

NURTURING SOFTWARE:

HOW SOCIETAL INSTITUTIONS SHAPE THE DEVELOPMENT OF SOFTWARE

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Abstract:

It is widely recognized that software affects fundamental societal concerns, such as privacy. Software does not just appear, but is produced within a variety of societal institutions. This article analyzes how societal institutions shape the development of software and its resulting implications for society. Specifically, we consider how institutional rules are evident in the different structures, motivations, and influences of four societal institutions. We begin by discussing universities and continue on to firms, consortia, and the open source movement. Once we understand how all of these factors operate, we can offer predictions on the resulting attributes of software. In the final section, we show how these institutional factors explain the variation in the development of web browsers as well as in the incorporation of the societal value of security into software.