Informations Croyances Prédictions

Ecole d'été *Ecole douteuse* – 14-18 Juillet 2025

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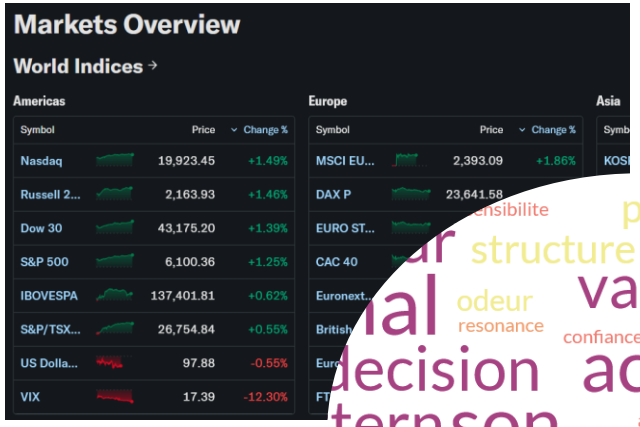
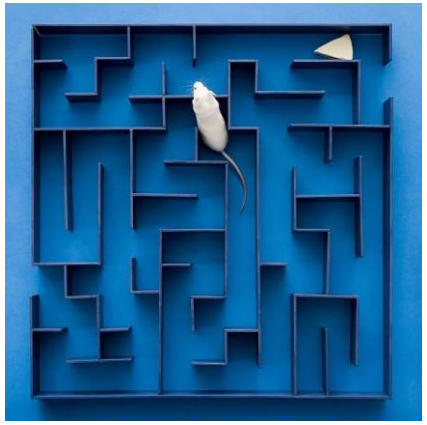
Valentin Guigon

