

On the Impact of Aspect-Oriented Programming on Object-Oriented Metrics

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9th ECOOP workshop on Quantitative Approaches
in Object-Oriented Software Engineering
Glasgow, Scotland
2005/07/25



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Goals

- Ultimate goal

- Propose a quality model to assess aspect-oriented program design and implementation

- Design issues with aspects

- What happens to OO programs?
- How are the metrics modified?
- Can we propose a quality model?

Thought

- Is AOP a new paradigm?
(and where does AspectJ stand?)
 - AOP
 - AOP built on top of OOP
 - OOP mixed with AOP
 - OOP



Existing work

- Metrics for AOP
 - Statically
 - Zhao
 - Dinamically
 - SABLE
- Impact of AOP on OO metrics
 - Sant'Anna
 - But only *aspect* and *advice*



Contributions

- Consider all AOP abstractions (as implemented in AspectJ)
- Automate the metric computation and the quality assessment
- Assess the impact of AOP abstractions on design and implementation



Methodology

- Relation between AOP and OOP
- Impact of AOP and OO metrics
- Study several AOP programs (and possibly compare with their full OO counter-parts)



Questions

- Is our ultimate goal valid?
- Is our methodology valid?

- Where are the AOP programs?