



Projet doctoral

**Coralie Réveillé**

Encadrement

Grégoire Bosselut (PhD-MCF)

Gérard Dray (PhD-PR-HDR)

Stéphane Perrey (PhD-PR-HDR)



- DEUG Biologie

**BIEN**

- DE psychomotricien [Rang 1]

**TRES BIEN**

- Licence Psychologie

**ASSEZ BIEN**



- Psychomotricienne

- Enseignement

- Publications / conférences



- Master 1 PsyCoach [Rang 3]

**BIEN**

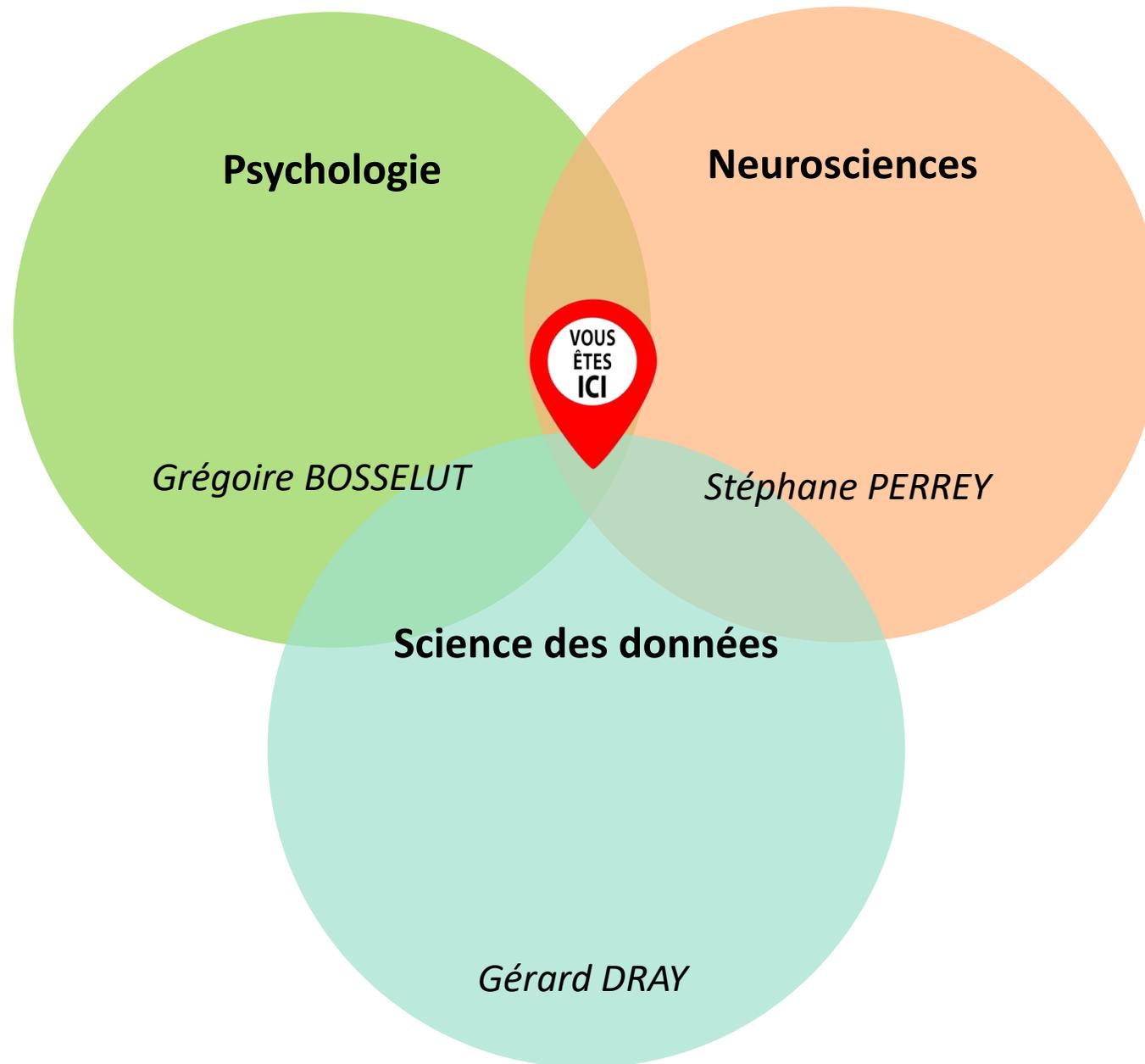
- Master 2 STM [Rang 3]

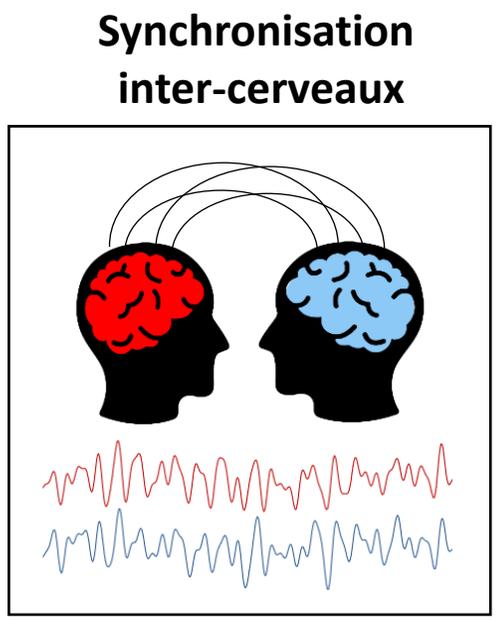
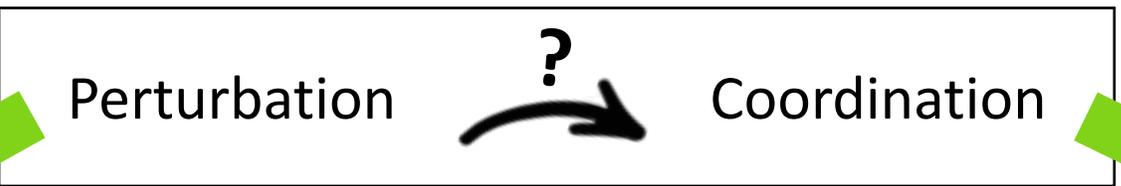
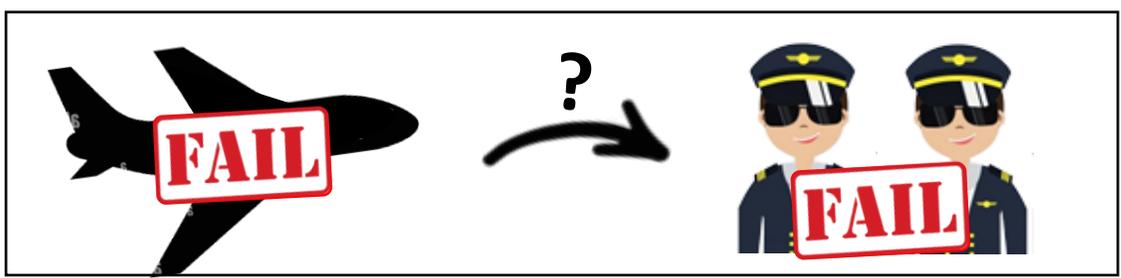
**TRES BIEN**