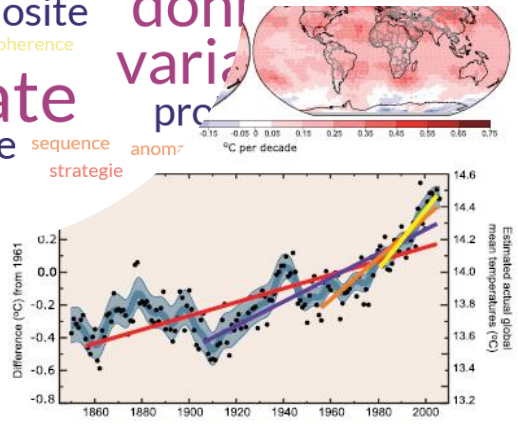
I. Informations

Comment perçoit-on le monde

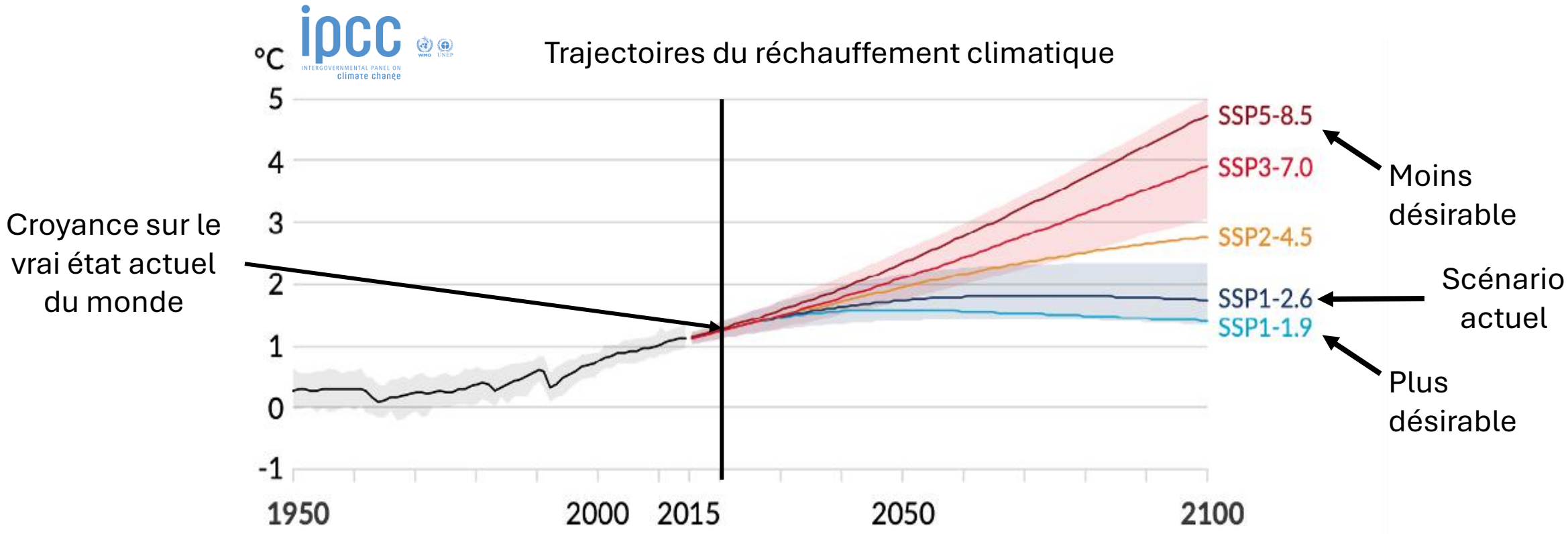
Qu’est ce qu’une information ?







La pertinence d'une information est déterminée par sa valeur



La valeur d'une information est liée à sa capacité à diminuer l'incertitude sur les contingences du monde

(Friston et al., 2015. *Cognitive Neuroscience*; Charpentier et al., 2018. *PNAS*; Shalvi et al., 2019)

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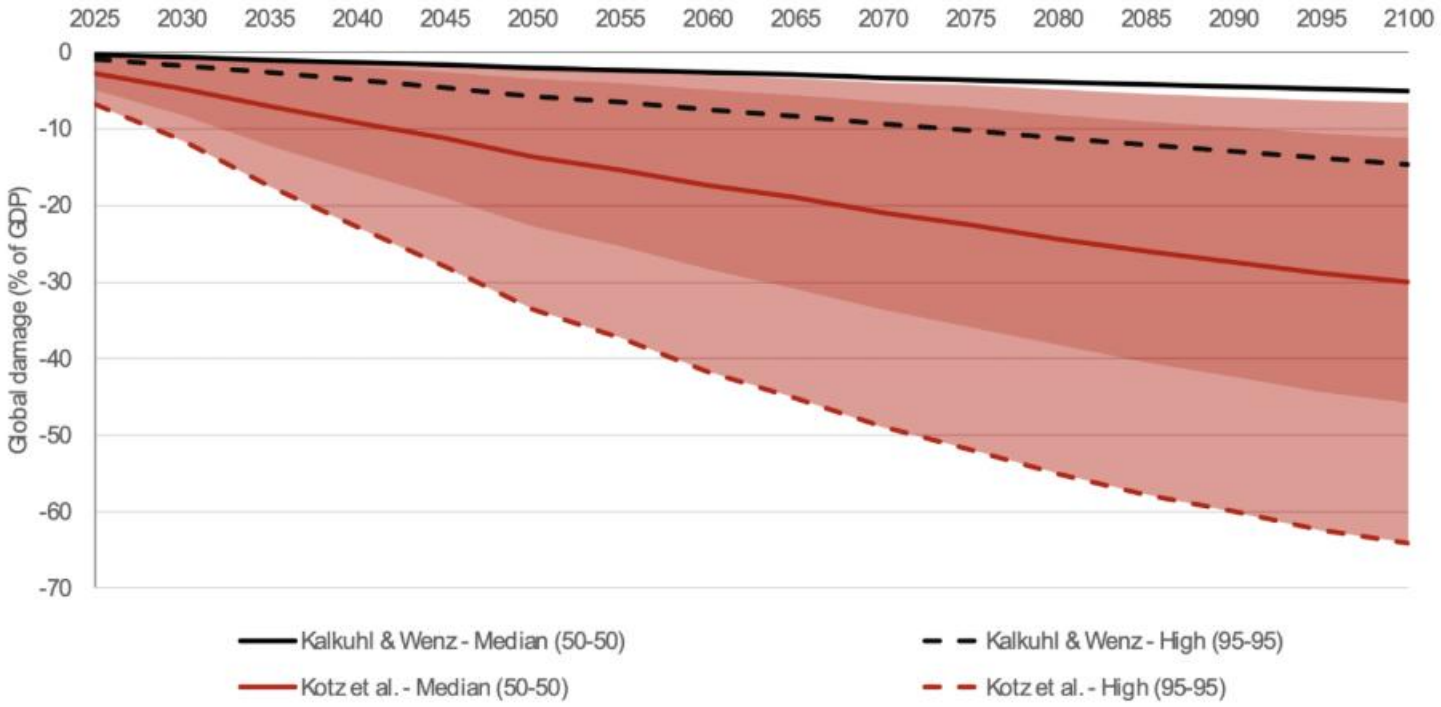
Figure 2 Global GDP losses due to climate change (NGFS Current Policies scenario)

