitive dissonance
- ✚ Confirmation bias
- ✚ Projection

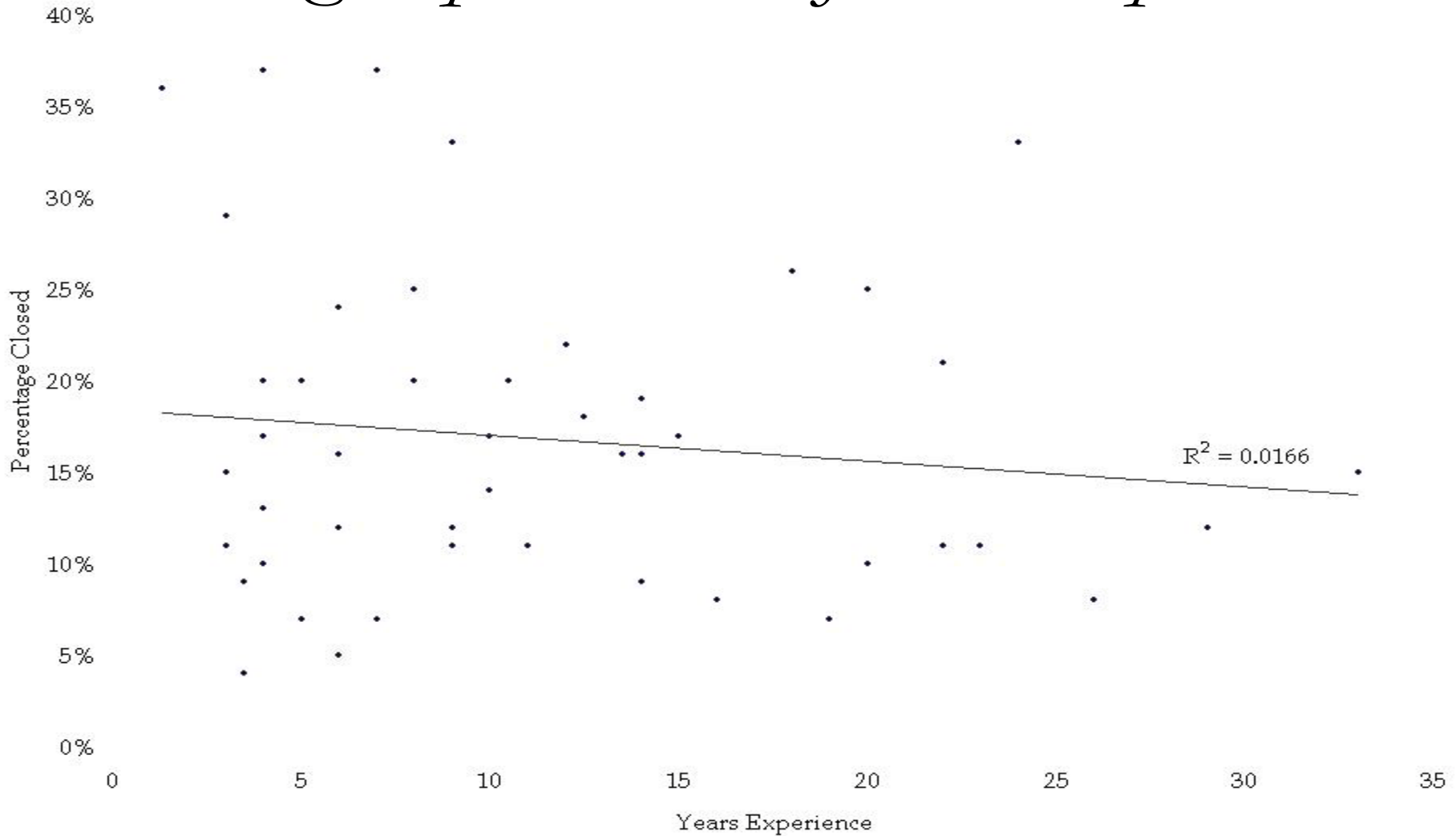


X and Y Happened, So X Caused Y

- ❖ People make invalid assumptions about correlation and causality
- ❖ E.g., “The project was on schedule until testing started...”
- ❖ “For every complex problem there is an answer that is clear, simple – and wrong”
– Mencken
- ❖ Often there are many causes for outcomes, some vital, some trivial (80/20 rule)
- ❖ What sounds rational can be wrong



“Bad Bug Reports Arise from Inexperience”





