Contributions to a neurophysiology of meaning: The interpretation of written messages could be an automatic stimulus-reaction mechanism before becoming conscious processing of information.

Roberto Maffei*[1], Livia Selene Convertini[1], Sabrina Quatraro[1], Stefania Ressa[1], Annalisa Velasco[1]

[1] A.L.B.E.R.T. (ARPA-Firenze Landmarks on human Behaviour Experimental Research Team), Florence – Italy.

* E-mail: roberto@robertomaffei.it ; albert@arpafirenze.it

SUPPORTING INFORMATION

Supporting Information

Summary

SECTION 0 – *About method*

The naturalistic approach we chose presents several difficulties, given that human communication cannot actually be observed "from outside": it is part of us and we simultaneously belong to it; it is impossible to avoid interactions (as much as to say "interference") with the studied sample, even though limiting them to the data collection. However, for research purposes there is a solution: an external point of view can be simulated.

We designed such simulation starting from the consideration that a total exclusion of personal/relational factors is illusory, even with unknown persons, given that it is impossible to take under control their emotional involvement (their subjective reactions to the survey in itself and to the survey conductors, independently of any specific content). In such perspective, two problems had to be solved: the first was related to the specific matter about which the sample would be committed; the second was related to the survey modalities. To solve the first one, we have involved our sample members in a real world-like communication case, totally external to their relationship with the survey conductors. Following a precise sequence, through a specifically designed questionnaire, we have submitted to participants the exchanged messages and the questions about their interpretation.

About the second problem, we decided to try transforming the relational weak point in a strong one. We concluded that, in the end, the most effective condition could never be the illusory neutrality; rather, it could be the possibility to act in a stress-free condition, to read messages without time pressure, to let sensations and emotions emerge

and to report them without any fear. In other words: a friendly, familiar environment, with a known conductor (to de-potentiate the structural initial difficulties in human relationships); a shared programming of the survey date and hour (to get the maximum possible of comfort and relax); the possibility to answer free from any constrictions (for this we mainly used questions with opened answers); the certainty about anonymity and the non-evaluative purposes of the survey. At the same time, the consciousness of participating to a serious work and the guarantee (for the research's purposes) of mostly uniform survey modalities. As much as to say that our control on the survey mainly lied on the reliability and the homogeneity of the relational system, rather than on the (impossible) attempt to cut off the relational aspects from the survey.

PART I - Materials and Method

SECTION 1 – *The research guide-lines*

Object to be investigated: human communication, the process through which a receiver attributes meaning to a message (the interpretation process, the way he/she "understands" the incoming message).

Methodological approach: given that research on human communication (H.c. from now on) has provided, about interpretation, abundance of theoretical hypotheses along with still indefinite answers, it seems a good solution to re-start from a basic exploration, which means from the **phenomenology** of specific events in a given environment ("naturalistic" approach).

Action plan: (1) Submitting a real world-like case to the sample and requesting the solution of a concrete problem related to it; (2) Observing respondents' reactions through collecting their accounts; (3) Analyzing them. The case should be suitable to be fully documented for the sample and its investigation should require a satisfyingly short time.

On the basis of these premises, the GUIDE-LINES for our investigation are established as it follows:

- The research will be carried out through a qualitative and quantitative (statistics-based) research.
- The sample will be randomly composed by adult Italians, granted with High-school degree (or upper education levels) and regardless of their student or employed (any employment) condition.

- About education level, possible exceptions only for people whose literacy, joined with their life experience, allow them to understand without effort the case documentation[1].
- The sample will be challenged with an appropriately documented H.c. case and the individual reactions to it will be investigated through a questionnaire. The questionnaire will end posing a **concrete problem**, referred to the case, and requiring the respondent's solution.
- The case must be **quasi-real**, not a mere laboratory exercise. So, it will be based on real world cases, remaining as close as possible to reality at the same time avoiding any reference or hint to the original real situations. It will be a written communication case (to allow for a better control on the stimuli submitted to the participants), limited enough to be taken into account complete, unabridged and accomplished.
- The sample will collect about 100 individuals and the survey sessions must not exceed the 30 – 45 minute time range. The sessions may be attended individually or in groups, but the filling of the questionnaires will always be an individual act.
- All the survey sessions will take place under the control of a conductor, who will follow a standard procedure for presenting the texts about the case and the questions (in order to send homogeneous inputs to the sample).

[1] Actually only 4 participants, out of the 102 composing the sample, had qualifications inferior than a High-school degree.

SECTION 2 – ***The case: description and research's rationale***

Introduction and rationale of the research. We examined, for our research, a series of real-world cases of interaction some of the authors had dealt with in their professional experience. The chosen cases were short enough to be easily handled and, at the same time, they were fully representative of the real world's complexity. The case to be created should have consisted of a realistic problem to challenge participants with; moreover, it should have been fully documented from start to end, consisting of written messages (e-mails) only and set inside an Italian corporation. We set up our case, we named it "The employee and the architect" (as a tribute to the protagonist characters) and we drew up the research protocol (see this Supporting Information, Section 3).

A complete description of the case can be found ahead in this present Section. In extreme synthesis, we could say that it goes on as an exchange of written messages (5 e-mails in total) between the employee and the architect; we have submitted these messages to the sample leading its members in a two-step work. In the first step, we have asked the participants to carefully read the first three messages in sequence, then to interpret them and the situation they outline; finally, to report and display the "concrete elements" on which their interpretations were based. The rationale was: interpretation process *in vivo* observation, quali-quantitative analysis and formulation of a hypothesis.

In the second step, we have submitted to participants the last two messages asking them to read carefully the texts, to interpret it and then to solve a problem: the fourth message had been submitted in two versions and the problem to solve was to indicate which of the two could have produced the final answer (fifth message). The rationale

was: exploring the relationship between interpretation and following action and, through a quantitative analysis, obtaining a first check of our hypothesis.

Case details. What follows is a complete description of the case used for our research, from its start to its end.

TITLE: We named the case "The employee and the architect", as a tribute to its protagonist characters.

CHARACTERS:

- XX – The employee. Female, line worker in an office of an Italian corporation. Her office is undergoing works regarding the heating plant.
- YY – The architect. Male, executive in charge of the works. He is a colleague of XX, being himself an employee of the corporation. He has superior position and duties, in respect to her, but he belongs to another branch and has no hierarchic power on her.
- Dr. KK and Dr. ZZ – Employee's (XX) colleagues, just mentioned by the architect in reference to the works in progress.
- The Colleague – A shadow character in the interaction, as he never appears during the action. The architect (YY) requests his advice about the text of one message to be sent to XX.

NOTE: The employee and the architect do not know each other; this interaction is their first contact, started and ended through e-mails only.

The STORY:

Notice – The texts of the messages that will be mentioned here below can be found in this Supporting Information, Section 4. The first three messages are presented under the form of a description in order to make the whole situation more comprehensible to the reader of this Supporting Information; however, they have been submitted to the sample as full-text documents.

Prologue – Works on the heating plant are coming to their end; XX (the employee) starts the interaction by writing to the architect (Message #1). She requests an inspection for quality control on the basis of generically claimed issues.

YY (the architect) replies immediately (Message #2) declaring, very briefly and generically as well, that the situation has already been checked and lies under control.

Several weeks later, XX writes again (Msg #3) insisting for an inspection and indicating some specific issues at the basis of her claim. The tone of her message appears to be hardened and one passage seems to contain a sort of threat.

Action – YY prepares a new reply (Msg #4, version "H", in short Msg #4/H) but requests his colleague an advice, before sending it. The colleague accepts YY's request and suggests for a different version (Msg #4, version "S", in short Msg #4/S).

The architect accepts the advice; Msg #4/S is sent and the case ends with a last reply of XX (Msg #5) declaring her satisfaction.

NOTES: Because of a specific choice of YY's colleague, Msg #4/S bears the same content of version "H" but is written in different form and its topics are put in a different sequence. Although XX expresses her satisfaction, no inspection has been carried out nor it has been requested any more.

