



REYKJAVÍK UNIVERSITY

# MODELING NON-VERBAL EXPRESSION OF DOMINANCE AND SUBMISSIVENESS IN VIRTUAL AGENTS

**A FORAY INTO IMPLEMENTING DOMINANT AND SUBMISSIVE ATTITUDES BETWEEN AGENTS IN THE VIRTUAL REYKJAVIK SOCIAL ENVIRONMENT.**

## DOMINANCE VS SUBMISSIVENESS

An agent predisposed towards dominance assumes expansive postures and tries to take up more physical space. In essence, a pose we would view as 'confident' or even 'relaxed'. A submissive agent does the opposite, preferring to keep his limbs closer to his body. Agents have a predefined disposition to either end of the spectrum. The model adheres to the FML standard, by having personality traits determine their predisposition, as well as in how to represent their attitude towards other agents.



## EFFECTS ON CONVERSATION

When a dominant agent requests a turn, the other agents are more willing to give him the turn. This means that the dominant agent gets to speak more overall.

## BODY LANGUAGE AWARENESS

The agents were made to be aware of each other's body language, in order to be able to determine what sort of body language they themselves should express. An agent with a dominant attitude towards another agent would pick dominant body language, and the other agent would respond by complementing it with submissive body language. This has been found to put people more at ease. Mimicking dominant body language might even be interpreted as aggressive.

## FUTURE

This project focused mainly on posture and limb positioning. Gaze and expressions are also part of nonverbal behaviour, and ought to be looked into as well. Roles are also something that needs modeling, for a hierarchy in relationships (e.g. boss and employee, mother and son). That would be so that their expression of dominance isn't solely determined by their personality traits, but also their societal role in the current context.

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