

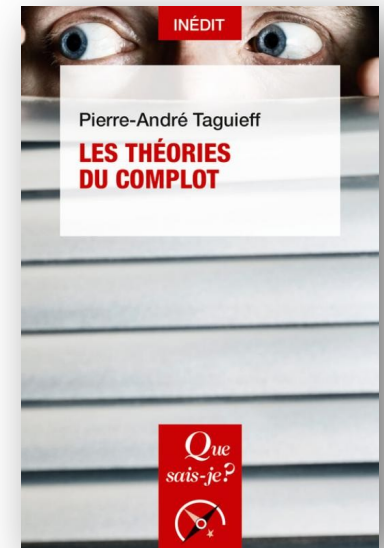
BIAIS & CERVEAU

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BIAIS & ERREURS

- Un biais n'est pas une erreur (à tous les coups)
- Biais : propriété du traitement de l'information dans le cerveau (programmé / acquis)
- Efficacité +++



Auditory Neuroscience: The Salience of Looming Sounds

Deborah A. Hall and David R. Moore

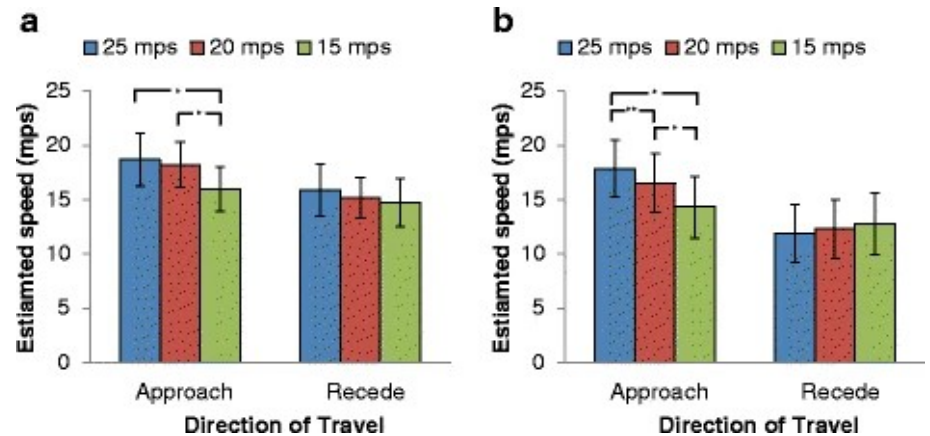
Sounds that move towards us have a greater biological salience than those that move away. Recent studies in human and non-human primates have demonstrated a perceptual and behavioural priority for such looming sounds that is also reflected in an asymmetric pattern of cortical activation.



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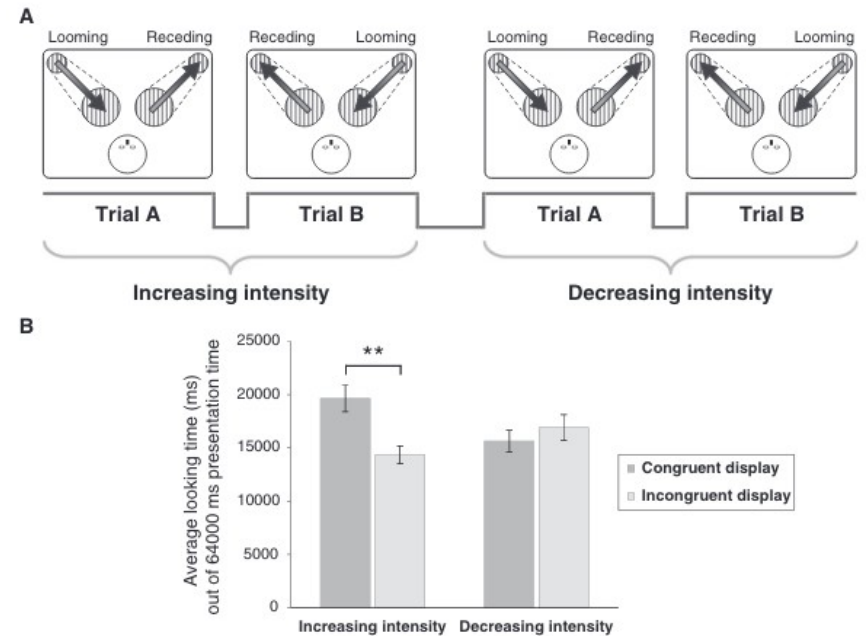
Neuhoff, J.G. Looming sounds are perceived as faster than receding sounds. *Cogn. Research* 1, 15 (2016).

