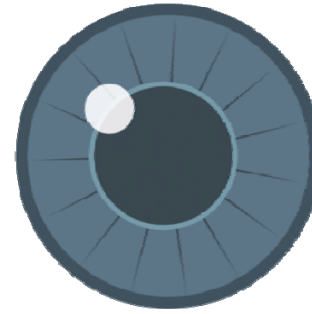




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*S'ouvrir aux mondes*



UNIVERSITÉ DE LA RÉUNION

**IRISSE**

INGÉNIERIE  
DE LA **SANTÉ**, DU **SPORT**  
ET DE **L'ENVIRONNEMENT**

***STUDY OF PRACTICAL REASONING IN REGIONAL  
AND NATIONAL LEVEL CLIMBERS DURING THE ASCENT  
OF AN UN KNOWN NATURAL BOULDER***

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Orianne/ 9 years old  
« Hatchling »: V11/ 8A (Rocklands)



## PROFESSIONALS PROBLEMS

I don't see all the reasons of action when i see my students

How to train my students to build methods before, during and after their try on a boulder problem.

How experts climbers describe and justify their actions and goals before, during and after their performance.

# Theoretical framework

## Culturalist anthropology

-The Wittgensteinian concept of “rules” to describe the signification of human activity during work.

“There is no think without language”  
(Vygotski’s thesis)

The human actions are the result of a  
learning of cultural and community rules

# Theoretical framework

...sense and meaning of the facts and actions depends on the rules he learned through the Community of Practice (as Lave & Wenger, 1991).

...the rules then allow the description and judgment of actions performed.

...among climbers, practical reasoning are built by the actors on the basis of those rules, and allow them to justify their methods after

# Protocol

Four climbers : Their maximum performance on natural boulder varied from 7C + (V10)/ 8B (V13)

The climbers activity was studied on the work on natural boulder they did not know.



# DATA COLLECTION

Audio vidéo data



## DATA COLLECTION

**Verbalisation data:  
Self confrontation**





## Interview guide's goal

The rules he has followed during the action

*I did this / because i tried to get this goal »*

His perceptions and sensations

*“this crimp is painful for my finger... I feel tired...”*

The circumstances of each action

*“roc was wet... shoes were not precise...”*

## Interview guide's goal

The expectations and knowledges he has used

*Usually I love crimps like this... This arête is like a boulder that I did there..."*

The judgments on his action

*this attempt is a good one because... this method is better than the previous one because..."*

# Quantitative results

The four subjects made between 18 and 25 trials

They followed between 18 and 49 rules.

Two climbers managed to solve one or two problems.