Blaming the Victim

- ❖ External factors often impact testing, and yet testing is blamed
 - ❖ Quality problems found during testing result in schedule delays; testing is blamed for the delay
 - ❖ High rates of false positives and false negatives due to poor specifications; testing is blamed for bad information
- ❖ It's important to measure and demonstrate how external factors contribute to testing problems



What People Don't Want to Hear

Cognitive dissonance

- ✦ The mental difficulty and stress associated with processing unexpected information
- ✦ E.g., team members not seeing why test results mean that the current schedule is untenable
- ✦ Often expressed as frustration

Confirmation bias

- ✦ The tendency to seek out and agree with information that confirms existing opinions
- ✦ E.g., rejecting test results when other team members say that quality is fine
- ✦ Often expressed as anger or dismissiveness



How People Feel about Facts

- ❖ People tend to project how they feel about *something* (e.g., test results) onto *someone* (e.g, the test manager)
- ❖ This well-known human tendency is sometimes called “killing the messenger,” after Greek mythology where Hercules killed someone who brought him bad news



Has Delivering Bad News Made You the Bad Guy?



**Grim
reaper or
friendly
guide?**

- ❖ The test manager is sometimes on the receiving end of emotions from bad news
- ❖ Professional pessimism is part of the solution
 - ❖ Stick to the facts; back up recommendations with data
 - ❖ Avoid being a quality cop
 - ❖ Don't pass judgment on other's processes or people
 - ❖ Never gloat, even (especially?) if you were right and everyone else was wrong
- ❖ Juan de Mariana: "The greatest of follies is to exert oneself in vain, and to weary oneself without winning anything but hatred."





How Metrics Help

- ✦ To make your status reporting less subjective, use good metrics
- ✦ Talk to the key testing stakeholders about what information you can provide and how you can provide it
- ✦ Don't use out-of-the-box metrics: Draft the metrics, discuss them with the stakeholders, and fine tune
- ✦ Continuously manage the team's perception of accuracy, credibility, and timeliness of the metrics

Credibility of the dashboard is critical: Just as people listen to podcasts and read websites they can believe, people only read test status reports that present accurate, credible information



Political Factors

- ❖ Mission clarity
- ❖ QA and other “q-word” titles
- ❖ Organizational placement
- ❖ Everything-but-programming
- ❖ Managing your fellow managers
- ❖ Schedule pressures and testing
- ❖ Missing specifications



What Is the Test Manager's Job?

- ✦ Test/quality control manager
 - ❑ Risk management
 - ❑ Quality assessment
- ✦ Quality assurance manager
 - ❑ Test/QC management
 - ❑ Ensuring product quality through process
- ✦ Make sure you're competent, staffed, and politically supported for your role



Don Quixote: Lone Champion of Quality? By misunderstanding your role in the company, you can do yourself great political harm



Test Mission and Policies

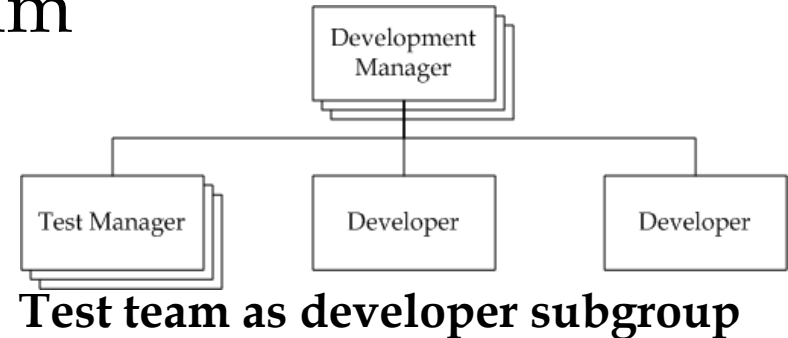
- ❖ Test team should have clearly defined objectives
- ❖ Establish effectiveness and efficiency metrics and goals for each objective
 - ❖ Find defects: defect detection effectiveness
 - ❖ Build confidence: requirements coverage
 - ❖ Reduce risk: risk coverage
 - ❖ Provide information: stakeholder satisfaction with test results
- ❖ Capture the mission, metrics, and targets for those measures in a *test policy*