SECTION 3 – ***The research protocol***

Notice – The texts of the messages that will be mentioned here below can be found in this Supporting Information, Section 4. The first three messages are presented under the form of a description in order to make the whole situation more comprehensible to the reader of this Supporting Information; however, they have been submitted to the sample as full-text documents.

The protocol:

INTRODUCTION

1. A case managed completely via e-mail, between an employee and a professional (the "architect"), has been set up. It concerns a problem inside an Italian corporation, lasting for one month and a half. The problem developed and was completely solved through 5 transactions (5 messages were exchanged, chronologically labelled from #1 to #5). The employee starts the first transaction (Message #1) and concludes the interaction with the fifth one (Message #5).
2. During the action, the architect requests the opinion of a colleague of his; such request refers to a draft of the answer to Msg #3 spontaneously prepared by the architect (such draft is the first version of Msg #4, the "H" version). The colleague studies the case and proposes an alternative Msg #4 (the "S" version); the advice is accepted by the architect, the "S" version is sent and it produces the expected result, as the last reaction of the employee demonstrates (Msg #5).

3. The used case is based on real cases which some of the authors had dealt with; it remains as close as possible to reality at the same time avoiding any reference or hint to the original real situations.

The QUESTIONNAIRE and its MANAGEMENT

4. Anonymity of respondents will be fully guaranteed during either the survey (questionnaire collection) or the analysis (data elaboration). No personal data will be asked; information that is necessary for statistical purposes (age, gender, education level and employment) will be requested as aggregated through pre-defined bins only.
5. For a better representation in the questionnaire, the case has been divided into two parts. In the first part (corresponding to the "Prologue" of the case description, see this Supporting Information, Section 2), the first 3 messages are gathered, in the same order they have been sent. The messages have been printed in sequence, in a single page (A4 dimension). The aim of this first part is to collect data about the interpretation process in general through a first set of questions. Such questions have been printed in another single A4 page (two opened questions, #1 and #2, the first sub-divided into three sub-questions).
6. In the second part (corresponding to the "Action" of the case description, see this SI, Section 2), the two versions of Msg #4 (version "H" and version "S") are presented, in separate A4 pages. They are submitted to participants in sequence (not simultaneously) and the remaining questions are printed in a last A4 page. At first (Questions #3 and #4) the participants' opinions are

requested (separately) about the presumable effects of each version of Msg #4 on XX. In the end, after transcription of the very brief Msg #5 (the employee's last reply), participants are requested (Final Question) to indicate which version ("H" or "S"), in their opinion, has produced the effect showed in Message #5. The aim of this second part is to collect data about the relationship between the interpretations of the alternative messages and the action (the choice) that follows.

7. All the questions (or sub-questions, if present) have been divided into two parts: in the first one, the interpretation of the respondent about one specific subject is requested. In the second one, he/she is invited to "indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based".

8. A special attention has been dedicated to the wording of the questions. Structural ambiguity of natural language implies the impossibility to formulate sentences with a univocal meaning, as the acknowledged Italian linguist De Mauro confirms[2]. Thus, any idea to pursue completely unambiguous formulations has been dropped. After the first careful formulation of the questions, two pilot-sessions will be set up for testing the questionnaire's suitability and gather indications about possible corrections. In

[2] The author (De Mauro, 1980) says that natural language is "equivocal" in etymological sense, from Latin *aeque vocare* (to name in the same way). That is: a same word can be used to refer to different things; different words can be used to indicate the same thing.

addition, ex-post specific controls will discard from quantitative analysis all the possibly remained ambiguous cases.

9. Same attention has been dedicated to possible statistical distortion effects. For example the YY's Colleague opinion on Msg #4/H could influence respondents inducing some biases in their final choice; furthermore, there could be a possible precedence effect if the two versions of Msg #4 were submitted always in the same order. On these bases, the presentation of the two versions to the participants will be counterbalanced: all the participants will be informed that they are going to see, as first, the version spontaneously prepared by the "architect". The second (the "alternative" version) will be presented as suggested to him by one of his colleagues when asked for an advice. However, about one half of the sample will actually receive the two versions in that order (first Msg #4/H, then Msg #4/S); the remainder will receive them in the reverse order.

SURVEY and DATA COLLECTION:

10. All the conductors of the survey sessions (12 persons, in total) are members of the research group or in contact with it. Non-members will follow a brief training, led by one of the authors. All the conductors are committed to avoid expressing any comment about the message texts and concentrate on survey process conformity. Conductors have also to assure that the process is clear for the participants and that they understand the structure of the case and the questions. In order to minimize the speech necessities for the conductors, a

title page has been prepared; it contains a presentation of the survey and the main context information (see this SI, Section 4). The conductors are due to invite participants to carefully read it. In the title page, the case will be presented as a real world case.

11. Informed consent will be requested verbally, after the reading of the title page. Written consent will not be collected for two reasons: the first is that it would imply the creation and management of a general database, paradoxically increasing, by its mere existence, the risks of accidental data diffusion. The second reason is that our data collection procedure (see also following points) anyway fully guarantees anonymity of participants. At the end of data collection, it will be impossible for everyone either to trace back participants starting from the filled questionnaires or to reconstruct the participants' list.
12. The 12 conductors will operate in a completely independent way and the participants will be enlisted by using their personal relationship network, extended until the third degree of separation. Enlisting requirements: adult condition (age>18 years), High-school degree at least. Exceptions about education level are accepted just for people whose literacy and life experience allow them to understand the case documentation without effort (see Note 1).
13. The conductors will collect questionnaires bereft of every personal indications (or even hints) related to participants. They will individually deliver the collected anonymous questionnaires to the authors' team and those documents will be randomly numbered and stored in a dedicated collection box. The

research activities that will follow (data entry, in order to set up a digital data base, and qualitative and quantitative analysis) will be performed on such anonymous database.

NOTE: Once the protocol defined, two successive pilot sessions have been set up (7 and 5 people respectively) and these experiences helped to progressively refine the form of the questions, until the definitive shape was reached. The texts of the messages remained always unaltered. The following Section 4 presents the questions in their final form.

SECTION 4 – ***The questionnaire: message texts and questions (english translation)***

Questionnaire summarizing form			
Part / Question #	***n. of sub-quest.***	***n. of items***	***NOTES***
Title page	---	---	Presentation of the research and general instructions to participants
Statistical information	---	---	Gender, age range, education level, employment
Question #1	**3**	**2 x 3 = 6**	Opened answers
Question #2	**2**	**1**	Closed answer
		2	Opened answers
Question #3	---	**2**	Opened answers
Question #4	---	**2**	Opened answers
Final Question	---	**1**	Closed answer
		1	Opened answer
Total of 5 questions	*Total of 8 quest. / sub-questions*	*Total of 15 items*	*Total of 2 closed answers and 13 opened answers*

Title page

First of all, welcome and thank you for joining our research.

The e-mails on which this study is based will be submitted to you during the present session. They have been exchanged in a real working environment and they refer to an interaction that occurred in real life. They are presented in their original version; their text has not been modified to be used for this research. Of course, all the elements that specifically refer to persons, or to the real context, have been removed or appropriately altered for privacy reasons.

Your task consists in reading the messages, respecting their submission sequence. Please, read carefully and answer the questions intuitively, not analytically (although, not excluding some personal reflections, if necessary). Underline the text, take notes or look back at the message text, when deemed necessary, any time you need it.

All the questionnaires will be anonymous. We only ask you to give us general information about yourself, here below, for merely statistical purposes (data disaggregation).

[*Questions followed on gender, age range, education level and employment (answers requested through pre-defined bins only).*]

Message #1 (*description*)

A female line-worker (the employee, named "XX") writes a 67 word e-mail to the Project Account (the "architect") about the installation of the heating plant in her office. She requires an inspection, claiming about "flaws" in the present state of the works. Flaws are no better detailed. In her request, she declares that she is also speaking in the name of some colleagues and she uses the expression: "we would be pleased if, at least once, someone of our Corporation would come here and control…".