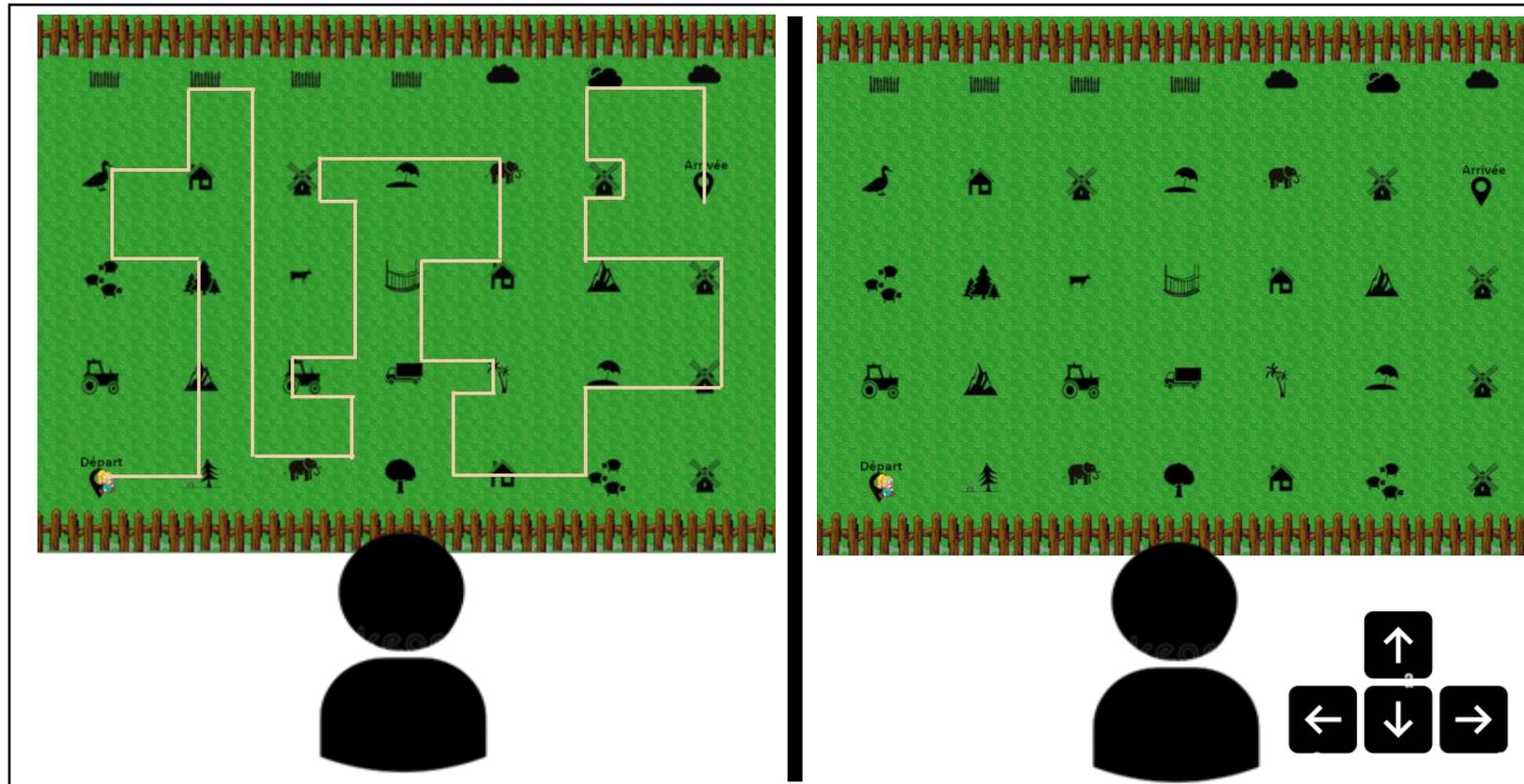
Stage de Master 2

**Effet d'une perturbation  
sur la coordination d'une dyade :  
étude en hyperscanning fNIRS**



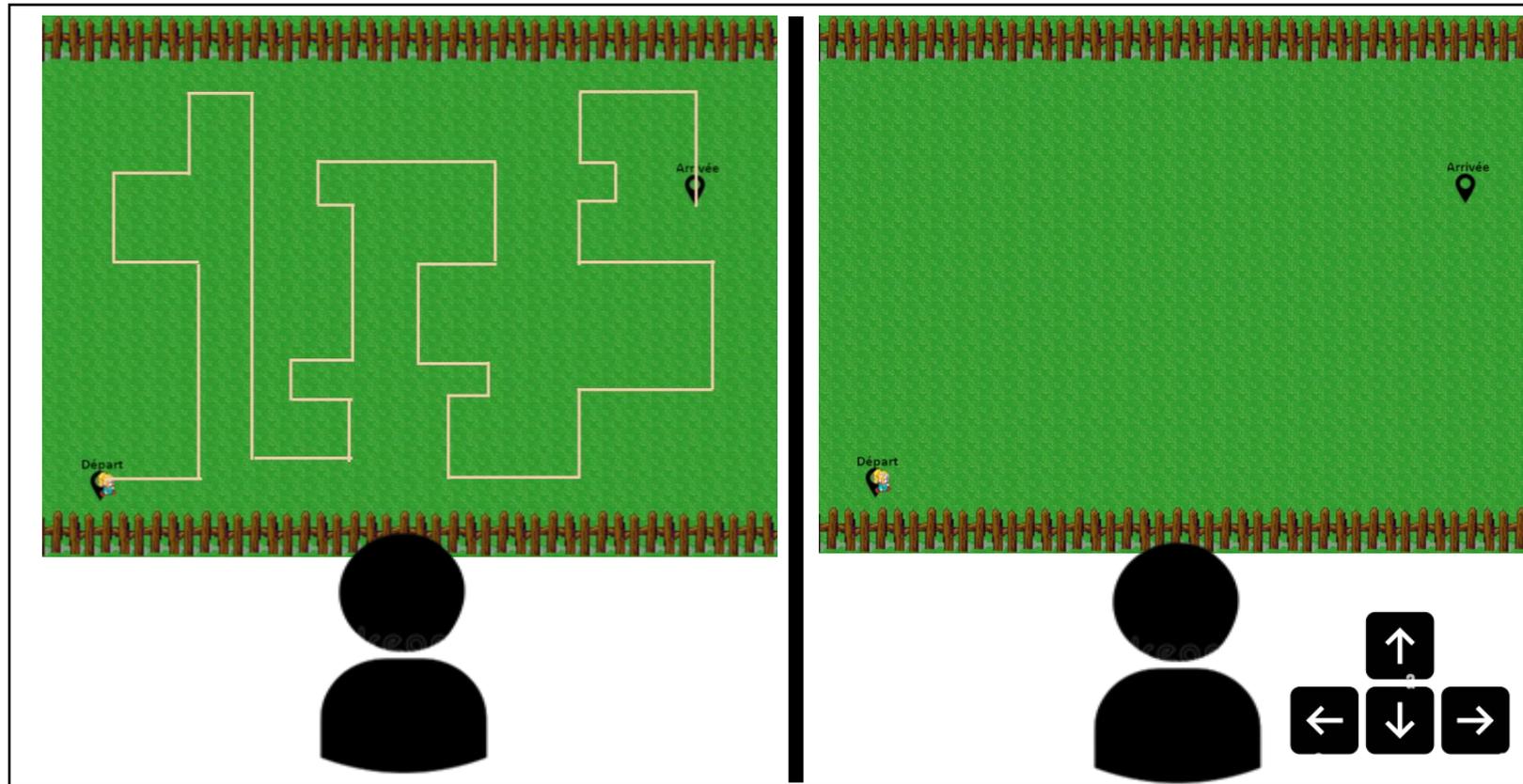


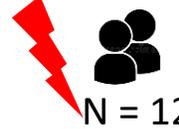
# Protocole



<p>Contrôle</p>  <p>N = 9</p>	<p>Expérimental</p>  <p>N = 12</p>
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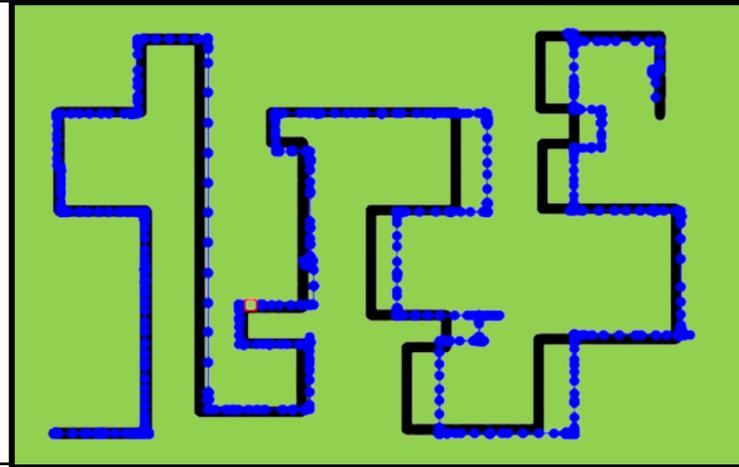
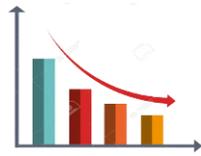
# Protocole



Contrôle	Expérimental
	
N = 9	N = 12

