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## On the role of dislocations in fatigue crack initiation

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*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2005

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Brinckmann, S. (2005). *On the role of dislocations in fatigue crack initiation*. [Thesis fully internal (DIV), Groningen]. s.n.

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# Propositions

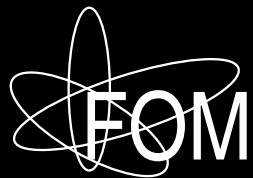
- When planning a project in time one usually forgets that "When one wants to climb the Mount Everest, he has to pass through valleys." Therefore, a tight setting of milestones is meaningless.
- Research is a *search*, which can or cannot deliver results. Therefore, planning ahead of what to do with results of research is nonsense.
- *"Nobody knows himself, nobody understands the element in which he floats and works. [...] Wealth and rapidity is what the world admires and what everybody seeks; [...] all kinds of communication are, what the educated world tries to surpass each other on [...] We will, perhaps with exception of a few, be the last of a era, which will not return soon."*<sup>1</sup> During three centuries, people have complained about an increase in the speed of life and the connected unrest. Since nothing has changed it is unlikely that people will slow down in the future.
- Current dislocation models are not able to capture the formation of ladder-like dislocation structures in fatigue.
- Dislocations move because of the local force and ignore the global field. In that respect, they are just like humans.
- A few dislocations in a previously perfect crystal will soon trigger a large number of dislocations if some force is applied. In that respect, dislocations are like humans who conquer and modify the earth, creating an imperfect world.

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<sup>1</sup>Goethe, 1825



2005-05



ISBN 90-367-2237-3