Message #2 (*description*)

The Project Account (a male professional, the "architect", named "YY") answers to XX. In his message (which is brief, 48 words) he declares regularity in the Project progress, ending with: "at the moment, the progress substantially complies with the chronogram".

Message #3 (*description*)

XX replies to YY's answer, declaring herself totally unsatisfied. Her message (136 words) sports two main features: (i) some minor flaws are listed; (ii) she expresses what it looks like an actual threat against YY, in the case he would not take measures regarding to the presented problem (she makes a specific reference to a hypothetic "waste of public money", as the Project funding involved some public sources).

QUESTIONS #1 and #2, about Messages #1, #2, #3 (*full text*)

1 * Please, read Messages #1 and #2 and answer to the following questions:

a - What do you think is going on, between XX and YY?

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

b - In particular, how would you define XX's position during the interaction?

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

c – How would you define, then, YY's position during the interaction?

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

2 * Please, read Message #3 and answer to the following questions:

Do you think the attitude of XX towards YY has changed, in respect to Message #1?

[*YES/NO*]

If it has, how would you define the new XX's position, in respect to YY?

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

Message #4 / "H" version (*the spontaneous version by the architect, full text*)

Block #1

From: YY (*Project Account for the heating plant works*)
To: XX (*Employee in one of the offices affected by the works*)
Cc: ZZ (*Office referent for the works*)
Sent: … [*date*] [*hour*]
Subject: R: heating plant

Dear Mrs. XX,

Block #2

I want to premise that, for the sake of a wise management of the work process, intended to optimize the utilization of our Corporation resources (exactly, in order to avoid wasting public money):

- Before Project start, I asked the Director of your structure (B wing of the building), Dr. KK, to put a specific person in charge of controlling the work's progress;
- As far as I am concerned, the indicated person is, and will remain, Dr. ZZ;
- Dr. ZZ carefully planned the project development steps with us;
- Each office, situated in the B wing of the building, has been already supplied with heating systems (hardware), fully complying with the timetable agreed with Mrs. ZZ;
- The heating plant is now working, even though in provisional mode.

I do recommend you to send any communication, concerning the mentioned Project, to the specific person in charge of controlling, in order to avoid (as already happened) message exchange with personnel that is not directly and formally involved within the process.

Block #3

However, I inform you that, at the moment, the works under discussion have been suspended, in order to enable the provisioning of the plant-control software. It will manage automatically the heating system in the offices, including yours, regulating the warm air diffusion (in order, as said above, to reduce any waste of money).

As soon as the software will be installed by the contractor, the works will come to end. By the way, in this phase they should not affect the rooms situated in the B wing of the building at all, but only the thermo station.

All quantitative and qualitative controls, requested by the CHK form [*formal inspection document*], will be carried out after the end of the works and just before their compliance to fixed quality standards will be attested, as prescribed by the current rules.

Block #4

This said, I have found your objections very interesting. For this reason, once the real existence of the problems you have marked will be assessed, I will certainly solve them as a part of my duty.

Block #5

Yours sincerely
The Project Account
Arch. YY - [Corporation branch] ……

_____

Message #4 / "S" version (*the version suggested by YY's colleague, full text*)

Block #1

From: YY (*Project Account for heating plant works*)
To: XX (*Employee in one of the offices affected by the works*)
Cc: ZZ (*Office referent for the works*)
Sent: … [*date*] [*hour*]
Subject: R: heating plant

Dear Mrs. XX,

Block #2

I remember your last message, which I have already answered, and now I really thank you for this new one. In fact, we do believe that the attention of our colleagues, on field operating with structures and plants we provide, is fundamental to complete our tasks at best.

Block #3

In order to optimize our contribution, I have been since the beginning asking for a unique person in charge of controlling the works, accounted for your office's building. This person is Doctor ZZ (I might have already mentioned her in my previous answer even though, at present time, I am not certain about this). Her duty is to collect all the observations expressed by the staff about the work in progress, then to send it directly to my office. I think you already know her and she is going to receive a copy of the present message. I thought this would make communication easier.

Block #4

Concerning your request, you can be certain that, so far, our Project has been developed by following all the technical and formal standards prescribed by the current rules. In addition, I inform you that the works are not yet concluded and final checks (along with possible inspections) are about to be carefully planned. Please, inform your colleagues about the existence of a person in charge of control and do not hesitate to contact her in the case of further observations or possible problems. As I said, she will return your indications to us; this way, I assure you they will not be ignored.

Block #5

Best regards
The Project Account
Arch. YY - [Corporation branch] ……

_____

QUESTIONS #3 and #4, about Messages #4/H and #4/S (*full text*)

Premise*: YY prepares Message #4 as an answer to Message #3 (received from XX). Before he sends it, he consults one of his colleagues, who advises him against sending and suggests a different text (**alternative** Message #4).*

3 * Please, read Message #4 and answer to the following questions:

In your opinion, what effect will this version produce on XX?

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

4 * Please, read* alternative *Message #4 and answer to the following questions:

In your opinion, what effect will the alternative version produce on XX?

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

Message #5 (*full text*)

Thank you very much for your interest and for the information. That was very kind of you and your answer was exhaustive.

Best regards

XX

FINAL QUESTION

Consider that Message #5 was the final reaction of XX and answer the following questions:

In your opinion, which version of Message #4 did XX receive?

[*YY's draft / Alternative*]

Could you indicate the concrete elements (words, sentences, expressions etc…) on which your answer is based?

SECTION 5 – *Case structure and communication critical points*

Focusing on the communication aspects of our case, we can synthesize its structure as in Table S1, which accounts also for the critical points of the interaction between the employee and the architect. Such scheme can be translated in plain language as it follows: apparently, the employee (working for the architect's same corporation but belonging to a different branch, with no executive commission) was complaining, through Message #1, about the quality of the heating plant installation. However, some lacks of matter (for example the claimed "flaws" were not specified) suggest to figure out possible different reasons.

The architect's first answer (Message #2) can be interpreted as an attempt to quickly end the interaction; however, the reaction of the employee (Message #3) demonstrates the failure of this tactic. It is particularly worth quoting a possible threat contained in that message, considering that XX literally writes: "if the work was made at my home… there's a matter of public money…". She was hinting to the fact that the Project funding involved some public sources. All this should arouse alarm and caution.

On the contrary, the architect's spontaneous reaction (Message #4, "H" version, in short Msg #4/H) follows the escalation initiated by the employee: he squabbles, with a repeated retaliation, about the question of money; he expresses doubts about the fondness of the employee's statements ("once the real existence of the problems you have marked will be assessed, I will certainly solve them…"); he substantially refuses to establish any relationship with the employee, putting just a hint of appreciation at the end of the message ("This said, I have found your objections very interesting…"), at the same time

491 counterbalancing it with his doubts. The most probable result should be an escalation of
492 the conflict.

493 Now, if we analyse in deep Msg #4/H's structure, we can detect in it five main
494 content blocks (see this SI, Section 4, where they are marked along with Message #4/H
495 text). Msg #4/S maintains the same content while its written form is reviewed and its
496 sequence modified. In practice, the "alternative message" #4/S presents the same content
497 blocks of Msg #4/H (see this SI, Section 4, where they are marked along with Message
498 #4/S text) in a different order and under a new written form. We have synthesized a
499 comparison of the two structures in Table S2.

500 The substantial difference between version "H" and version "S" of Message #4 is
501 founded on the diverse approach to the arising conflict: while the spontaneous reaction of
502 YY approached it through a direct confrontation, the alternative version maintains the
503 same information content but approaches the relation with XX in terms of welcome and
504 acknowledgement.

