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## The Quest for Product Safety in the Context of 3D Printing: A Law and Economics Analysis

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## **Stellingen behorende bij het profschrift van Shu Li**

1. In the context of 3D printing, consumers are taking a proactive role as the coordinators of digital designers and fabricators, and they shall also be provided with the incentive to behave appropriately.
2. Contracting over product risk is expected to reduce accidents and shift risks when production is organised in the way of customisation with the application of 3D printing. However, it would be less effective when parties have no opportunity of sufficient bargaining.
3. Strict liability is not desirable in the scenario of 3D printing. Because digital designing and physical fabrication are typically accomplished by different parties, it is not easy to identify a suitable party, by allocating liability to whom social welfare is maximised.
4. Information regulations should be widely used to reduce information asymmetries in the context of 3D printing. In comparison, mandatory standards and prior approvals should be restricted to the sectors with most risks. This is also true for the context of 3D printing.
5. Online platforms and technologies are expected to play an increasingly critical role in reducing information asymmetry and shifting risk in the changed value chain of 3D printing.
6. The residual liability shall be allocated to the most suitable party. From a law and economics perspective, this most suitable party shall be the one, who can reduce accidents at the lowest cost, who can precisely evaluate the full price of the final product and who has the capacity to spread the risk. However, this party may not be easily defined in bilateral accidents.
7. Risk-shifting could be challenged by the rise of disruptive technologies. Meanwhile, new technologies have the potential to alleviate risk-shifting problems in return.
8. Business models are designed to boost private interest; legal instruments can incentivise stakeholders to take public interest into account.
9. The collection of data and further data analytics have the potential to decrease information asymmetry, but these may meanwhile raise problems of data ownership and privacy.
10. While 3D printing is emerging as a disruptive technology, only time will tell us whether it will replace mass production.
11. Machines are behaving like humans and humans are behaving like machines.