# Mesures

Performance



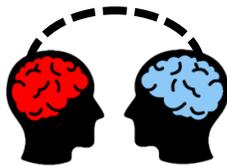
- Précision du tracé
- Distance / tracé de référence

**AVANT**

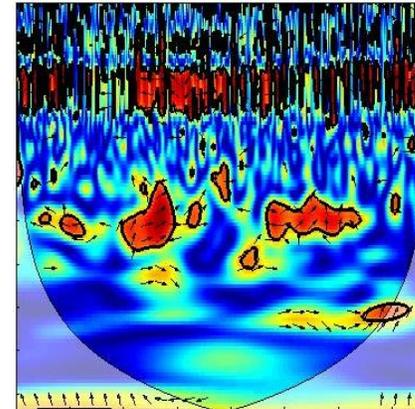
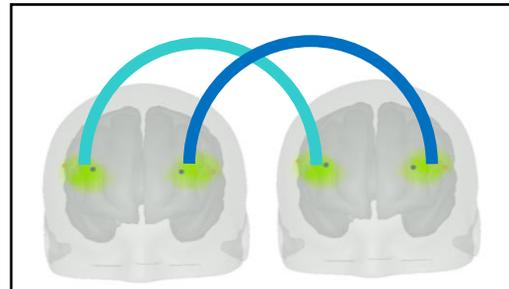


**APRES**

Synchronisation  
inter-cerveau



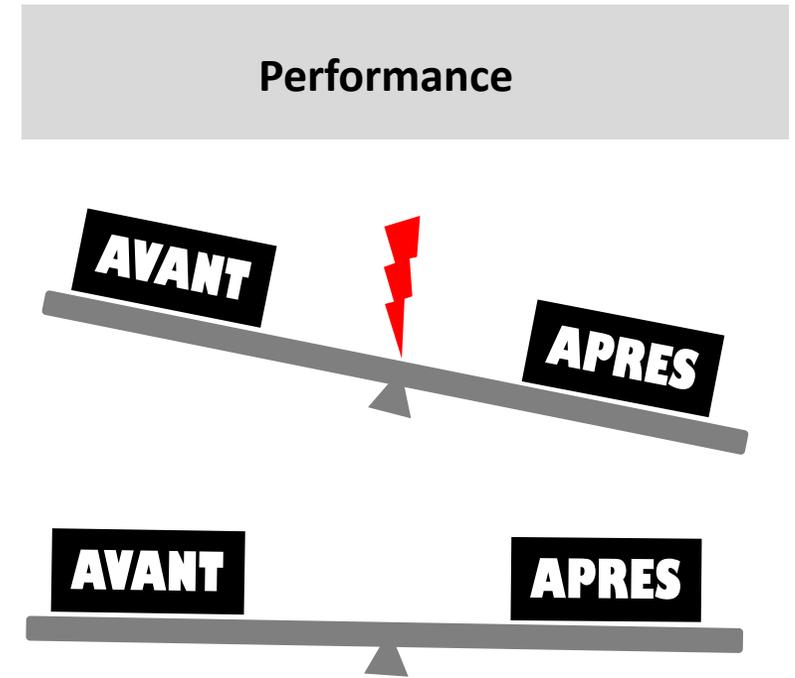
fNIRS



- Hyperscanning fNIRS
- Cortex préfrontal D et G
- 2 combinaisons
- Wavelet Transform Coherence

### 3 résultats

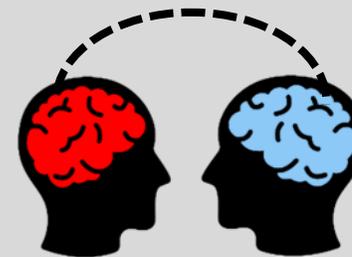
- Perturbation → baisse de performance ✓