505

506 **PART II - The collected data**

507

508 SECTION 6 – ***The sample***

509 Our work was aimed to explore the process of message interpretation, sharing the
510 general assumption that the communication process is uniform all across humankind. We
511 mean that human communication, although it appears extremely variable on its
512 expressions, must however stem from a unique base of fundamental factors and
513 processes. Something like a limb in a heterogeneous sample of humans: its aspect looks
514 very different in function of sex, age, size, health and so on; nonetheless, it remains based
515 on a unique anatomical and functional scheme. For this, the sample's representativeness
516 with respect to the Italian people was not critical. Thus, we decided to increase, as much
517 as possible, the amount of participants while easing the sampling process (see research
518 protocol, in this Supporting Information, Section 3, points 10, 12).

519 We recruited 102 participants in our sample, whose characteristics are displayed
520 in Tables S3-S5. The total sample composition (Table S3) shows an exceeding rate of
521 women vs. men and of Graduates/Post-graduates vs. High-school degree granted
522 members (columns "Education", "Gr" bin vs. "Dg" bin; people granted with Elementary
523 degree are inessential, only 4 out of 102). We also highlight the high rate of students and
524 unemployed vs. employed members (columns "Employment", "E" and "F" bins vs.
525 others). For these reasons, even if sample statistical analysis is less relevant in our work,
526 we have drawn more balanced sub-samples from the total sample. The statistical
527 distribution results, observed on the total sample, have been verified on sub-samples

528 every time it turned out necessary. The first sub-sample ("AGE", Table S4) is
529 exclusively composed by people over 29 years-old (age bins B, C and D, excluding A; in
530 total, 60 members). The second one ("EMPLOYMENT", Table S5) is exclusively
531 composed by employed people (A to D bins, excluding E and F, that is for students and
532 unemployed people; in total, 65 members). Our intention was to balance the weight of
533 the younger part of the sample, over-crowded with female members (either graduates or
534 students).

535 SECTION 7 – ***The harvest***

536 In this section we present in detail an assessment about the amount of the
537 collected materials ("how much" the respondents have written in their answers, the
538 answers' "physical amount").

539 Starting data analysis, we firstly transcribed into a .xls file the filled
540 questionnaires: 1 tab containing 8 data-sheets, one for each main question or data source
541 (information for disaggregating data, Questions #1-a, #1-b, #1-c, #2, #3, #4, Final
542 question). Secondly, we reviewed transcriptions with regard to text correction (typos) and
543 we harmonized data entries (different operators had produced little differences in
544 managing spaces near punctuation marks and in using suspension points, abbreviations
545 and similar details). At this point, it was possible to measure the collected data amount:

546 ▪ Paper archive: each participant provided a 6 pages long document. Four pages
547 contained the information materials (the title page and the transcriptions of the
548 messages). In a few cases, on those pages, respondents had written very short
549 notes and underlined some words. The other two pages contained the answers,
550 which are the actual data source of our research. In conclusion, we collected
551 102 x 2 = 204 handwritten pages containing data to be processed.

552 ▪ Digital archives: they contain the transcriptions of opened answers (harmon-
553 ized text), that returned totals of 16,094 words, corresponding to 89,685 char-
554 acters (spaces excluded) or 104,200 characters (spaces included).

555 ▪ In order to let the readers estimate the amounts better, we calculated that using
556 Times New Roman font in 12 size characters, space 1, with a "letter" page

format and 1'' for all margins, the opened answer texts should be occupying about 26.7 to 27.4 pages (range of 3,800-3,900 characters per page, spaces included, text only, no picture, table or main titles).

- We also calculated the filling rate of the questionnaires (opened answers) in the following way: we excluded the two opened items of Question #2 (answering the opened part of the question was under condition and it was performed by just 60% of the sample); then, we recorded 27 unanswered items on an expected total of 102 participants x 11 items = 1,122 (see SI, Section 4, questionnaire summarizing form). The filling rate is: (1,122-27)/1,122x100 = 97.6%.
- This last information says which percentage of the opened questions received an answer but says nothing about the length of those answers. We can calculate an average length in two ways: the first is dividing the total words by the amount of participants and, then, by the amount of the opened items. The result is 16,094/102/13=12.1 words per respondent per item (answers to Question #2 are included in the calculation). In order to appreciate this value better we can follow the second way: one page, of the previously approximated 27, has typically 44 lines, which means an average of about 1 typed line per respondent per item (44x27/13/102=0.90 typed lines, answers to Question #2 included). 1 typed line is up to 90 characters (spaces included) or about 10 to 15 words; a satisfactory result, about the accomplishment of their commission by the sample members.

579 ▪ About the closed answers, only the Final question is relevant (for the closed
580 part of Question #2, see previous points), and 101 out of 102 answered to it.
581 In the end: survey returned a good harvest, consistent with our expectations and
582 with the research needs.

583 SECTION 8 – ***Data quality check: compliance with research requirements and***
584 ***technical-theoretical questions related to answer interpretation***

585 a – *Answers' general features and compliance with research requirements*. A first
586 noticeable aspect is that it is not possible, in any of the answers, to find overt doubts,
587 uncertainty statements, declarations of impossibility to answer, indications of equivalent
588 alternatives[3]. For each respondent, his/her own interpretation seems to be **the only**
589 **available option**. This happens in spite of the fact that about 27% of the total sample
590 describes the effects of Messages #4/H and #4/S as similar: for an 18% (18 people) they
591 both will solve or ease the contrast; for a 9% (9 people) they both will escalate the
592 contrast (see manuscript Table 8, "Total sample" columns, H+/S+ and H-/S- cells). This
593 observation confirms that the answers are spontaneous and that our survey collected
594 subjective perceptions, instead of elaborated rational reflections. That is what we aimed
595 to, while following the research guide-lines and protocol (see this SI, Sections 1 and 3)[4].
596 Another important point is that no one of the sample members uses any technical
597 word or expression. About this, it is worth considering how participants reacted to the
598 two points which, from a communication slant, can be rated as the most critical: the
599 possible threat XX expressed in Message #3; the squabbling and the personal attack by
600 YY against XX in Message #4/H (see this SI Section 5 and Table S1). Even if some

61 [3] Just 1 participant (out of 102) declares some uncertainties in his final choice, writing that the final
62 effect (as it appears in Message #5) could be obtained both with Message "H" and Message "S".
63 Nevertheless, while answering to the other questions, his statements are in all similar to the other
64 participants' ones.

65 [4] Exactly in order to facilitate such result, in the actual survey sessions (lasting range: 20 to 45
66 minutes) no discussion about the answers was allowed before the filled in questionnaires had been
67 collected by the conductor; in addition, no further contact with the questionnaires was permitted
68 after the sessions were over.

601 participants refer to these passages in their answers, none stresses them as particularly
602 critical and almost none labels them as “threat” or “personal attack”. Finally, while
603 examining the answers to Questions #3 and #4 and to the Final Question, we found that
604 about one fourth of the sample (mean for the three questions 26.5%, range 16% - 36%)
605 overtly stated, at least once, the impossibility to analytically answer to the second part of
606 the questions (which requested to point out the “concrete elements” that induced the
607 answer to the first part). These respondents described their answers to the first part of the
608 questions as the result of “a general impression”, “a sensation/a perception”; in other
609 cases they presented such answers as “an opinion drawn from the whole message” or
610 something similar. These observations confirm the general naïve condition of the sample
611 about human communication (another feature requested by the research plan).

612 b – *About the questionnaire interpretation*. Interpretation problems, related to the
613 questionnaires, are essentially of two kinds: interpretation of the questionnaire questions
614 by the sample; interpretation of the sample answers by the research team. Following here,
615 two selected examples of the first kind:

616 1. Question #1 (“What do you think is going on, between XX and YY?”) – It has
617 been interpreted, in certain cases, in terms of interpersonal relationship, in
618 other cases in terms of organizational position or professional profile.
619 2. Questions #1 and #2, first part (each containing indications for focusing on a
620 specific message, out of the first three) – Actually, a large part of the sample
621 did not make any distinction and answered discarding indications and
622 simultaneously referring to all the three messages.

