

A Psycho-physiological model of aging

Bo Hagberg

Dept of Psychology

Lund University Sweden

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F:a Hjärn-konsult, Hanö, 294 07 Sölvesborg Tel +4645653055, P-G 193461-1

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Synopsis

- Does wear and tear still matter for aging?
- Indication that this might be the case
- A psycho-physiological model
- The endocrinological mechanisms
- Testing the model



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“Wear and tear” first formulated as a theory of aging
by Weismann in 1882

“the disposable soma theory” (Kirkwood and others 1979)



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Indications that wear and tear still holds

1. Why don't we see so many old salmons



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Indications that wear and tear still holds

- 1. Why don't we see so many old salmon**
- 2. The General adaption syndrom**



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Indications that wear and tear still holds

1. Why don't we see so many old salmon
2. The General adaption syndrom
3. "Burn out"



Young women making a professional carrier severely stressed

- Long term sick-leaves increased with 326 %
- Female employees with good income salary more often being “burned out”
- Danish women have reduced their life length and excessive stress being one of the reasons
- Aged arteries more often found in persons with a great number of “burn out” episodes in their lives

Sandmark & Renstig 2005, G. Berglund 2003



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Indications that wear and tear still holds

1. Why don't we see so many old salmon
2. The General adaption syndrom
3. "Burn out"
4. Allostatic load

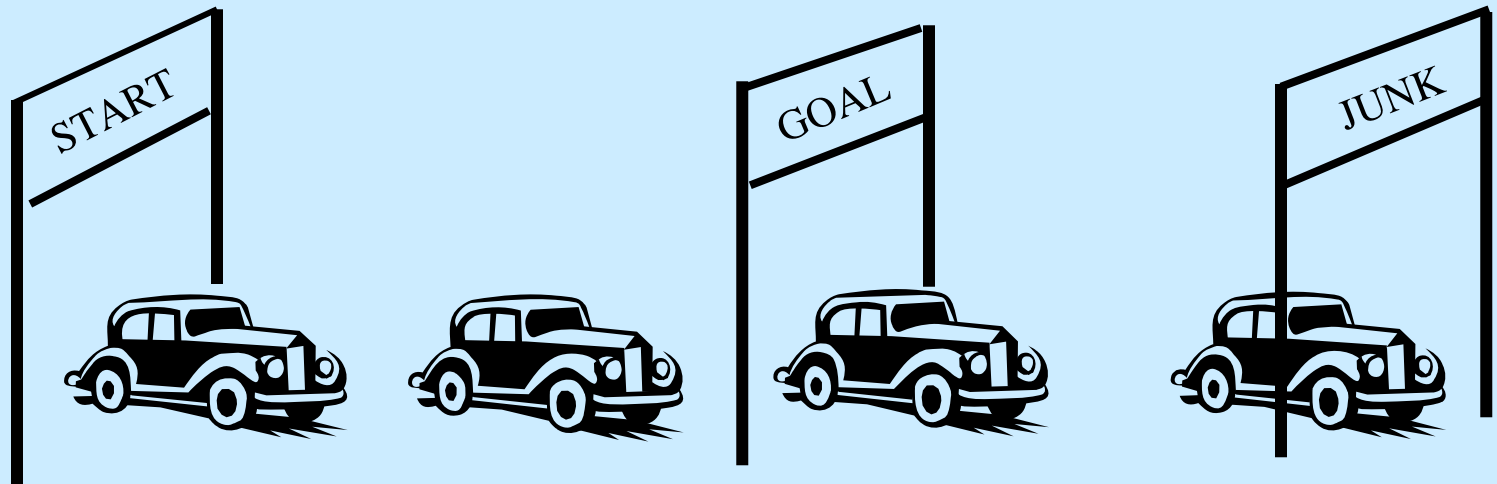


ALLOSTATIC LOAD

“refers to the physiological wear and tear on the body that results from the individuals ongoing effort to adapt to the world around him”