<https://doi.org/10.1186/s41235-016-0017-4>

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Giulia Orioli, Andrew J. Bremner, Teresa Farroni. Multisensory perception of looming and receding objects in human newborns. *Cur Biol* Volume 28, Issue 22, 19 November 2018, Pages R1294-R1295

Table 41.2
A Selection of Adaptive Biases

Category and Domain	False Positive (FP)	Costs of FP	False Negative (FN)	Costs of FN	Result
<i>Protective: Approaching Sounds</i>	Ready too early	Low	Struck by source	High	Bias toward underestimating time to arrival
<i>Protective: Foods</i>	Reject a food type that is in fact safe	Low	Ingest toxin or pathogen	High	Bias toward acquiring permanent aversion on the basis of one piece of evidence of toxicity
<i>Protective: Diseased persons</i>	Avoid noninfectious person	Usually low	Become infected	Often very high	Tendency to avoid persons with physical afflictions, even if noninfectious
<i>Protective: Physically threatening persons</i>	Avoid altercation with safe person	Usually low	Suffer physical injury	Often high	Tendency to overestimate physical formidability of potentially threatening persons
<i>Social: Men's inference of female sexual interest</i>	Inferring sexual interest where there is none	Rejection—relatively low	Inferring no interest when there is interest	Missed reproductive opportunity—high	Sexual overperception by men
<i>Social: Women's inference of commitment</i>	Inferring interest to commit where there is none	Desertion—high	Inferring unwillingness to commit where there is willingness	Delayed start to reproduction—relatively low	Underperception of commitment by women
<i>Social: Social exchange</i>	Attempt to free-ride and get caught	Potential ostracism, especially in collectivist social situations—high	Cooperate when one could free-ride	Give up a unnecessary benefit in exchange—relatively low	Bias toward cooperation
<i>Self and Future: Beliefs about future achievements</i>	Believe you can achieve things when you cannot	Low (if costs of failure are low)	Believe you cannot achieve things when, in fact, you could	High (if benefit of success is high)	Optimistic bias (where benefits of success exceed costs of failure); overconfidence bias

Le cerveau, expert des régularités

Bleu

Vert

Jaune

Bleu

Rouge

Le cerveau, expert des régularités

Bleu

Vert

Jaune

Bleu

Rouge

Le cerveau, expert des régularités



Le cerveau, sensible aux irrégularités



Le cerveau, sensible aux irrégularités

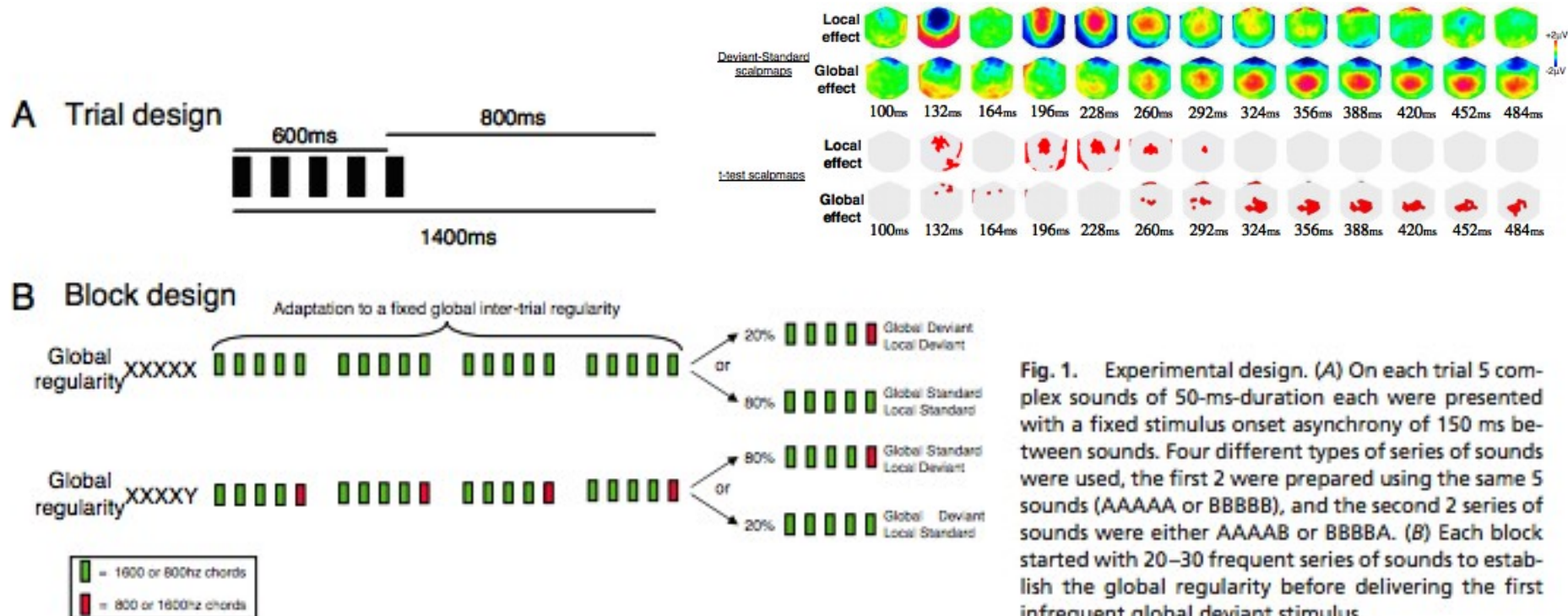


Fig. 1. Experimental design. (A) On each trial 5 complex sounds of 50-ms-duration each were presented with a fixed stimulus onset asynchrony of 150 ms between sounds. Four different types of series of sounds were used, the first 2 were prepared using the same 5 sounds (AAAAA or BBBBBB), and the second 2 series of sounds were either AAAAB or BBBBA. (B) Each block started with 20–30 frequent series of sounds to establish the global regularity before delivering the first infrequent global deviant stimulus.