VOX EU CEPR

Scénario à >2.5°C



THE GLOBE AND MAIL

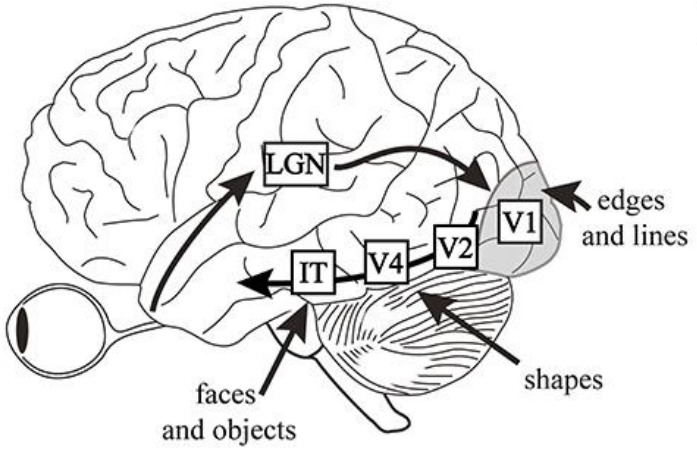
Climate change will knock one-third off world economy, study shows

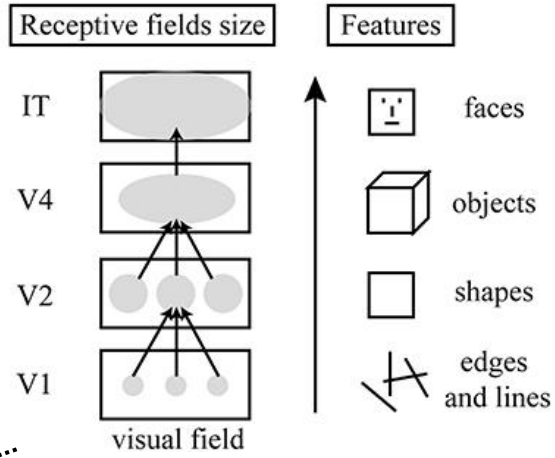
La valeur d'une information est liée à sa capacité à diminuer l'incertitude sur les contingences du monde