623 Here, two examples of the second kind:

624 3. Question #1 ("What do you think is going on, between XX and YY?") – In
625 one of the answers, Message #2 is defined as "bureaucratic"; although, it is
626 impossible to understand if this adjective is used with a technical meaning
627 (referring to a normal interaction inside an office) or with a relational one
628 (defining a conflict, with YY using formality to resist to XX's action). We
629 found other similar cases.
630 4. Question #2, first part (requesting if, after comparing Message #3 with
631 Message #1, the respondent considers XX's position as "changed") – It is
632 interesting to know that 41 people (40% of the sample) answered "NO – Not
633 changed", and 61 (60%) answered "YES – It has changed". These answers are
634 nonetheless unsuitable for deep quantitative analysis because of the different
635 interpretation of the word "changed". For example the answer "YES" (the
636 position has changed) may correspond to the actual perception of an escalated
637 interaction; however, it may also be simply connected with attention on
638 isolated linguistic elements (like some technical terms, introduced in Message
639 #3 but absent in #1). The answer "NO" (no change detected) could mean that
640 the respondent does not actually perceive any difference; it may also indicate
641 that the differences, clearly detected relationship-wise, are nevertheless
642 considered scarcely effective on the respective organizational positions of XX
643 and YY.

644 As stated in the research protocol (previous Section 3, point 8.), given the
645 impossibility of a completely unambiguous formulation of concepts in natural language,
646 we ex-post discarded from quantitative analyses all the unsuitable data.

647 SECTION 9 – ***Data quality check: analysis of the collected data distribution***

648 In order to check the existence of possible imbalances in the collected data, we
649 explored the distribution of the answers' texts with respect, by one hand, to the
650 questionnaire's questions/sub-questions and, by the other hand, to the respondents. We
651 quantified these texts through the amount of words and characters contained in the filled
652 questionnaires. We remind that each question/sub-question was divided into two items;
653 when we refer to "totals", we mean that the presented data are the result of summing
654 values related to the "strict" answer (first item, i.e. first part of the question) and values
655 related to the indicated "concrete elements" (second item, i.e. second part of the
656 question).

657 a – *Text amounts' distribution with respect to items*. The results of this first
658 analysis are displayed in Table S6 and Fig. S1. Table S6 shows totals and some statistical
659 indexes with regards to the distribution of the answers' texts on questions/sub-questions.
660 Data referred to all the answers (left part) are compared with those excluding Question
661 #2 (right part). The reason of such exclusion: answering was under condition and
662 Question #2 was answered by only a part of the sample. In order to investigate the
663 distribution shape, we drew the histogram of Fig. S1, which displays the percent
664 distribution of the texts' amounts (in terms of words and characters, Question #2
665 excluded) with respect to the questionnaire's items. It shows evident lower levels for
666 Questions #1-b and #1-c (whose minimum, all the same, is around 7%); the rest of the
667 values seesaws between 9% and 11% (the general percent mean, per item, is
668 100:11=9.1%, see Table S6, right part, "% Gen. means per item" row).

About this, we must consider that several respondents answered in short to sub-questions #1-b and #1-c, just indicating some references to the previous sub-question (#1-a, indeed having the highest values). Thus we prefer to use, for comparing different items, values referring to the percent mean of the three sub-questions of Question #1, that is 8.3% both for words and for characters (SI = spaces included). On the whole, we have a range oscillating between 8.3% and 11.1% (for words) or 11.3% (for characters). No significant difference is recordable and the distribution of the answers' texts with respect to the questionnaire's items can be assessed as satisfactorily balanced. Actually, no question at all has been neglected by respondents.

b – *Sample distribution with respect to the text amounts*. The results of this analysis are displayed in Table S7 and Fig. S2 and S3. Table S7 shows totals and some statistical indexes referred to the amounts of text (in terms of words and characters, Question #2 excluded) provided by respondents through their answers. Data are displayed separating values referred to the first item of the questions ("strict" answer) from those referred to the second one ("concrete elements"). In order to investigate the distribution shape, we drew two histograms, in which participants have been grouped in bins referred to words (30-words bins, Fig. S2) and characters (200-characters bins, Fig. S3, SI=spaces included) amounts. The histograms' shape has features comparable to a bell-curve, even though its form is not perfect (see statistical details in the figures' captions). Data uphold the idea of differences mainly due to spontaneous random variations and lead to the conclusion that also such distribution can be considered satisfactorily regular (no participants seem to have neglected their commission).

PART III - Added materials

SECTION 10 – *The "block preference" analysis*

The second indicator we have used (block preference indicator), was built starting from the consideration (this SI, Sections 4 and 5) that Message "H" and Message "S" contain the same content blocks (it was an overt decision of YY's "collegue") differing for the order of presentation and for linguistic form. Each block is identified as concerning a given content (see this SI, Section 5 and Table S2). Then, we investigated about possible differences regarding the attention paid by "H" and "S" choosers to different blocks, while answering to Questions #3 and #4 (predictions of the messages' effects on XX). Our goal was to explore finer characteristics in the choice process. Specifically, we intended to verify if the different choices ("H" or "S") were linked to differences in focusing on the blocks or in detecting diverse characteristics inside same blocks. In the first case the different contents, ascribable to the different blocks, would lead the process; in the second case, other factors would play a critical role.

To build the block preference indicator we, at first, examined the answers to Questions #3 and #4 and highlighted all the direct references to Message "H" and Message "S" texts (i.e. sentences in quotation marks or undoubtedly referring to clearly identifiable passages). Then, we associated them to the text blocks. Results from this part of the analysis are displayed in Tables S8-S11[5]; they contain clear indications about the

[5] Tables S8 and S9 display data with regards to the amount of **references** to each block expressed by participants. In Table S8, totals for each block and each evaluated message (as well as general totals) can be higher than the people amount, given that each person can express more than one references. Tables S10 and S11 display data with regards to the amount of **participants** that referred to each block. In Table S10, totals for each block and each evaluated message must be inferior to the participants' amount; however, the general totals can be higher,

711 message blocks which the attention of participants has fallen upon. We will base our
712 analysis on Table S10 data; blocks are displayed along with the texts of Message #4/H
713 and Message #4/S; a comparison among them is presented in Table S2.

714 Regarding Message "H" blocks, both "H" and "S" choosers express the same
715 preference, as their attention is mainly attracted by Block #2 (from both the versions of
716 Msg #4) in a similar proportion: (13+9)/(21+11), about 70%, for "H" choosers; (10+43)/
717 (17+65), about 65%, for "S" choosers. Conversely, with regard to Message "S", "H" and
718 "S" choosers split. Indeed, "H" choosers focus on Blocks #2 and #3 (converted
719 numbers[6]) in a large majority: (6+10+7+3)/(18+14), more than 80%. "S" choosers focus
720 on Blocks #3 and #4 in a minor but still strongly prevailing proportion: (34+3+35+0)/
721 (95+7), a little more than 70%. The principal differences regarding Block #2 and Block
722 #4 are the following: Block #2 is the paragraph through which YY refuses to engage
723 XX's request and re-addresses XX to another account (ZZ) inside the organisation. Both
724 "H" and "S" choosers give Block #2 a prevalent attention, when they read it in Message
725 "H". However, when they read it in Message "S", we see that "H" choosers maintain
726 their preference (with a little shift towards Block #3, containing specific information)
727 while "S" choosers pay the minimum of attention to it (18+4=22 references) moving
728 towards Block #3 and #4 (34+3=37 and 35+0=35 references respectively).

89 given that each person could refer to more than one block.

90 [6] We remind that Message "S" maintained the same content of Message "H", and that content
91 was divided into analogous text blocks, but varying their sequence (besides their written form).
92 For reliable comparing, it has been necessary to give each "S" block a "converted number", that
93 is the same of the correspondent block in Message "H" (see this SI, Section 5, and Table S2,
94 extreme right column). From now on, until express notice, all the numeric references to "S"
95 blocks must be intended as converted numbers.

