Applying Personal Web Principles to Systems Designed to Support Decision Making

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Introduction

Clinical work is a high pressure environment, full of stress and fatigue. Clinicians are currently not well supported in their workflow. Through previous work (Yu, Kealey, Chignell, Ng, Lo, 2010) we have identified areas of need in the clinical environment which include contextually aware & integrated information systems & clinical decision support systems that support expert decision making processes (Brooks, Norman, Allen, 1991; Norman, Young, Brooks, 2007).
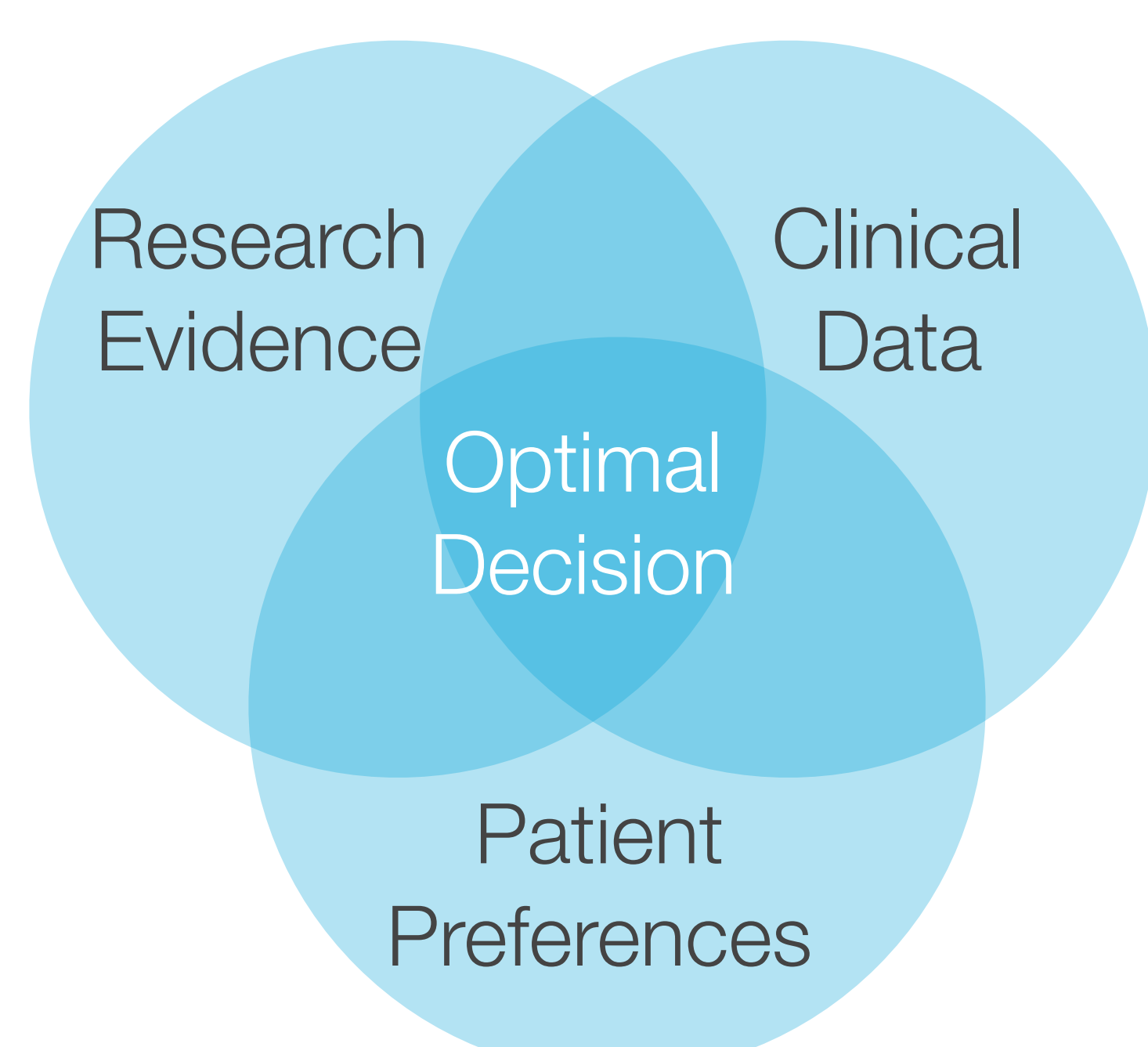
User Requirements