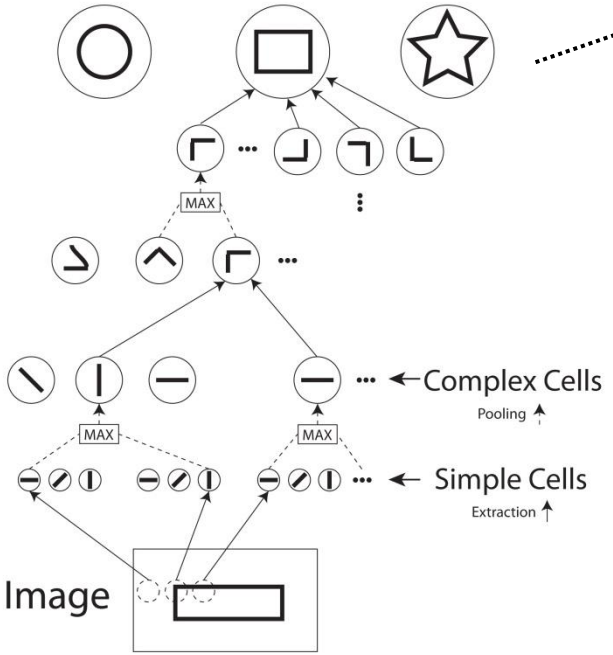
(Friston et al., 2015. *Cognitive Neuroscience*; Charpentier et al., 2018. *PNAS*; Shalvi et al., 2019)

Comment traite-t-on les infos. de plus bas niveau?

Herzog, Clarke, 2014. *Front. Comput. Neurosci*







de Ladurantaye, Rouat & Vanden-Abeele, 2012. *Visual Cortex: Current Status and Perspectives*

Précision du traitement d'informations de bas-niveau: motricité

- Interagir avec un objet en mouvement nécessite de **suivre sa trajectoire** et **prédire sa position future**
  (surtout, contraintes sensorimotrices, ex.: 200ms entre perception et mouvement)

- Les objets du quotidien n'ont **pas toujours une vitesse constante**,
  Ce qui rend la **prédiction** de mouvements dynamiques (accélérés) essentiel au quotidien
  (Zhao et Warren, 2015 ; Fiehler et al., 2019)

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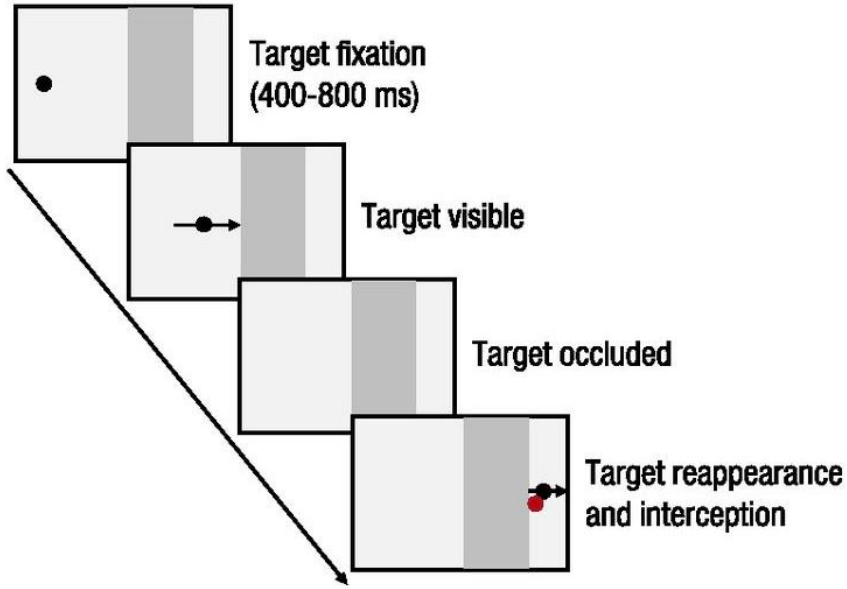


Kreyenmeier et al., 2022. *eNeuro*

- Les **yeux suivent correctement** les objets accélérés (mise à jour continue de la vitesse)
- Mais **les mains interceptent en ignorant l'accélération** → erreurs systématiques (trop tôt ou trop tard)

