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by [Lauren Pechey](#) - Saturday, 19 October 2024, 9:42 AM

I would respectfully disagree with the assertion that “Torvalds has been proven wrong and it only took nearly thirty years. Microservices and microkernels are the future.” While microservices and microkernels offer certain advantages, it is essential to recognize that the choice between monolithic architectures (as advocated by Torvalds) and microservices/microkernels is not a matter of one being definitively superior to the other. Each architectural style has its own merits and is suited to different scenarios and requirements.

Microservices allow for greater scalability, flexibility, and ease of deployment, as they enable the development of independent services that can be scaled, updated, or replaced without impacting the entire system (Fritzscht et al., 2019). However, this approach introduces complexity in terms of inter-service communication, data consistency, and deployment strategies. Additionally, the overhead associated with managing multiple services can lead to increased latency and operational challenges.

On the other hand, monolithic systems can offer performance advantages and simpler deployment strategies. They are easier to manage in terms of development, debugging, and testing, particularly for smaller applications or teams. Torvalds’ emphasis on the efficiency of monolithic kernels has merit in contexts where performance and low-level resource management are paramount (DiBona and Ockman, 1999).

In summary, while microservices and microkernels present innovative approaches to software architecture, they are not universally superior to monolithic systems. The choice of architecture should be based on the specific needs and constraints of the project, rather than a blanket statement of superiority.

References

DiBona, C. et al. (1999) *Open sources : voices from the open source revolution*. 1st ed. Sebastopol, California: O'Reilly.

Fritzscht, J. et al. (2019) ‘From Monolith to Microservices: A Classification of Refactoring Approaches’, in *Software Engineering Aspects of Continuous Development and New Paradigms of Software Production and Deployment*. [Online]. Switzerland: Springer International Publishing. 128–141.

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