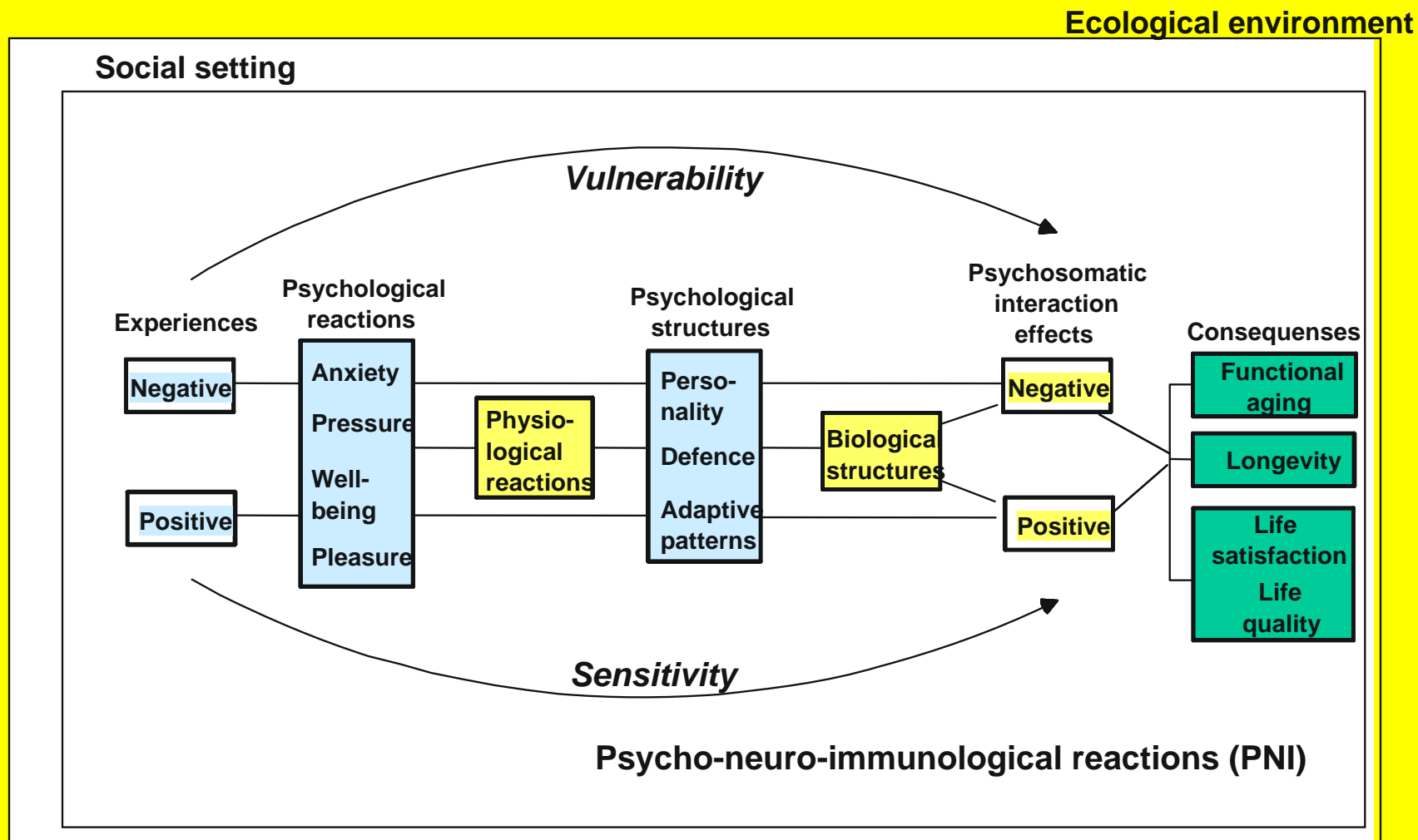
The MacArthur Study of Successful Aging. (Seeman et al 1998)