Block #4 is the paragraph expressing YY's relational acceptance toward XX; in Message "H", it is placed at the end, immediately before the form of salute, and is scarcely considered by both sides (even if, as usual, in different proportions). Reading it in Message "S" (where it comes as second, immediately after the form of address), we see that "H" choosers confirm their neglecting while "S" choosers pay great attention to it. In other words, "H" choosers give constantly their preference to YY's refuting and, a little less, to information providing. "S" choosers vary their preferences according to the message and they seem to attribute importance to the relational block just in Message "S", even if it is present in Message "H", too.

What does this result mean? Data seemed to be insufficient for drawing reliable conclusions; for this reason, we returned to the answers' texts (answers to Questions #3 and #4, in particular the second item, "concrete elements") and discovered what it follows. First, the apparent convergence of "H" and "S" choosers behaviour, about their taking into account Message "H" (both choosers preferentially focused on Block #2), is not real: almost all "S" choosers rate the impact of Block #2 from Message "H" on XX-YY conflict as negative **for relational reasons**. It is notable that their answers are about an information that YY gives to XX (Dr. ZZ assuming a role of account) but they refer quite exclusively to the relational impact of the passage. In this way, choosers behave homogeneously and coherently select Message "S".

Conversely, "H" choosers clearly split: on one hand, eleven of them (out of 26, 42%, see manuscript Table 11, left column, L and LM rows) express, on Message "H", the same negative rating of "S" choosers (XX-YY conflict escalation) and for the same

751 reasons (relation aspects), too. Nevertheless, they eventually choose that same Message
752 “H” providing various justifications for their choice. On the other hand, 15 of them (58%,
753 see manuscript Table 11, left column, MG and G rows) rate the impact of Message “H”
754 on XX-YY conflict as positive. Coherently, they choose that message but indicate final
755 effects of different nature: XX should be “calmed”, because of the great quantity of
756 information received. However, she could also be sorted out, just stopped despite her
757 dissatisfaction. These 15 people behave as if they were thinking that information is what
758 it matters and they pay little attention to relational aspects. Such situation reminds the
759 differences between “H” and “S” choosers’ behaviour highlighted by coherence indicator
760 analysis (specifically, the sample distribution with respect to coherence level).

761 We successively noted that a minority of “S” choosers, while evaluating Message
762 “H”, focused on Block #4 (the relational acceptance passage) and rated it,
763 overwhelmingly, negative (4+15=19, see Table S10, Block #4 row, column “S”
764 choosers/”H” evaluation). Some of them, for example, justify their evaluation
765 interpreting that YY overtly declares that he does not trust XX, given that he says he
766 reserves himself to check for the real existence of the problem, before intervening[7]. They
767 do not pay any importance to the formal relational acceptance that Block #4 contains.
768 Moving to Message “S” evaluations, we face apparent divergent behaviours, as “H” and
769 “S” choosers focus on different blocks; nevertheless, this appearance covers an actual
770 continuity with what we observed about the evaluations on Message “H”. For example,

100 [7] We observe that, as widely discussed in the manuscript (specially in the Discussion section),
101 the question is not linked to the information *per se*, nor it regards YY’s right to control. The
102 question is “the fact that” YY decided to overtly declare, in a certain point of his message and
103 under a certain form, his doubt and his intentions.

771 "S" choosers that focus on Message "S"/Block #4 (we remind this is the "converted"
772 number, corresponding to the original #2, see Table S2) express positive rates for
773 relational reasons; quite homogeneously, they hold this block responsible for solving the
774 conflict and they constantly describe the effects of Message "S" (and Block #4 in
775 particular) with words like "acceptance", "XX satisfaction", "reassuring", "XX will feel
776 listened to", "acknowledgement", "appreciation". Conversely, "H" chooser behaviour,
777 once again, is split: those who, regardless of their choice, rate "S" effects as positive
778 (9+5=14, see manuscript Table 11, left column, L and MG rows), express their
779 evaluations in terms which are very similar to those of "S" choosers: "satisfaction" of
780 XX, "reassuring", "calming", "attention given" and so on. Twelve of them, who deem
781 "S" as negative (2+10=12, see manuscript Table 11, left column, LM and G rows), give
782 the maximum of importance to XX notifying the necessity to refer to a different person
783 (Dr. ZZ). Only in 2 or 3 cases we found generic comments about the excessively
784 "diplomatic" form of Message "S".

785 All these observations summed up, our investigation through the second indicator
786 helps us to answer the initial question: if the choice between Message "H" and Message
787 "S" can be linked to differences in block focusing or to different characteristics detected
788 inside same focused blocks. Indeed, even though our observations seem to be pointing to
789 the second option, we got the impression that such formulation could result weak and
790 that the observed processes cannot be restrained to such dichotomy. Then, how can we
791 explain our observations? The picture can be synthesized as it follows:

- When predicting Message "H" effects, both "H" and "S" choosers mainly focus on the same block but they are attracted by different characteristics: "H" choosers by its information content; "S" choosers by its relational impact.
- When predicting Message "S" effects, "H" and "S" choosers mainly focus on different blocks. However, their answers show that such behaviour is linked to the attraction they feel towards the same characteristics that stimulated them in the previous case: "H" choosers insist on privileging information content (and Blocks #2 and #3, that concentrate the information); "S" choosers shift towards new blocks that make evident the relational care of YY with regards to XX (Blocks #3 and #4).

One last aspect to be cleared: the second point contains, besides the specific divergence in focusing, a new example of the first case, i.e. the same focusing joined to attention paid to different characteristics. Actually, both "H and "S" choosers focus also on Block #3 (converted number) of Message "S", that is labelled as "Information" in Table S2. However, even though that block undoubtedly contains information, the two versions present it in different ways. Confronting the texts, we can easily verify that the "H" version bears just technical and formal contents while the "S" version pays attention to present the information as a "service" for the colleagues. Evidently, respondents jointly take such aspect into account but (as usual) they interpret it in different ways. As a matter of fact, "H" choosers mainly highlight the **information** that "the works are not yet concluded and final checks… are about to be carefully planned"; "S" choosers mainly

emphasize the **reassurance** (a purely relational aspect) that YY expressly gives to XX with his words “I assure you [that your indications] will not be ignored”.

In synthesis, what we found is that, about focusing on blocks, the differences, as well as the convergence, are apparent and the attention of participants seems to be attracted by those blocks that can “resound” something they are possibly looking for, something pre-existent. What drives the focusing is not the mere information content of the blocks. Once more, we have observed nothing else than a “disassembling” operation (see manuscript for details). In doing so, we have collected two examples of what kind of “pre-existing blueprints” (in some way present in the actors’ central nervous system) can orient focusing and explain the different approaches employed by “H” or “S” choosers: the first mainly focus on content or context aspects; the second ones mainly focus on relational aspects.

