

## SI Text 1 – Instructions used in Study 1

The 5 attitudes were presented to the participants using the following textual definitions (translated from French), as well as illustrating pictures of various social situations (SI Figure 1). The pictures were also used as reminders during the recording of the interactions.

**Domineering** (French: dominant, agressif, directif): Someone with this attitude is certain of his superiority. He/she makes others feel that they have to follow or obey, and that they have no option but submitting. He/she does not hesitate to re-assert as strongly as needed, if others do not pay due respect.

**Conciliatory** (French: conciliant, faire un pas vers l'autre, accommodant): Even though he/she may be very different from their partner, or even disagree with them, someone with this attitude makes an effort to step in the other's direction, hoping that they in turn will come forward, and that a fruitful dialog will ensue.

**Disdainful** (French: Dédaigneux, indifférent, sans égard): Someone with this attitude wants to emphasize that he/she *is* different from their partner, and makes them feel that they do not really belong to the same universe. He/she makes their partner understand that he/she feels no obligation whatsoever towards them, sometimes even simply ignoring them altogether.

**Insolent** (French: insolent, effronté, impudent): Someone with this attitude wants their partner to understand that he/she has no respect for them, and believe their position is illegitimate. He/she attempts to undermine what their partner tries to do, by mocking or provoking them, without a second thought about what harmful consequence this attitude may end up having.

**Caring** (French: prévenant, être aux petits soins) : Someone with this attitude attends to their partner's every wishes and needs; often, he/she will even try to anticipate them. He/she aims to become transparent, while letting the other know they'll be catered and cared for no matter what.

## SI Text 2 – Instructions used in Study 5

To help participants judge the interactions using the two scales of affiliation and control, participants were given detailed explanations about the meaning of each dimension:

Affiliation: "The affiliation scale characterizes to which degree the left musician is warm or distant with the right musician. Use values on the right end of the scale if you think the left musician is warm, agreeable, including, caring and approving of the right musician. Use values on the left if you think the left musician is cold, hostile, excluding, unconsidering and disapproving of the right musician."

Control: "the control scale characterizes to which degree the left musician is dominant or dominated by the right musician. Use values on the right end of the scale if you think the left musician tries to control, dominate, lead or 'boss' the right musician. Use values on the left if you think the left musician is dominated, submitted, seeks approval or act as a subordinate to the right musician."

In addition, at the beginning of the experiment, they were shown a video extract of Sid Caesar and Nanette Fabray's 1950 pantomime "Argument to Beethoven's 5th," (SI Video 2). Snapshots of the video were also used as trailing examples to illustrate the instructions (SI Figure 2), and

participants were encouraged to think of the extracts ``as the soundtracks of a video similar to the one they were just shown'', judging the attitude of an hypothetical left-standing Caesar with respect to a right-standing Fabray.

### **SI Text 3 - Acoustical analysis of single-channel cues in the corpus.**

In addition to the dual-channel cues analysed in the main text, we examined what single-channel prosodic cues in the encoder's channel covaried with the types of social intent communicated in the corpus. We selected the n=64 successfully-decoded duets, and subjected them to acoustical analysis.

When expressed in speech, social intent is linked to prosodic patterns of amplitude, pitch and duration in the encoder's channel, e.g. longer and louder speech acts for assertive and domineering speakers. Similarly here, intent also covaried with prosodic cues in the encoder's musical channel: DOM and INS were associated with high signal energy (Root-mean-square (RMS);  $F(4,59)=12.58$ ,  $p=.000$ ) and high RMS variations ( $F(4,59)=12.3$ ,  $p=.000$ ), and DOM and DIS with long playing time ( $F(4,59)=3.02$ ,  $p=.02$ ). However, RMS cues did not discriminate between e.g. CAR and CON affiliatory behaviors, and there was no systematic attitudinal profile of either mean pitch or pitch variations.

**SI Figure 1:** Example of illustrating pictures for attitude "domineering". This panel was used (along with textual definitions) to explain task instructions to musicians participating in Study 1, and to participants in the four decoding tasks of Study 2. All photos copyright GettyImages.

**SI Figure 2:** Example of snapshots from SI Video 2 used to explain the social dimensions of affiliation and control to participants in Study 5 (here, illustrating high affiliation behaviours)

**SI Video 1:** Four representative interactions from Study 1. The complete corpus is available in audio format from <https://archive.org/details/socialmusic>

**SI Video 2:** Video extract of Sid Caesar and Nanette Fabray's 1950 pantomime "Argument to Beethoven's 5th," used to explain the task of evaluating social behaviours from music to the non-musician participants of Study 5. Video available from youtube.com, copyright unknown.