Précision du traitement d'informations de bas-niveau: évaluation

L'œil humain **suit finement** les **variations** de vitesse d'un objet …

Mais une poursuite oculaire précise ne garantit pas des rapports verbaux corrects.
(Tavassoli et Ringach, 2010. *Current Biology*)

Le traitement sensoriel brut ne suffit pas à produire une **perception consciente cohérente**:

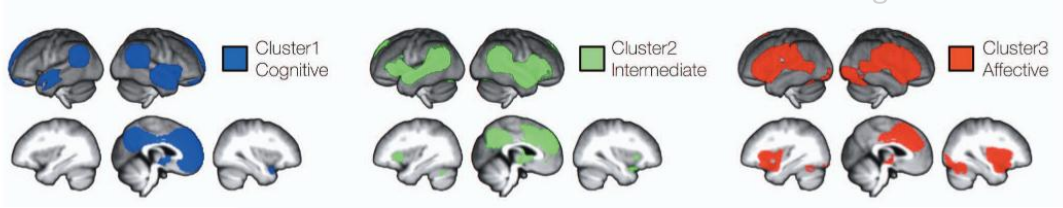
- Les **mouvements oculaires** exploitent des **signaux visuels rapides et fidèles**
- La **motricité** repose sur ces signaux, mais reste **physiquement contrainte**
- La **perception consciente** mobilise des **traitements supplémentaires** (intentions, attentes, apprentissages)

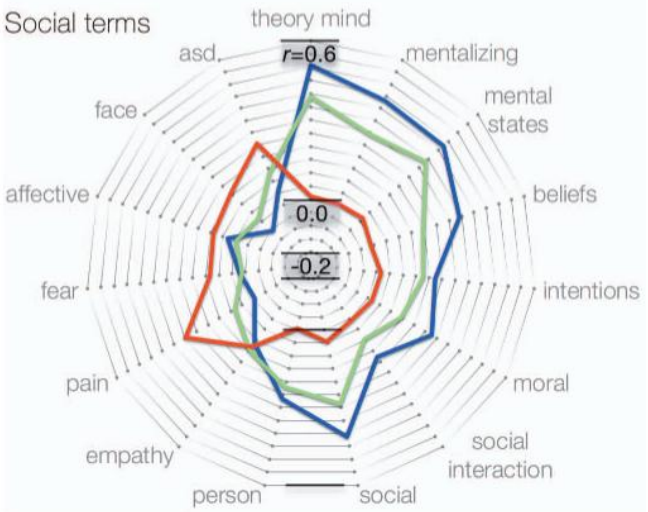
Comme si le cerveau **produisait deux lectures divergentes** d'un même stimulus
(Two-streams hypothesis: Milner et Goodale, 1992, 2008)

- Vision-action: le **système oculomoteur** s'appuie sur des signaux visuels fiables mais reste soumis a des contraintes motrices
(ex. : délais, imprécisions anticipatives)
- Vision-perception: La **perception consciente** combine ces signaux visuels avec des traitements cognitifs de haut niveau