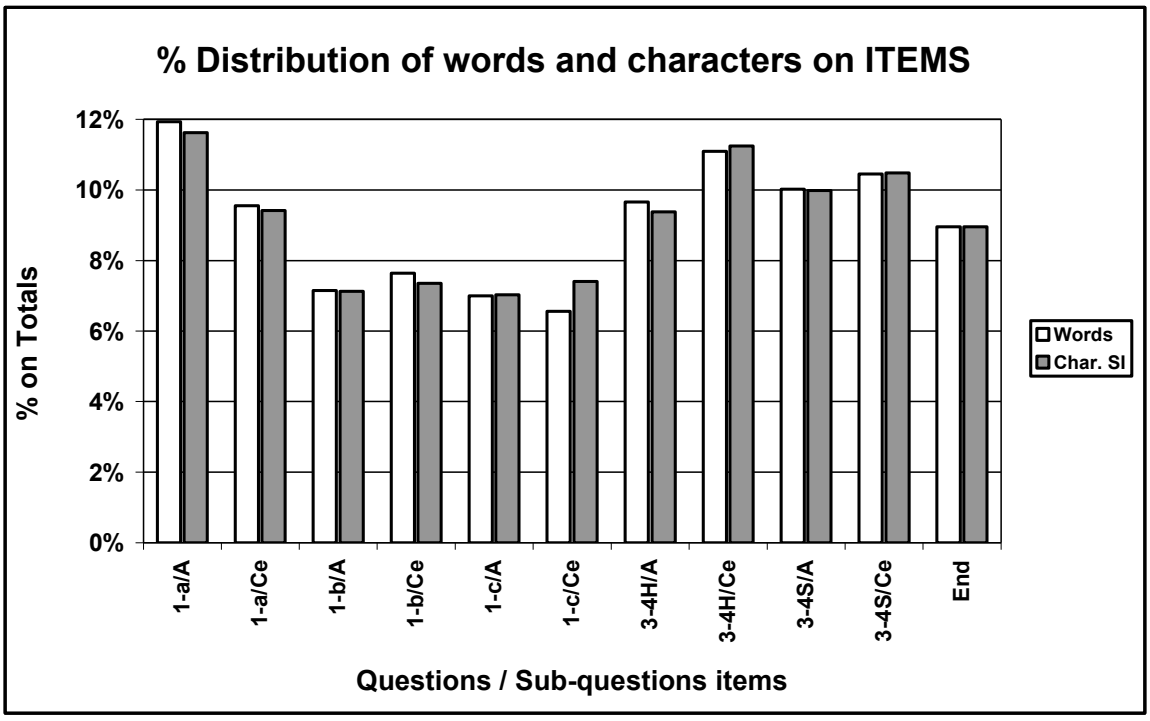
826 **References**

827 De Mauro T. 2003 (1980). *Guida all'uso delle parole*. Roma: Editori Riuniti.

828

829 **SUPPORTING INFORMATION Figures**

830



831
832

833 **Figure S1: Percent distribution of words and characters on question items (Question**

834 **#2 excluded).**

835 [Legend: 1-a, 1-b, 1-c = Answers to sub-questions of Question #1; 3-4/H, 3-4/S =

836 Answers to Questions #3 and #4 referred to Message "H" or to Message "S"; End =

837 Final question. A = "Strict" answers; Ce = Concrete elements; Char.SI = Characters

838 (spaces included)]

839

840 This histogram shows that the words' and characters' amounts resulting from the

841 respondents' answers vary, with respect to items, from 6.6% to 11.9% (words) and from

842 7.0% to 11.6% (characters, spaces included). The range reduces to 8.3%-11.1% (words)

843 and 8.3%-11.3% (characters SI) if the three sub-questions of Question #1 are grouped
844 together and their mean is considered (see text for details). The amounts appear to be
845 distributed in a satisfactorily balanced shape, across the questions of the questionnaire (no
846 statistical significance recorded). On the whole, no item seems to be definitely privileged,
847 or neglected, by the participants.

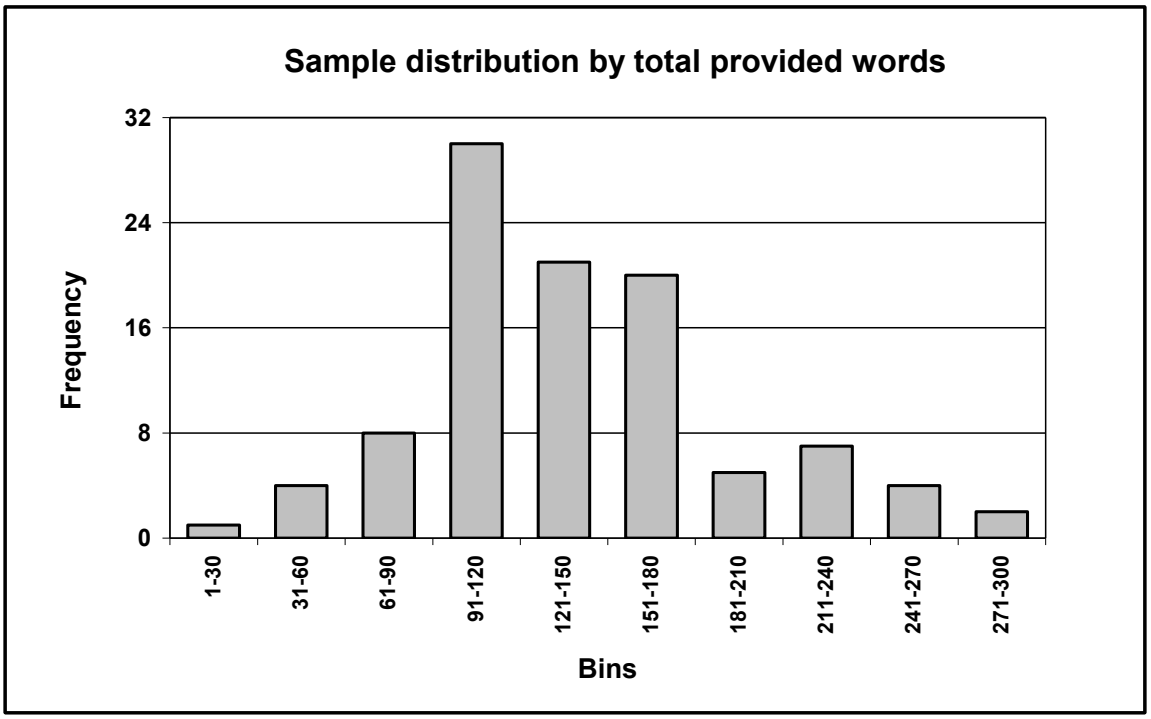


Figure S2: Sample distribution with respect to total provided words (Question #2 excluded).

The histogram shows how the sample is distributed with respect to the amount of words provided by participants. The participants are grouped in 30-words bins. Totals ("strict" answers + concrete elements indications) are displayed. The main statistical indexes of the distribution are the following (SD = Standard deviation; CV(%) = percent Coefficient of Variation):

Mean = 138.5; Median = 131; Mode = 142; SD = 53.7; CV(%) = 38.75%.

Skewness = 1.15; Kurtosis = 0.09.

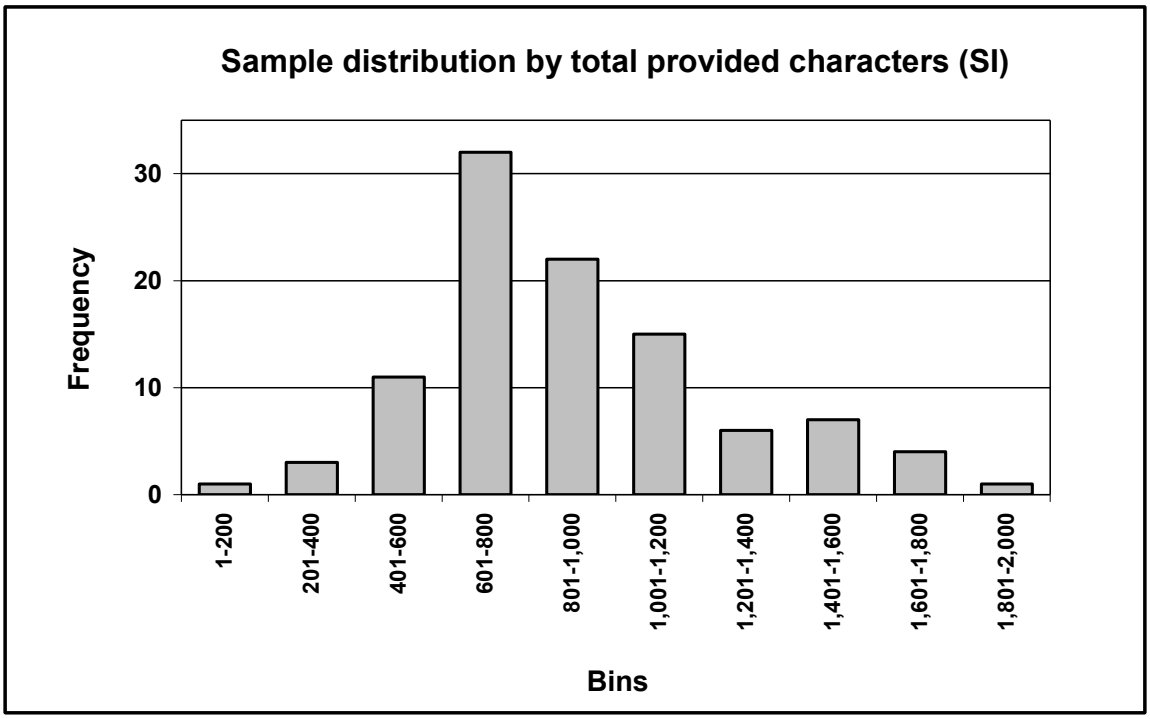


Figure S3: Sample distribution with respect to total provided characters (spaces included, Question #2 excluded).