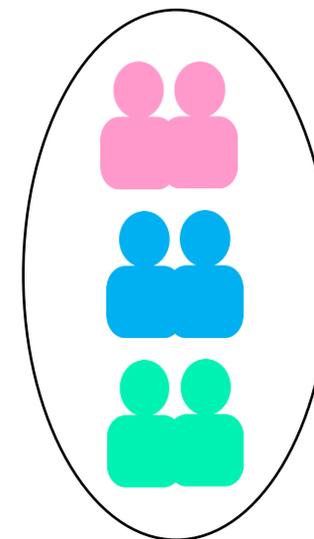
### 3 résultats

- Perturbation → baisse de performance ✓
- IBS dyades réelles >> IBS dyades reconstituées ✓

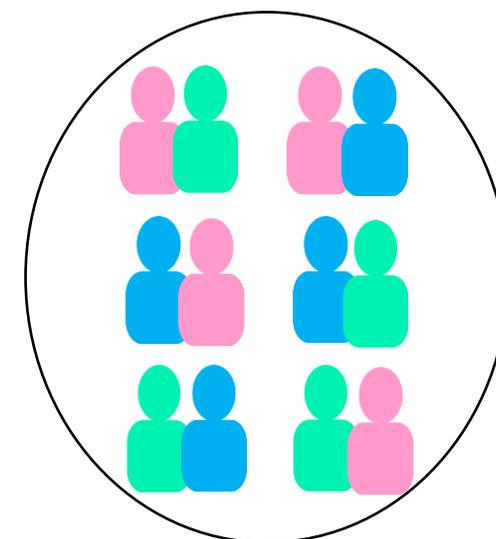
### Synchronisation inter-cerveaux



Dyades réelles



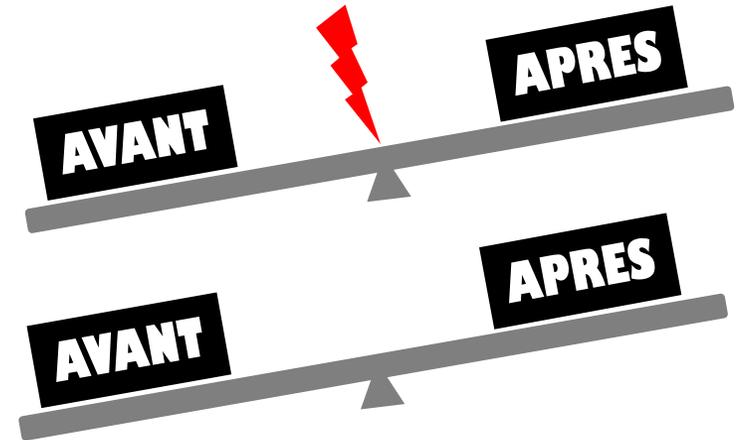
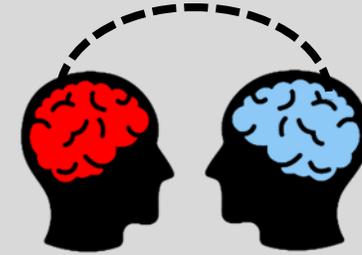
Dyades reconstituées



### 3 résultats

- Perturbation → baisse de performance ✓
- IBS dyades réelles >> IBS dyades reconstituées ✓
- Perturbation → changement d'IBS ✗

### Synchronisation inter-cerveaux



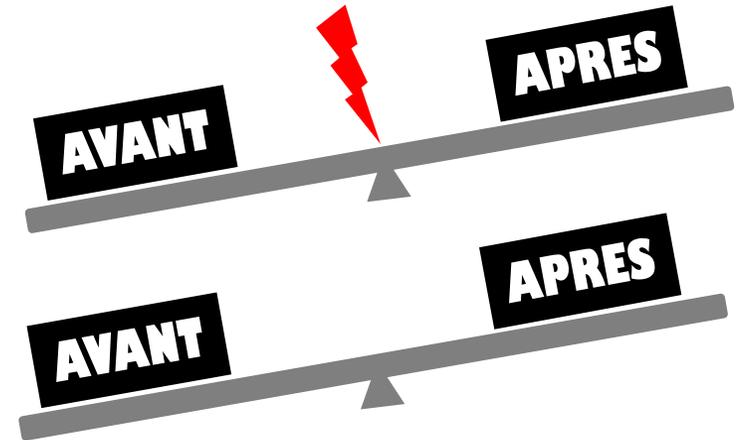
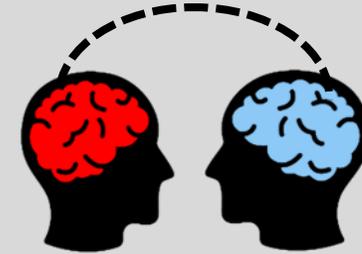
### 3 résultats

- Perturbation → baisse de performance ✓
- IBS dyades réelles >> IBS dyades reconstituées ✓
- Perturbation → changement d'IBS ✗