Test Team within the Company

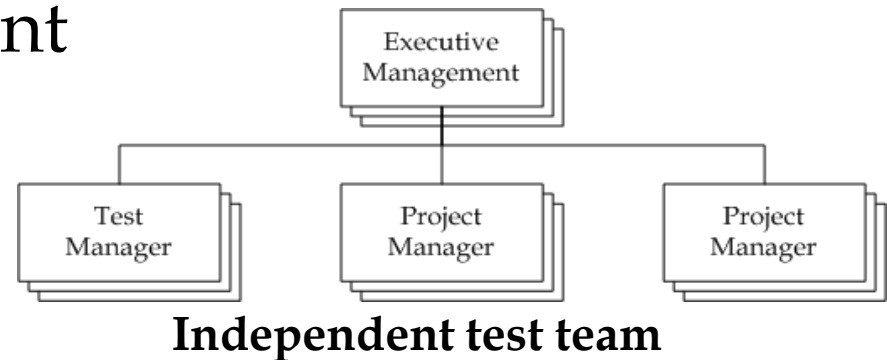
❖ Part of development team

- ❖ Okay for startups
- ❖ Not independent
- ❖ Hard to advocate quality



❖ Completely independent

- ❖ Bureaucratic for small companies
- ❖ Preserves tester independence



❖ In Agile, a matrix approach works



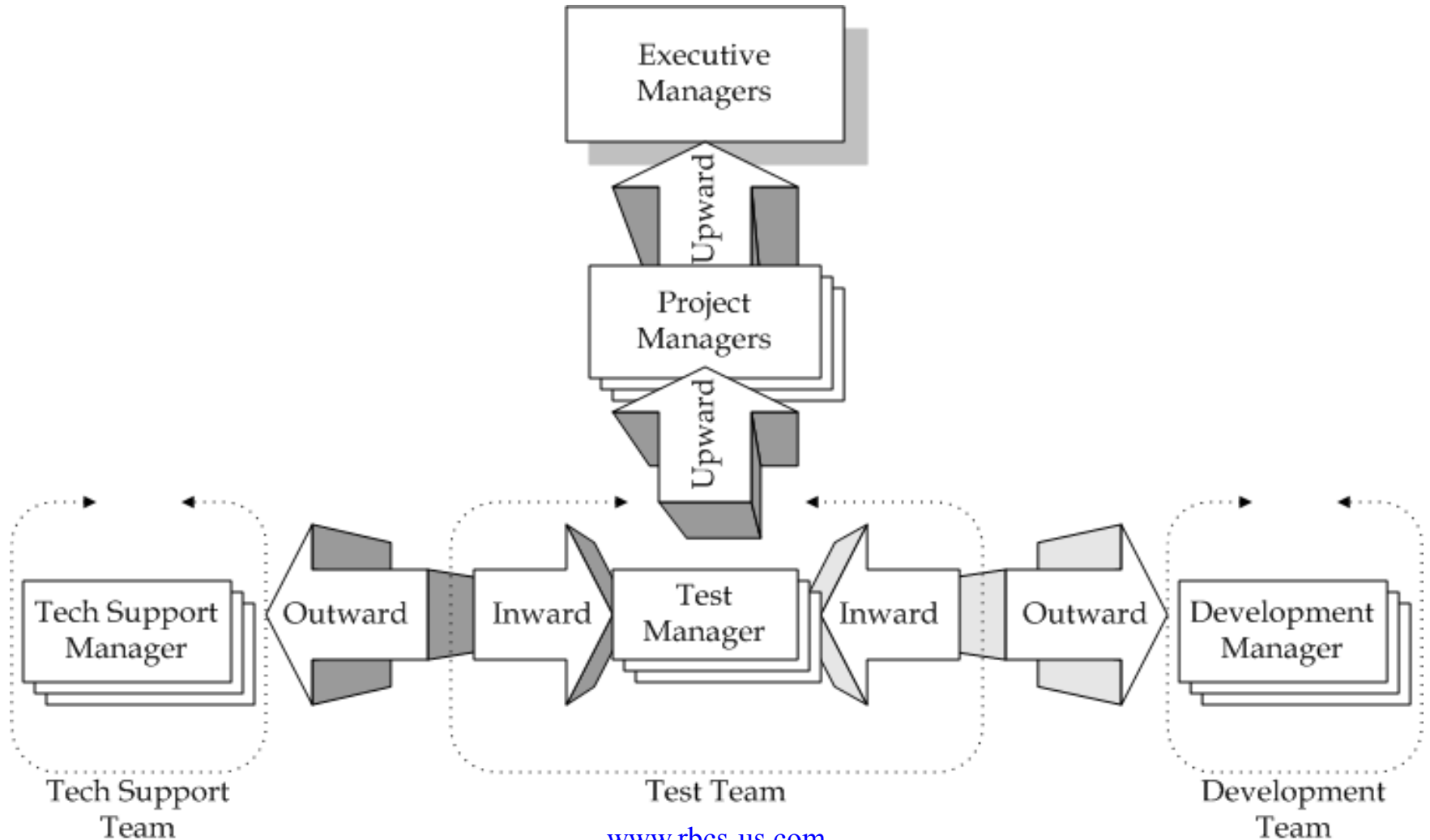
Additional Non-Test Roles

- ❖ Other roles test team is sometimes asked to fill
 - ❖ Configuration management and release management
 - ❖ Customer support
 - ❖ Operations such as system administration and disaster recovery
 - ❖ Quality management – e.g., code reviews, inspections, and process
 - ❖ Management of the development lab
 - ❖ Creation of training data and procedures for operations staff

- ❖ Usually such additions do not make sense
 - ❖ Development roles interfere with independence
 - ❖ Test team has no extra people or bandwidth
- ❖ Sometimes accepting these roles can be a political survival issue
 - Ensure that you *do* survive by getting commensurate resource commitments



Directions of Test Management





Managing Your Fellow Managers

- ⊕ Essential tasks for managing
 - ❖ Providing valuable testing services
 - ❖ Delivering and measuring value
 - ❖ Devising an effective test dashboard
- ⊕ Poor upward management leads to perceptions among executives that your team has failed
 - ❖ Paperwork and status reporting can seem tedious and disconnected from critical tasks
 - ❖ But your managers are your most important customers.
 - ❖ Your managers provide the funds you need to carry out testing.
 - ❖ The better they understand your role and contributions, the more resources and political support they'll give



Communicating Clearly with Managers

- ❖ Ensure that your managers do not hold you responsible for product quality
- ❖ Help your managers understand testing in business terms
- ❖ Think ROI – return on investment – and talk it
- ❖ Measure your results (e.g., defect charts, test progress)
- ❖ Give accurate, timely reports
- ❖ Communicate in terms of moving the project forward
- ❖ Participate in the dog and pony shows
- ❖ Address both the urgent and the important
- ❖ Don't let bad news wait
