

The emotive episode is a composition of anticipatory and reactive evaluations

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Intelligent Systems and Networks

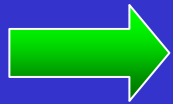
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Bottom-up, systemic approach to researching emotions

- developmental synthetic methodology
- take a biologically inspired perspective



investigating the real time dynamic nature of the emotive process



“what” develops and “how” does it develop

The systemic and active nature of emotive processes



value system functionality



internally generated evaluative feedback



comparative processes

sensory processes

motor processes

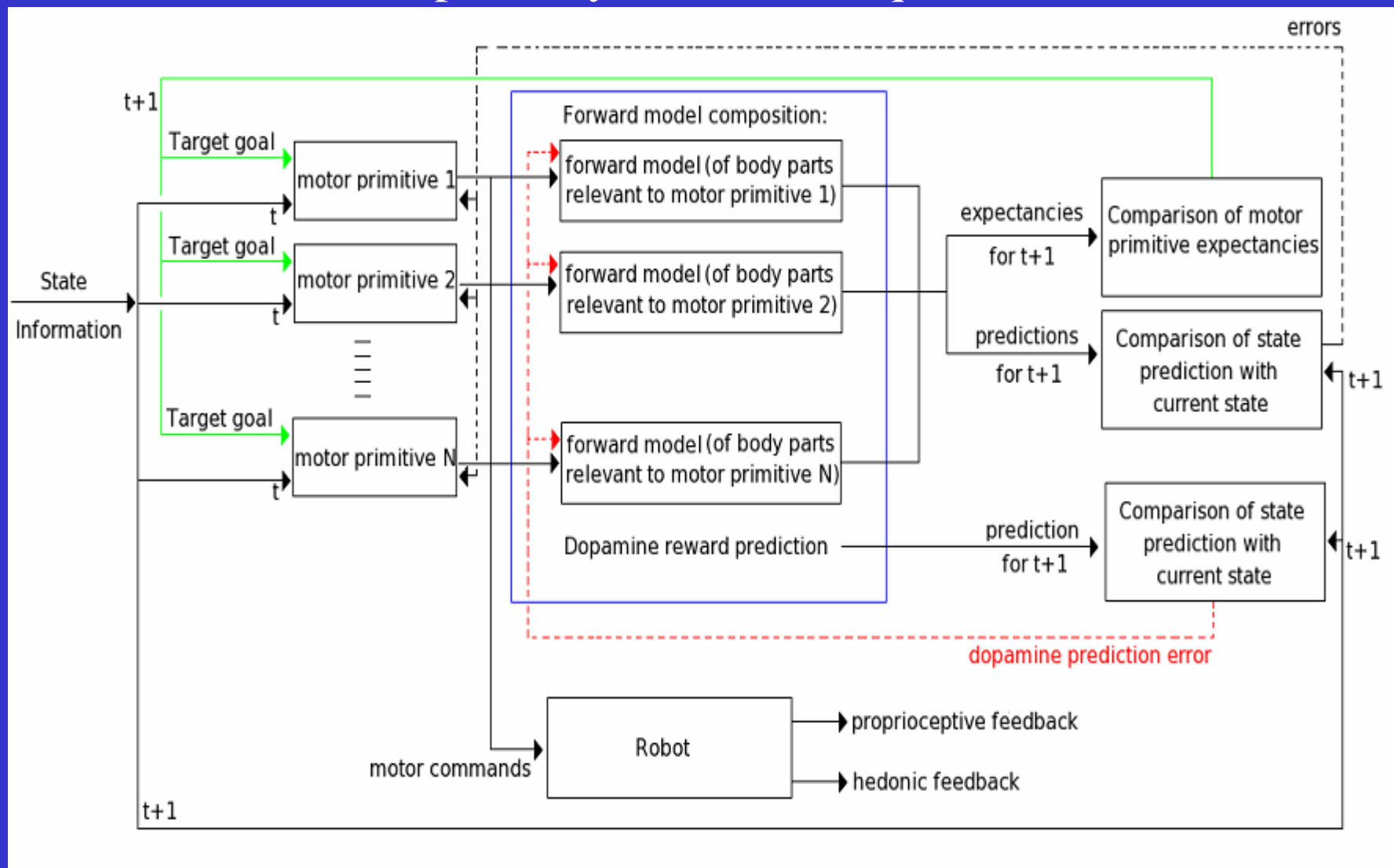
neuromodulatory processes

memory processes

Value system functionality

- temporal coupling of distributed system components
- self-generation of motivational potential
- monitoring of efficient system functioning
- integration of efferent motor and afferent sensory information for flexible and adaptive movement generation and control
- self-generation and specification of temporal and spatial dynamics for goal-directed behaviour
- association, updating and retrieval of memory processes leading to model learning, categorisation and anticipation of internal and external dynamics
- integration of learning and control in a concurrent fashion
- generation, differentiation and modulation of emotive processes

Implementation: an active anticipatory system forming a perception-expectancy-execution sequence

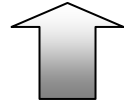


Results:

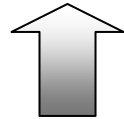
- propose the emotive episode to be multi-factorial and comprised of an anticipatory and a reactive phase, based on qualitatively and quantitatively different and temporally distinct feedback components on sensory, cognitive and motor levels
- propose the circular interaction between motor primitives and self-generated expectancies as a neural mechanism for initiating and guiding goal-directed behaviour
- show dopamine to encode associatively learned predictive evaluative feedback and to structure the emotive process
- show “wanting” and “liking” to be two evaluative and functionally distinct but interacting component systems involved in reward processing and linking the concepts of motivation and emotion
- allow to qualifying and quantifying of emotive processes and to modelling their distinctiveness

<http://www.iis.ee.ic.ac.uk/~m.lahnstein/AISB05.pdf>

The systemic and active nature of emotive processes



value system functionality



internally generated evaluative feedback