### 1 résultat inattendu

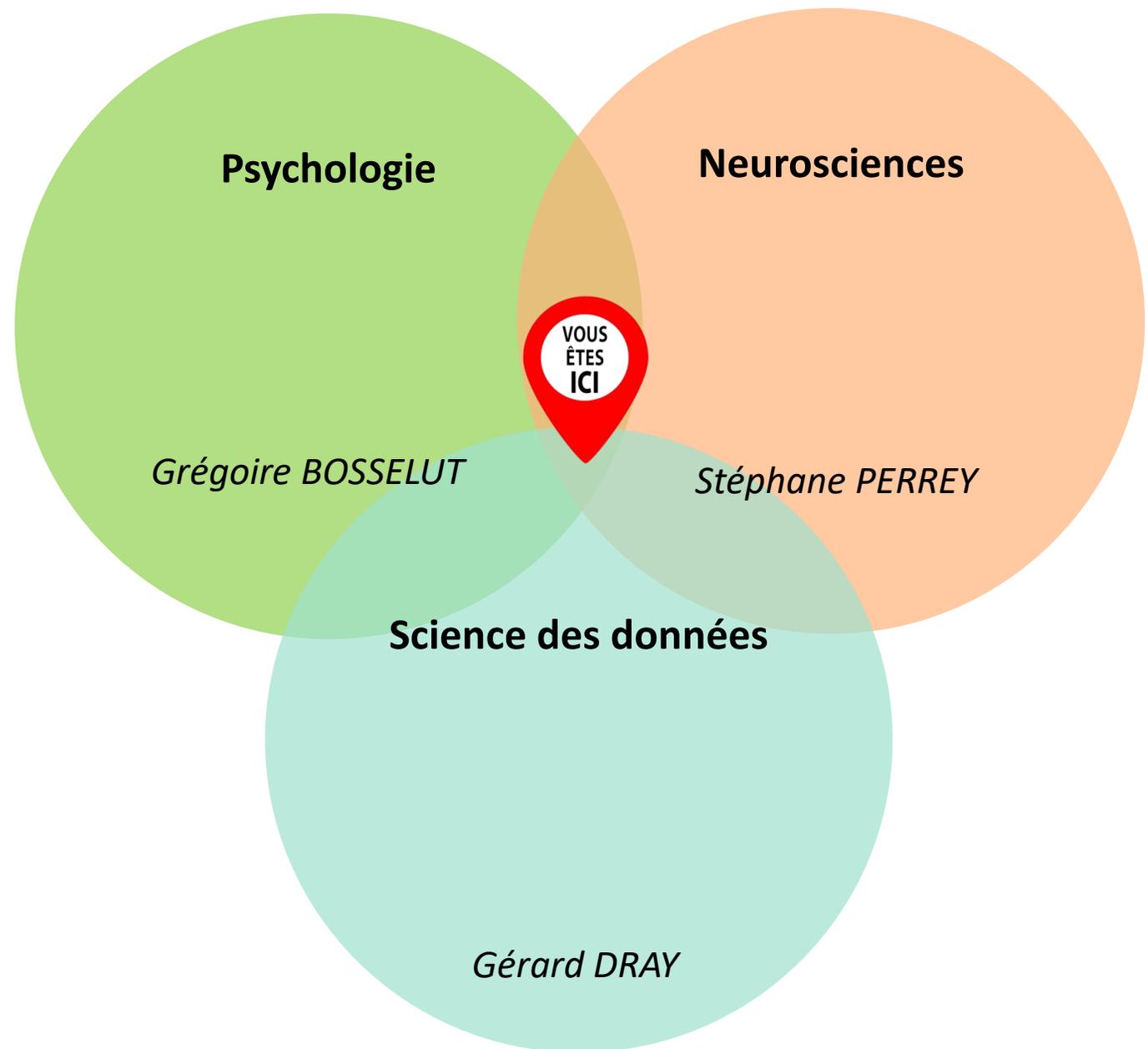
Augmentation de l'IBS au cours de la tâche

### Synchronisation inter-cerveaux



Projet doctoral

**Facteurs psychologiques de la performance collective :  
apports des neurosciences  
et de la science des données**

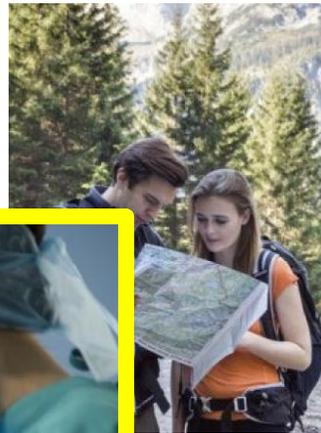




Equipe = 2 individus ou +

Travail en équipe : au quotidien

➔ Importance de la performance collective

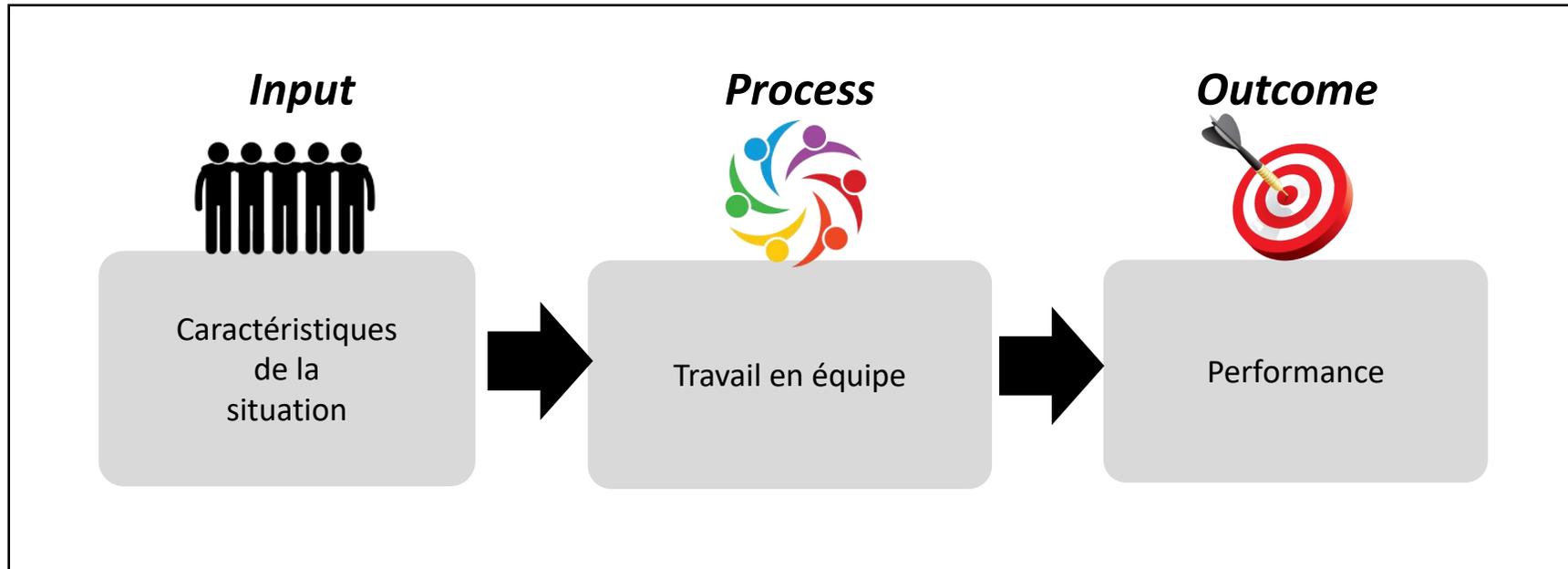


Equipe = 2 individus ou +

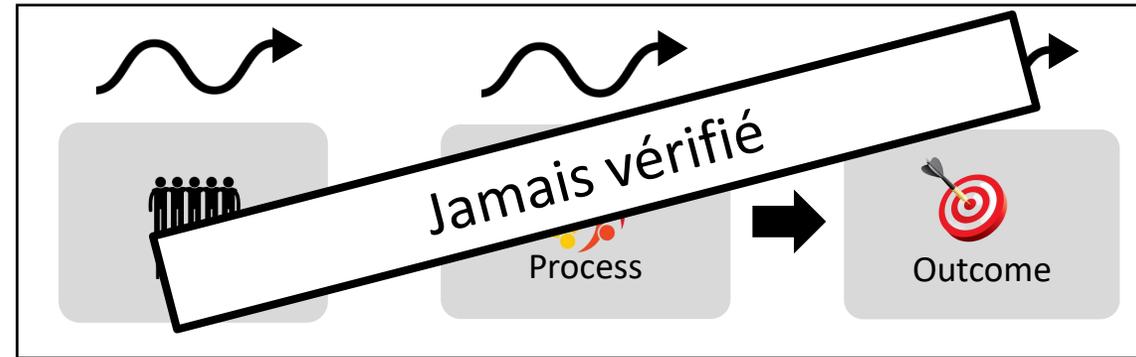
Travail en équipe : au quotidien

➔ Importance de la performance collective

## Modèle IPO de la performance collective



- Modèle de référence
- Importance du travail en équipe



### Théorie

- Consensus : équipe = dynamique
  - Situation évolue
  - Processus = émergent
  - Performance = continue
- Nécessité d'étudier « dans le temps »



