

# The mindsponge concept and the bayesvl R package by 2021

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February 14, 2021

Last update: May 19, 2024

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“Innovation can help Kingfisher conserve energy while maintaining a sense of tranquility, which is suitable for an increasingly advanced age with diminishing physical strength.”

In “A Shocking Secret”; [The Kingfisher Story Collection](#) (2022)

Our AISDL research team has used the concept of “mindsponge” extensively, in numerous research studies, since 2018 (Vuong, 2023). The concept was first introduced by Vuong (2016) and Vuong & Napier (2015). Nonetheless, it has become increasingly applicable since empirical studies and further conceptual developments and real-world applications such as Nguyen et al. (2019), Nguyen, Le & Meirmanov (2019).

Before our extensive use of the theory, it had already received support from other conceptual applications and developments, which help us better understand (and benefit from) its values and relevance and further calibrate our subsequent studies, both conceptually and empirically.

Those publications that shed light on its use and potential include Donato (2019), Ranizal et al. (2019), Verrips & Schoonewelle (2019), Basinsk & Rozkwitalska (2020), Bărbulescu, Tecău, Munteanu & Constantin (2021), Stoermer, Laurin, & Selmer (2020), Fischer (2021), Kowalski & Rybacki (2021), to name just a few. The applications range from psychology to business administration and innovation processes to mental health studies.

Nonetheless, our subsequent studies have greatly benefited from a data science weapon, the `bayesvl` R package, also developed by the main author of the mindsponge concept and our colleague (La & Vuong, 2019; Vuong et al., 2020b; Vuong et al., 2020c).

The Bayesian network data analytical method, employing the computing power equipped by the Hamiltonian MCMC technique, has enabled us to investigate much more deeply into complex issues—that the mindsponge processes might require us to—and explore the possible causal nexus thereof. Thanks to the power of the `bayesvl` package, the mindsponge concept has helped to shed light on several important socio-cultural phenomena through such publications as Vuong et al. (2018), Vuong et al. (2020a), Vuong (2021), and Vuong et al. (2021).

The usefulness of the mindsponge notion has been aided by the philosophical reasoning nature inherent in the Bayesian belief updating process. For this exact reason, we have been able to develop further research models capable of investigating increasingly complex socio-cultural and psychological problems (Nguyen, 2024). It is also noteworthy, drawn upon our actual research experience, that the mindsponge concept and Bayesian updating notion can work together quite well in research problems that do not require Bayesian computing at all.

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