- Integrated systems
- personalization capabilities
- contextual alerting
- support to enhance collaboration
- user control & freedom
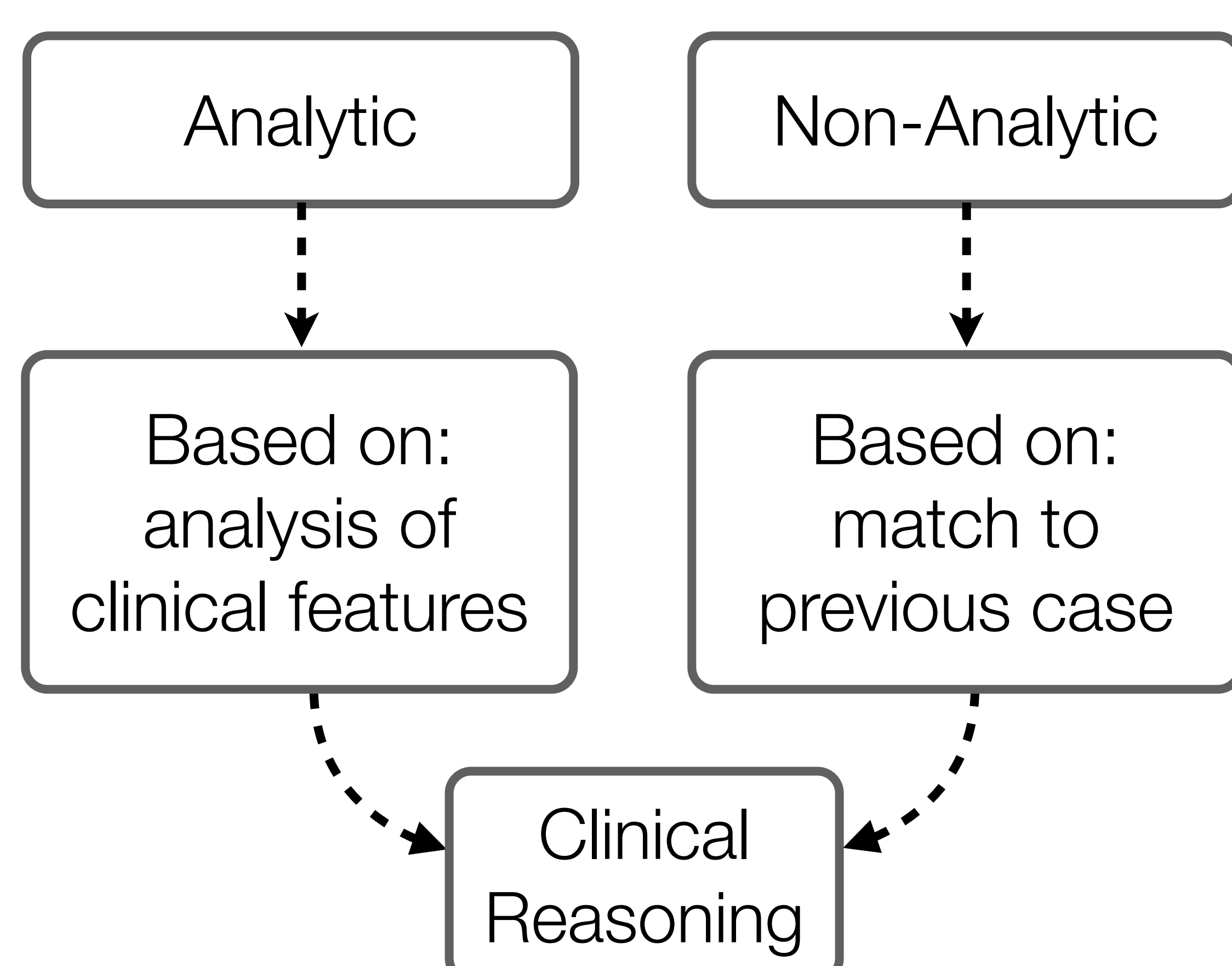
source: (Yu, Kealey, Chignell, Ng, Lo, 2010)
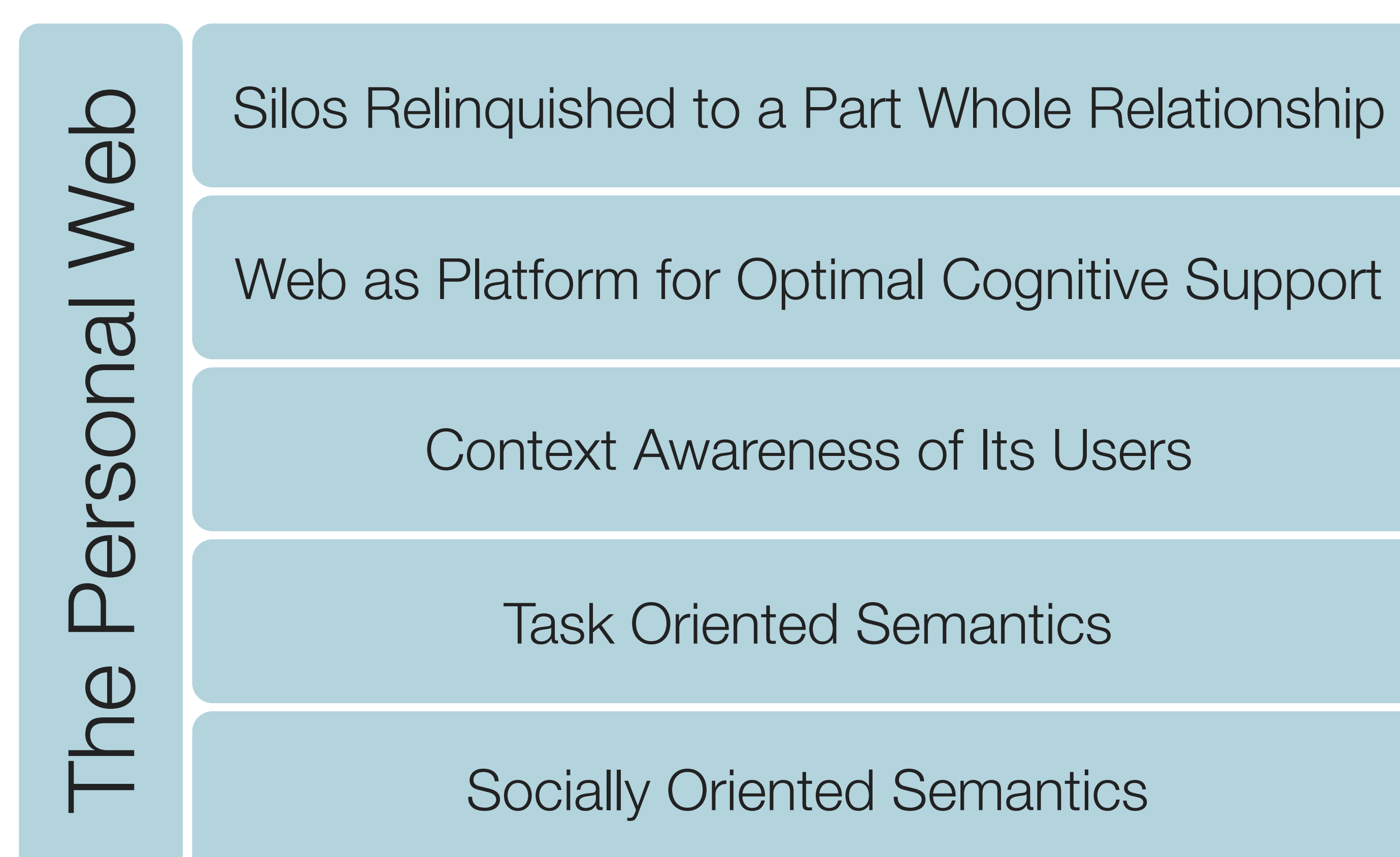

Clinical Decision Making

Clinical decision making is a complex task comprised of the following lines of data:

How a physician goes about analysing these data is fairly well understood and previous work in Cognitive Psychology has identified 2 streams of processing the clinician may employ (Brooks, Norman, Allen, 1991; Norman, Brooks, Young, 2007). Not often are both of these processes supported in technological interventions.

Technological Framework

The Personal Web

- Silos Relinquished to a Part Whole Relationship
- Web as Platform for Optimal Cognitive Support
- Context Awareness of Its Users
- Task Oriented Semantics
- Socially Oriented Semantics

Ng, (2010) describes a framework for The Personal Web. This framework, along with IBM Cognos software solutions (the stats & analysis powerhouse), provides a roadmap and means to develop an interconnected, contextually aware, optimally tailored solution for the user.

Conclusion

We intend to utilize the philosophical & conceptual framework of the Personal Web (Ng, 2010) and analytical power of IBM Cognos software to develop an innovative clinical information & decision support system that provides contextually relevant support including data on similar patients to the current case and their outcomes

References

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