- ❖ Be optimistic about the project on the outside; keep pessimism within the team
- ❖ Escalate problems for help deliberately



Test, Management, and Schedule Slips

- ❖ Many software projects experience schedule slips
- ❖ Test isn't usually responsible for schedule slips
 - ❖ Last-minute-changes, late pieces of code, unrealistic schedules...
 - ❖ But test execution happens *when* the schedule slips
- ❖ Long hours are frequently used to try to catch up
 - ❖ Even if overtime for your team is unfair and won't help, be careful if you choose to make those arguments
 - ❖ Schedule slips can lead to firings, which can fall hardest on those perceived as "not team players" or malcontents
 - ❖ Watch out too for ad hoc testing, re-orgs, dissolution of independent test to work "side by side" with development, etc.



△ Manage message, image, and presentation carefully



Testing and Specifications

- ⊕ Insisting on specifications can be politically dangerous
- ⊕ Agile methodologies have increased the challenge
- ⊕ Testing without specs
 - ❖ Examine competing products
 - ❖ Consult with sales and marketing
 - ❖ Talk to customer support
 - ❖ Take your “best guess”
 - ❖ If in doubt, it’s a bug
- ⊕ Joe Mata: “Socratic method of testing... ‘twenty questions’ as a test development paradigm”
- △ If you test without specs, inform management that guessing imposes a 20-30 percent hit on efficiency and a 10-20 percent hit on defect finding effectiveness

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Conclusions

- ❖ Software engineering is a human endeavor; thus human psychology matters
- ❖ Recognize and accept psychology, and manage it with objective results reporting (metrics)
- ❖ Software engineering is a collective human endeavor; thus politics matter
- ❖ Recognize and accept the political aspects of testing, and manage it by seeing your team as a service organization
- ❖ Many test managers not only avoid going crazy, but succeed by mastering the psychology and politics of testing



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Address: RBCS, Inc.
31520 Beck Road
Bulverde, TX 78163-3911
USA

Phone: +1 (830) 438-4830
Fax: +1 (830) 438-4831
E-mail: info@rbc-us.com
Web: www.rbc-us.com