### Méthodologie

- Approche transversale
- Mesure subjective
- Mesure unique
- Ne rend pas compte de la dynamique

1

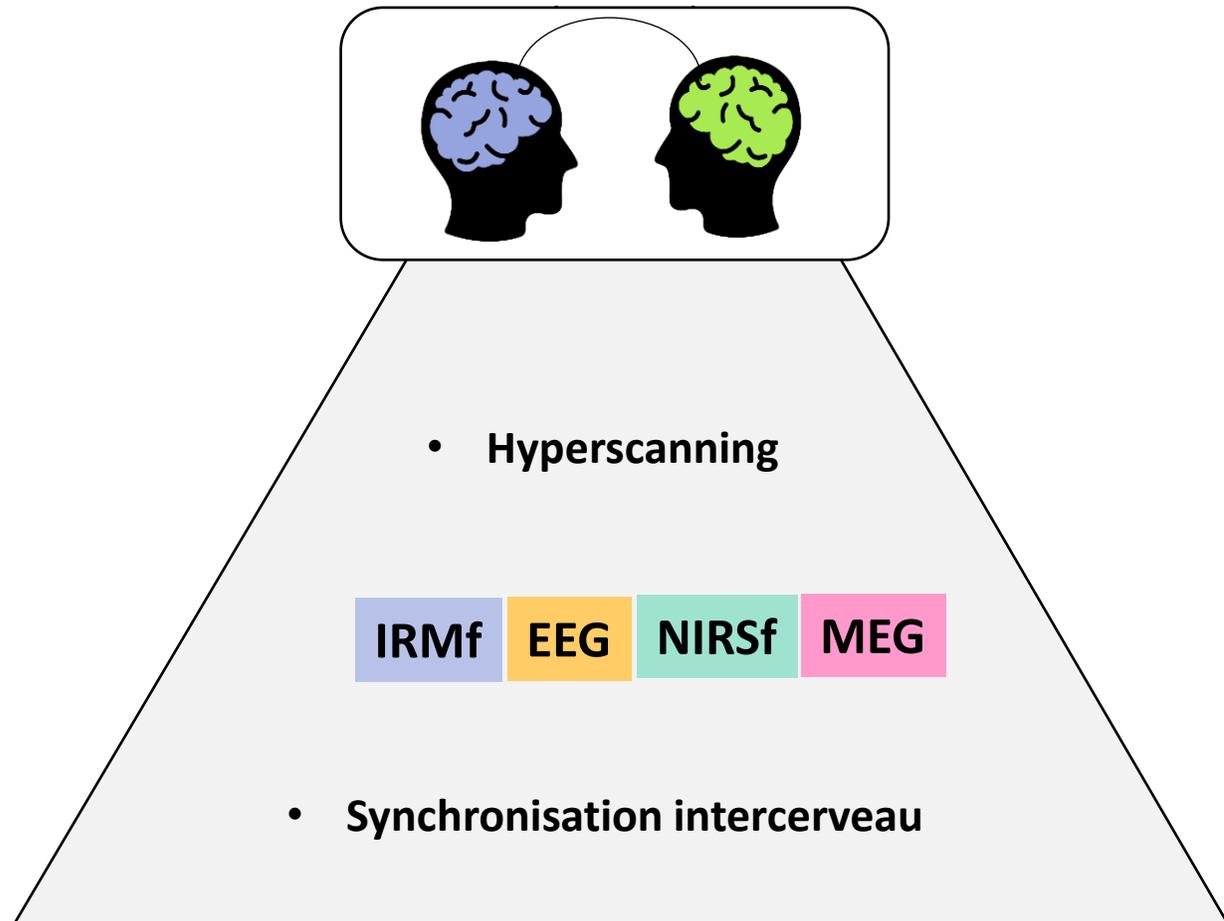


### Appels

Révolution méthodologique

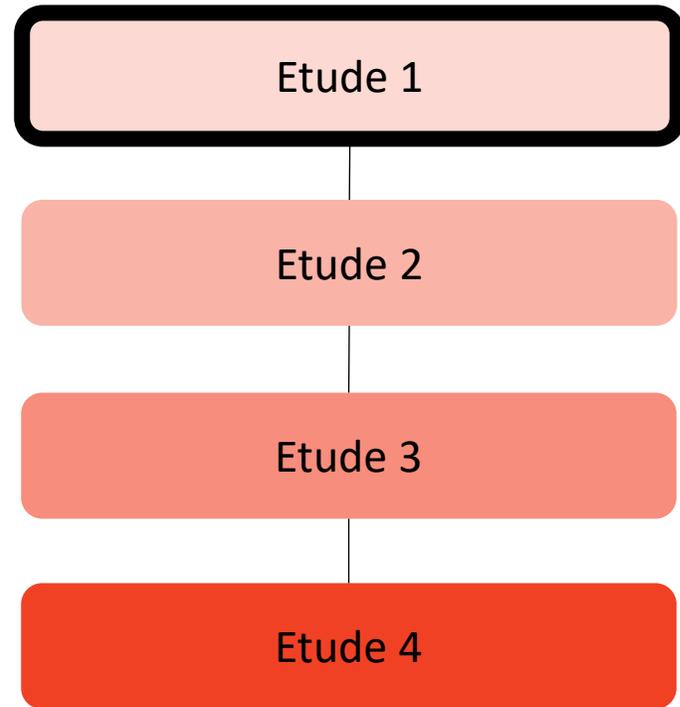
- « Capteurs d'interaction sociale »
- Approche longitudinale intensive
- Mesure objective