Metaphor for a life span journey

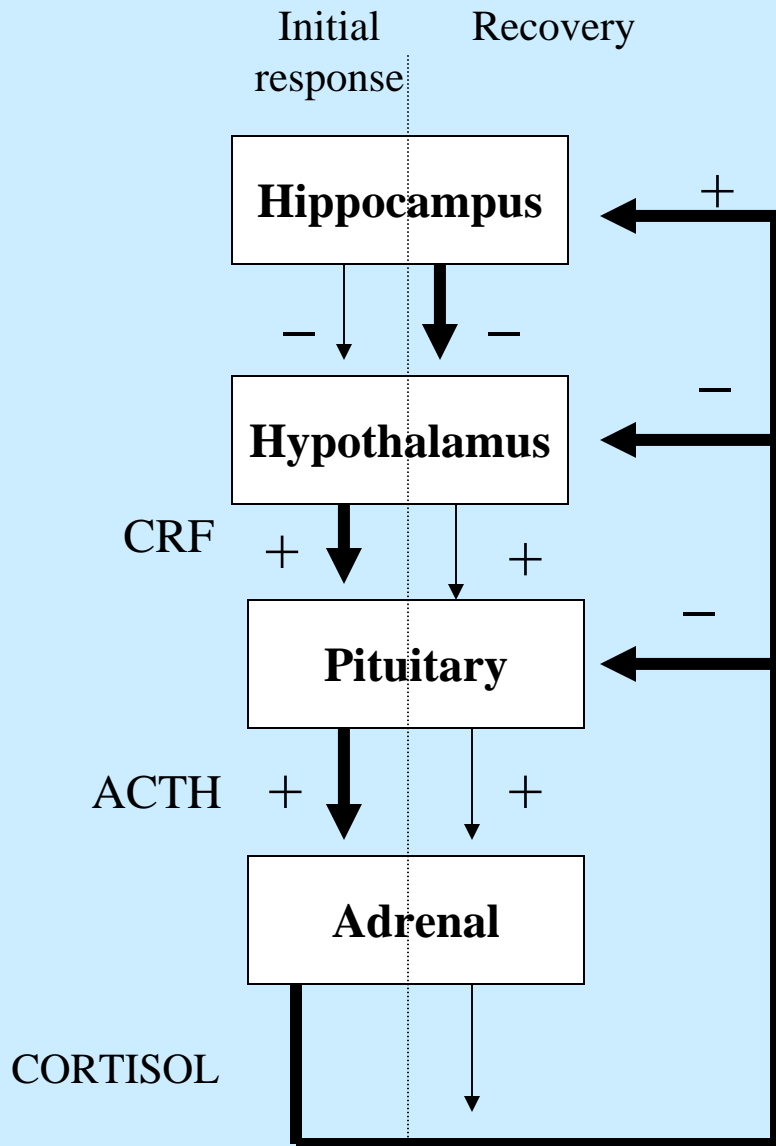


Hagberg, B. & Nordbeck, B. (2000). A psycho-physiological model for functional ageing differences. In P. Martin, C. Rott, B. Hagberg, K. Morgan (Eds.). *Autonomy versus dependence in the oldest old*. Paris: Serdi Edition.

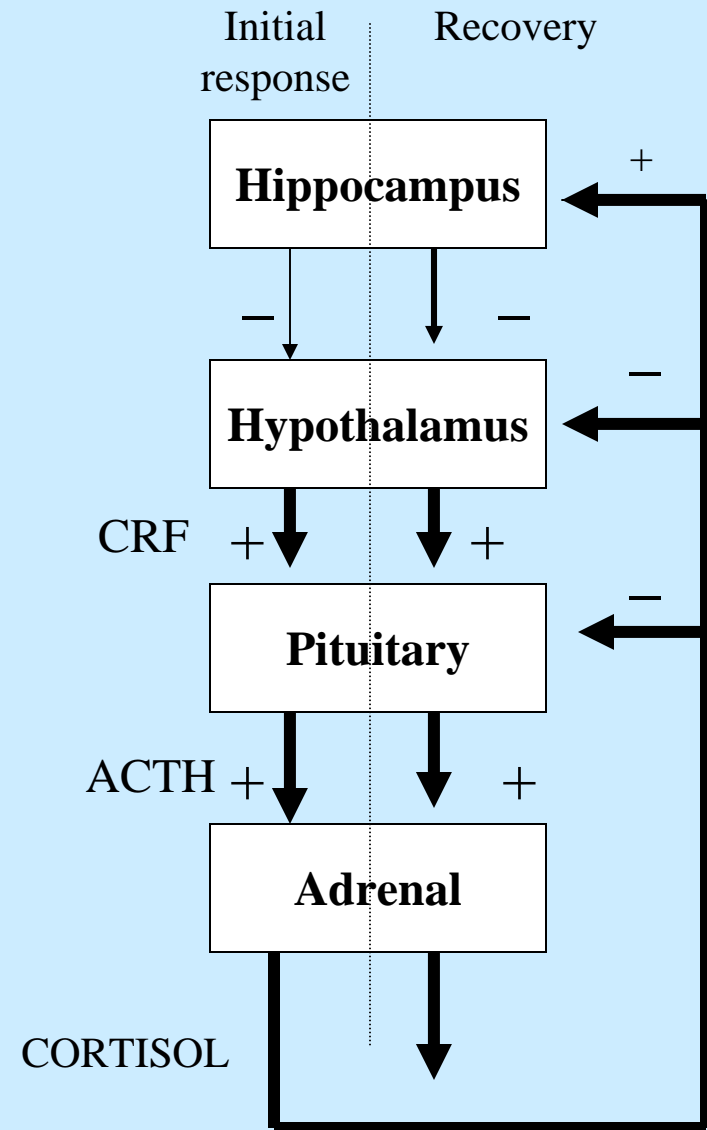
Functional aging – a working model



RESILIENT SYSTEM



NON RESILIENT SYSTEM



ÅLD RAND E T
i Blekinge



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Conclusions

An elaboration of the old wear and tear theory can show some of the mechanisms that helps us understand why people age differently.

Lifelong mismanagement of stress in all forms as well as an over-adaptive behaviour seems to take its toll on the body when considered in a lifetime perspective and promote a premature aging.

Being human has both advantages of an almost infinite capacity to adapt but an adaptation that can be very costly.



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Conclusions

- The difference between us and the animal if we for a moment return to my salmon is that we as humans have a choice which the salmon don't.
- Our choice is very much anchored in the personality characteristics that we develop during a life span.
- At the end of life it will show in the way we age.