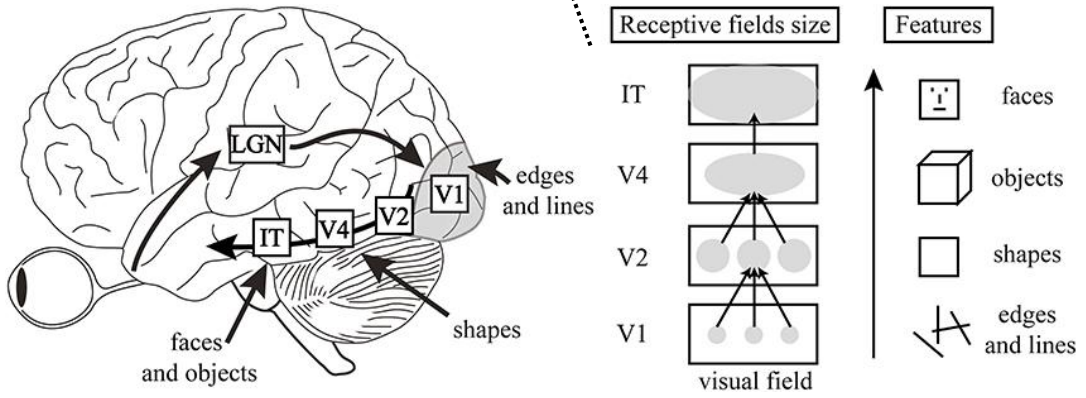
Informations sociales

Schurz et al., 2021. *Psychological Bulletin*



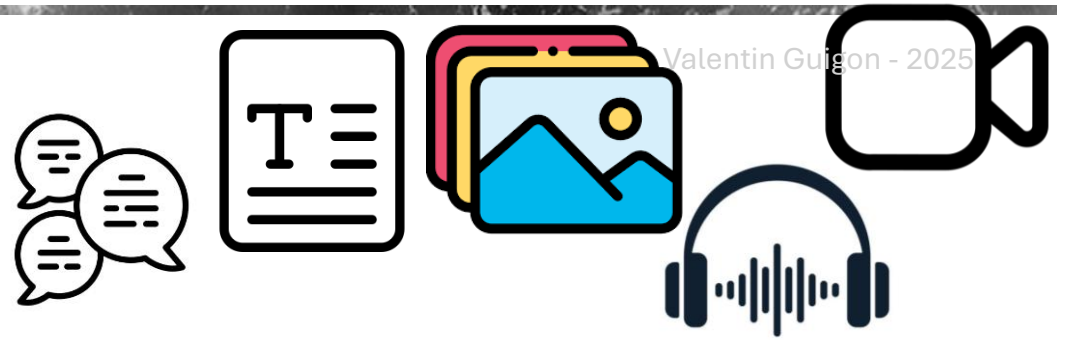


1. Perception visuelle de bas niveau
2. Extrait des composantes sociales
3. Processus cognitifs de haut niveau



Herzog, Clarke, 2014. *Front. Comput. Neurosci*

Informations médiatisées



Base sensorielle et sociale:

- ***Input -> Output*, transmis par des artefacts** (son, image, etc.)
- **Encode à travers des systèmes symboliques** (langage, graphismes, etc.)

Mobilise beaucoup de ressources:

- **Des connaissances préalables** (langue, culture, contexte, etc.)
- **Des processus cognitifs de haut-niveau:** (langage, mémoire, imagerie mentale, théorie de l'esprit, raisonnement, etc.)

Vise à construire un terrain d'entente

- **Accès indirect à des réalités spatialement et temporellement distantes** (passées, futures, lointaines, hypothétiques)
- Supporte coopération, institutions, normes

Introduit des altérations liées à l'*édition*:

Cadrage, ambiguïté sémantique, présentation, perte de contexte, manipulation, etc.

Des informations externes

Type d'information	Source initiale	Traitement	Contenu	Fonction principale	Vulnérabilités principales
Sensorielle	Signaux physiques (sons, lumières, etc.)	Traitement perceptif bas niveau	Brut	Représenter l'environnement immédiat	Bruit, incertitude physique, limitations sensorielles
Sociale	Signaux perçus émis par autrui	Inférence socio-cognitive	Intentions, normes, croyances …	Coordination, prédiction, évaluation sociale …	… + ambiguïté expressive, biais d'interpretation …
Médiatisée	Artefacts symboliques (textes, images…)	Interprétation symbolique/culturelle	Savoirs, récits, opinions …	Transmission à distance de l'information	… + manipulation, dépendance au contexte …

Attention: a) cette typologie n'engage que moi; b) cette typologie exclut les informations intéroceptives.

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