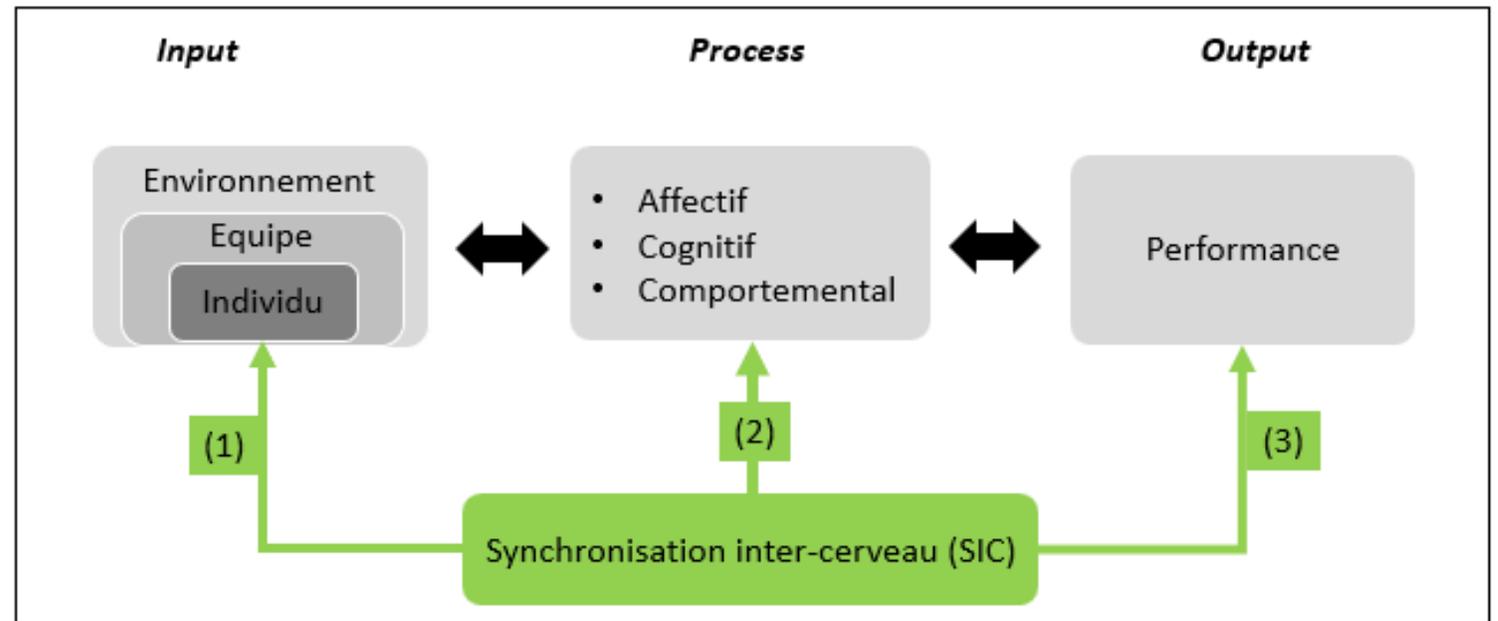
### Synchronisation inter-cerveau

- Reflète un processus d'équipe
- ➔ Permet de prédire la performance collective ?
- ➔ Tester le modèle IPO



## Revue systématique

Littérature hyperscanning



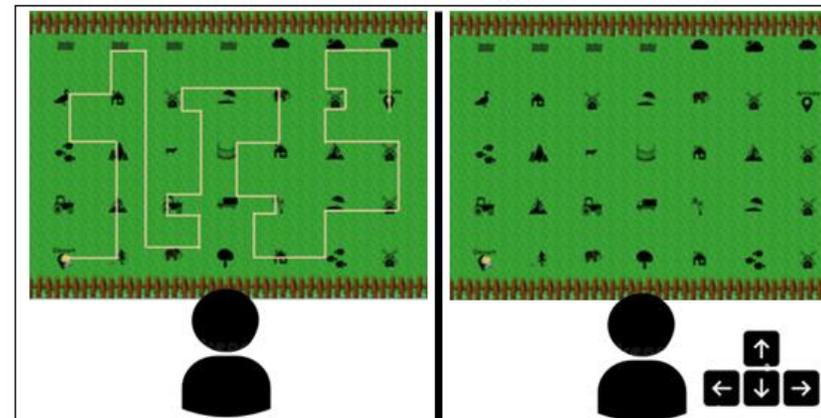
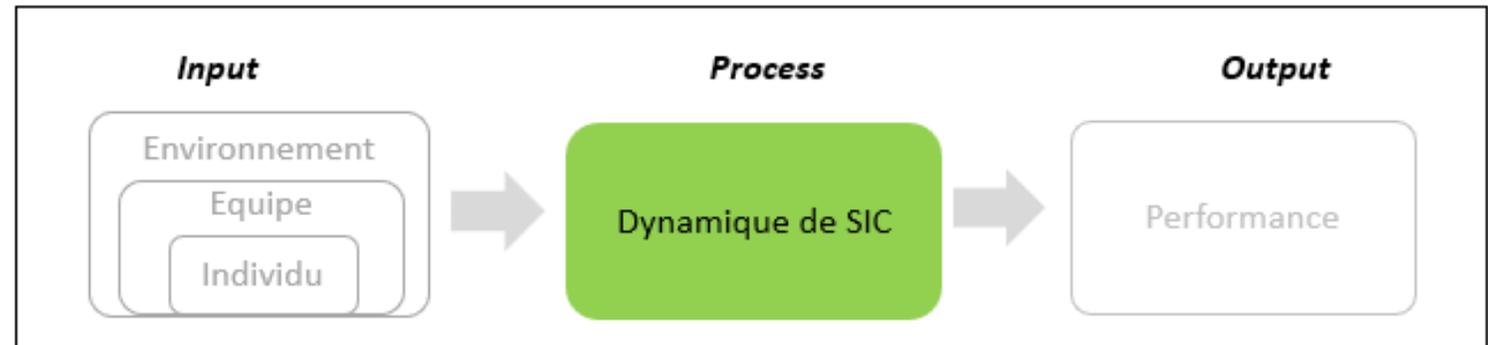
Etude 1