# RESULTS AND DISCUSSION

The same rules for the same mistakes

The preoccupation like a guide to understand the climbing style

Different rules were followed in order to simplify the crux

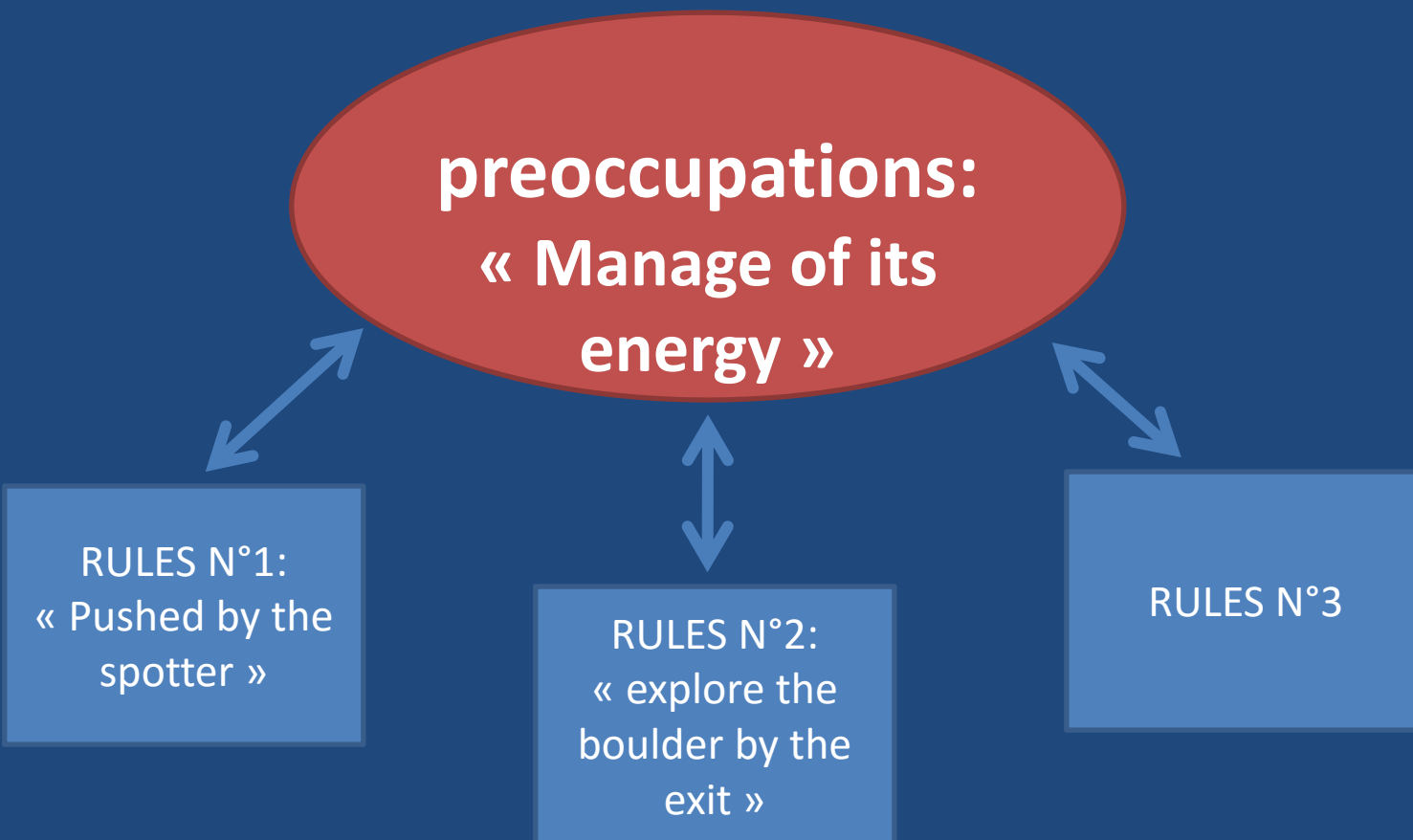
Some climbers prefer make decision during the action, others make decision before the action.

## The same rules for the same mistakes

Some similar expectations and judgments

This identical tracking of rules induce or justify  
the choice of methods in subjects.

# The preoccupation like a guide to understand the climbing style



Different rules were followed in order to  
simplify the crux

Thierry manage of its energy  
and physical integrity.

The help by the spotter.

Complete each movement separately to  
achieve the entire of the boulder.

The balanced energy investment between the  
crux and the rest of the problem.

Jean Michel tried to adapt the  
problem to his quality

He used almost exclusively micro-method  
fingers .

He avoided the holds that did not suit him  
(the slopers).



Tristan search a "perfect balance".

He avoids dynamic movements

A searching information and decision making during the ascent and not before the ascent.

He used micro-work feet

Greg want find the perfect line  
and not to hurt.

The exploration of the possible holds which  
had not been identified yet.

Test many possibilities of problems and  
methods.

## Two interests

Detailed description of the climbing subjects.

The modelling can become a prototype for the trainers.

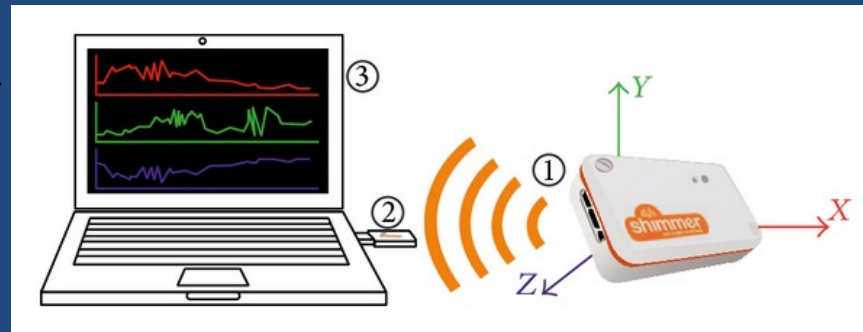
Testing a data collection method.

Figure:

The creation and use of different activity traces for use in formation of climbing trainers.

We use intrinsic traces (like video data) but also extrinsic activity traces which come from accelerometers placed on the student wrist and hip.

The coach is confronted with two types of activity traces.



# Thank you