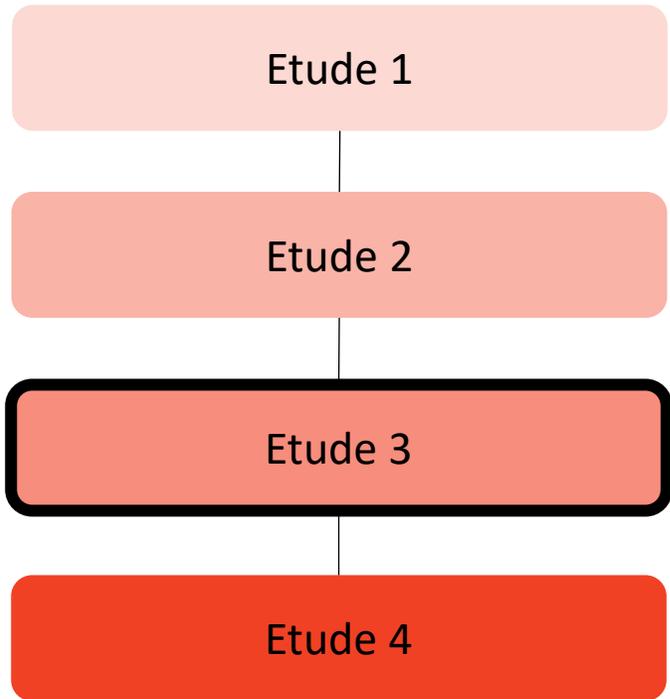
Etude 2

Etude 3

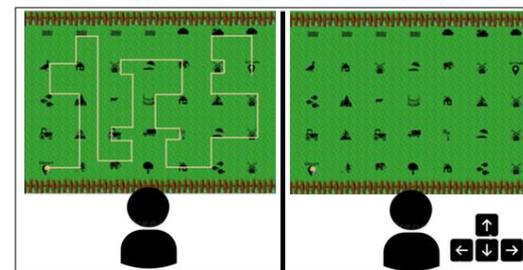
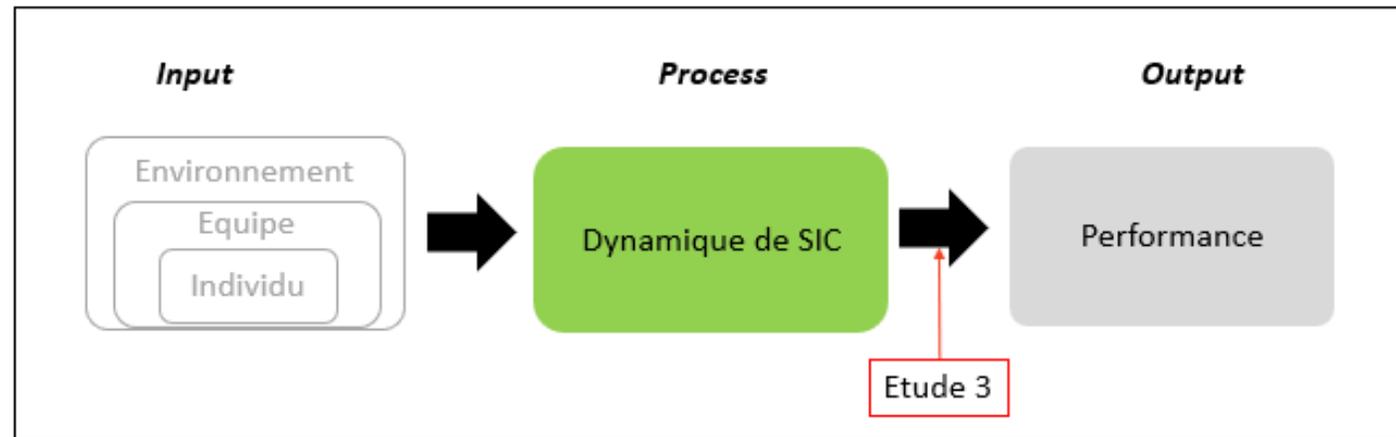
Etude 4

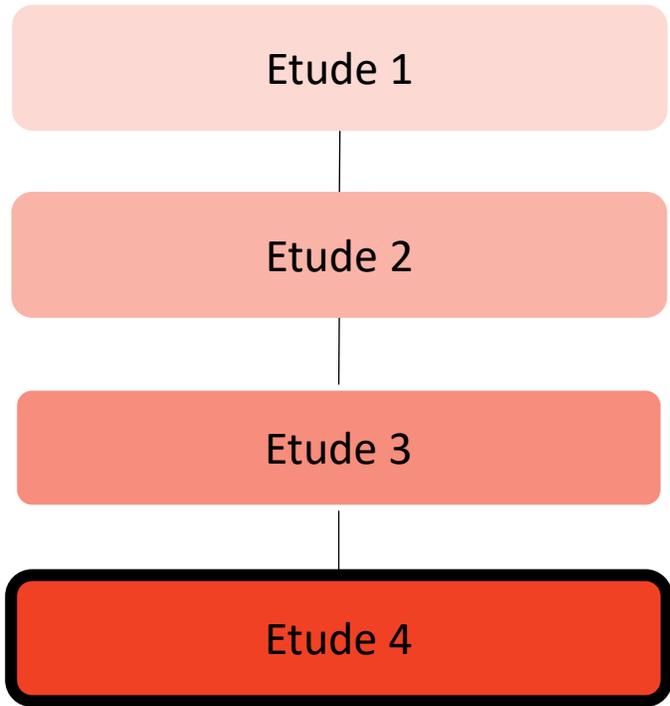
## Expérimentation



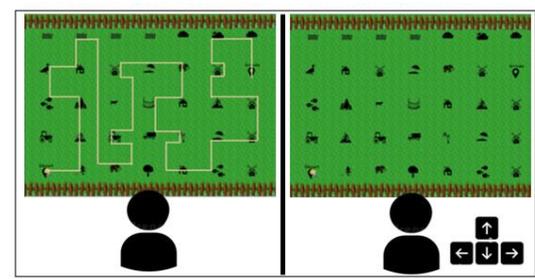
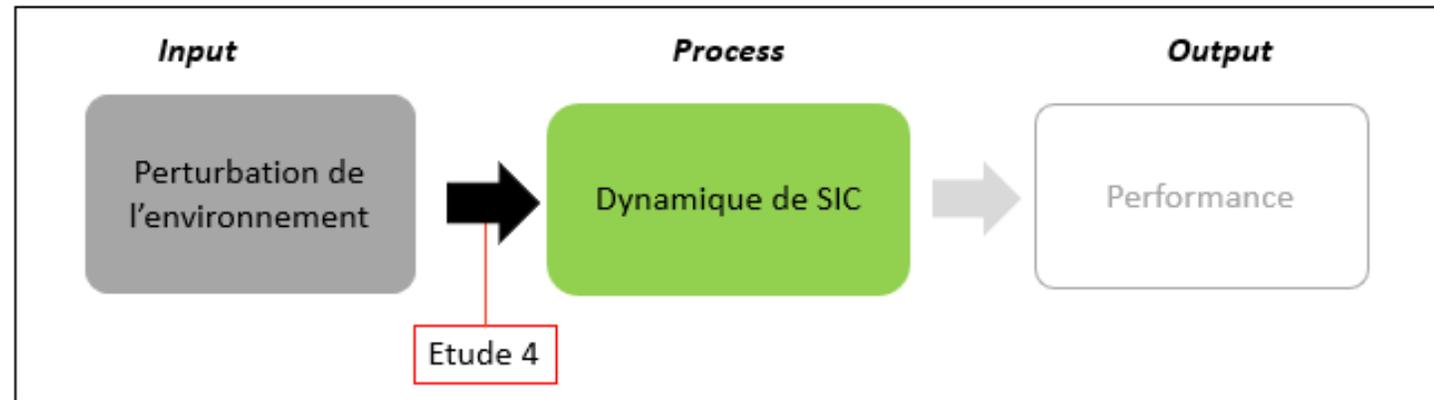


Expérimentation





Expérimentation







Merci pour votre attention

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Unité de Recherche  
EuroMov Digital Health in Motion