The histogram shows how the sample is distributed with respect to the amount of characters (spaces included) provided by participants. The participants are grouped in 200-characters bins. Totals ("strict" answers + concrete elements indications) are displayed. The main statistical indexes of the distribution are the following (SD = Standard deviation; CV(%) = percent Coefficient of Variation):

Mean = 900.4; Median = 813; Mode = 1,040; SD = 341.6; CV(%) = 37.94%

Skewness = 1.31; Kurtosis = 1.12.

SUPPORTING INFORMATION Tables

Message	Author	Character	Critical points	Notes
#1	XX	The employee, woman, line position	Lack of matter: no specific claim, no evident goal (consequent suspect of relational problems).	Start message
#2	YY	The professional, man, executive in charge of the Project	Evasive action, bureaucratic answer.	First feed-back
#3	XX	The employee	Hardened position, presence of a possible threat (*ALARM*!!).	Reaction / Reinforce
#4 "H"	YY	The professional	Squabble + Refusing relational level + Personal attack to XX (*ALARM*!!).	Second feed-back

Table S1: The case structure and the communication critical points.

This scheme displays the interaction structure and the communication critical points related to the first part of the case. It considers the exchanged messages (Messages #1 to #3) and provides comments on the "H" version of Message #4 (spontaneously prepared by the "architect", i.e. YY). While creating our case, we figured that exactly this could be the analysis of YY's colleague (or some external communication expert) that drove him/her to suggest the alternative.

Blocks	"H" Structure	"S" Structure	Conversion
#1	Form of address	Form of address	S "1" → S "1" *converted*
#2	Re-addressing XX	Relational acceptance	S "2" → S "4" *converted*
#3	Information	Re-addressing XX	S "3" → S "2" *converted*
#4	Relational acceptance	Information	S "4" → S "3" *converted*
#5	Form of saluting	Form of saluting	S "5" → S "5" *converted*

Table S2: Comparing text blocks in the two versions ("H" and "S") of Message #4.

The message presented as alternative to Message #4/H (i.e. the "S" version of Message #4, in short Msg #4/S) has the same text blocks of version "H" with the same information content. Only the position in the text and the written form were modified. Extreme right column shows the "conversion table" of the blocks numbers for the two versions, in order to simplify referencing while comparing them.

Age						**Education**						**Employment**					
Bin	***M***		***F***		***Tot***	***Bin***	***M***		***F***		***Tot***	***Bin***	***M***		***F***		***Tot***
	Val.	**%**	***Val.***	**%**			***Val.***	**%**	***Val.***	**%**			***Val.***	**%**	***Val.***	**%**	
A	**10**	*23.8*	**32**	*76.2*	**42**	El	**1**	*25.0*	**3**	*75.0*	**4**	A	**16**	*47.1*	**18**	*52.9*	**34**
B	**11**	*36.7*	**19**	*63.3*	**30**	Dg	**18**	*46.2*	**21**	*53.8*	**39**	B	**6**	*85.7*	**1**	*14.3*	**7**
C	**7**	*46.7*	**8**	*53.3*	**15**	Gr	**18**	*30.5*	**41**	*69.5*	**59**	C	**6**	*31.6*	**13**	*68.4*	**19**
D	**9**	*60.0*	**6**	*40.0*	**15**	--	--	--	--	--	--	D	**1**	*20.0*	**4**	*80.0*	**5**
--	--	--	--	--	--	--	--	--	--	--	--	E	**5**	*17.2*	**24**	*82.8*	**29**
--	--	--	--	--	--	--	--	--	--	--	--	F	**3**	*37.5*	**5**	*62.5*	**8**
Tot	**37**		**65**		**102**	***Tot***	**37**		**65**		**102**	***Tot***	**37**		**65**		**102**

Table S3: Main features of the sample (total sample)

Legend (*age*)	**Legend (*education*)**	**Legend (*employment*)**
A = 18-29 yy	El = Elementary level	A = Line workers
B = 30-39 yy	Dg = High School degree	B = Managers
C = 40-49 yy	Gr = Graduates / Post-graduates	C = Graduated technicians / Professionals
D = 50 yy and over		D = Artisans / Entrepreneurs
		E = Students
		F = Unemployed / Others

The table provides a quantitative description of the total sample with regards to age (left columns), education level (central columns) and employment (right columns) of the participants; see Legends for the used symbols. Data is shown as totals and split down by gender (***M*** = males; ***F*** = Females).

905

Age						**Education**						**Employment**					
Bin	***M***		***F***		***Tot***	***Bin***	***M***		***F***		***Tot***	***Bin***	***M***		***F***		***Tot***
	Val.	**%**	***Val.***	**%**			***Val.***	**%**	***Val.***	**%**			***Val.***	**%**	***Val.***	**%**	
A	/	/	/	/	/	El	**1**	*25.0*	**3**	*75.0*	**4**	A	**14**	*46.7*	**16**	*53.3*	**30**
B	**11**	*36.7*	**19**	*63.3*	**30**	Dg	**12**	*52.2*	**11**	*47.8*	**23**	B	**6**	*85.7*	**1**	*14.3*	**7**
C	**7**	*46.7*	**8**	*53.3*	**15**	Gr	**14**	*42.4*	**19**	*57.6*	**33**	C	**6**	*37.5*	**10**	*62.5*	**16**
D	**9**	*60.0*	**6**	*40.0*	**15**	--	--	--	--	--	--	D	**1**	*25.0*	**3**	*75.0*	**4**
--	--	--	--	--	--	--	--	--	--	--	--	E	**0**	*0.0*	**2**	*100*	**2**
--	--	--	--	--	--	--	--	--	--	--	--	F	**0**	*0.0*	**1**	*100*	**1**
Tot	**27**		**33**		**60**	***Tot***	**27**		**33**		**60**	***Tot***	**27**		**33**		**60**

906

907 **Table S4: Main features of the sample (sub-sample "Age", >29yy)**

Legend (*age*)	**Legend (*education*)**	**Legend (*employment*)**
A = 18-29 yy	El = Elementary level	A = Line workers
B = 30-39 yy	Dg = High School degree	B = Managers
C = 40-49 yy	Gr = Graduates / Post-graduates	C = Graduated technicians / Professionals
D = 50 yy and over		D = Artisans / Entrepreneurs
		E = Students
		F = Unemployed / Others

908

909 The table provides a quantitative description of the sub-sample "Age" (only participants
910 30 years, and over, old) with regards to age (left columns), education level (central
911 columns) and employment (right columns) of the participants; see Legends for the used
912 symbols. Data is shown as totals and split down by gender (***M*** = males; ***F*** = Females).

913

914

Age						**Education**						**Employment**					
Bin	***M***		***F***		***Tot***	***Bin***	***M***		***F***		***Tot***	***Bin***	***M***		***F***		***Tot***
	Val.	**%**	***Val.***	**%**			***Val.***	**%**	***Val.***	**%**			***Val.***	**%**	***Val.***	**%**	
A	**2**	*25.0*	**6**	*75.0*	**8**	El	**1**	*25.0*	**3**	*75.0*	**4**	A	**16**	*47.1*	**18**	*52.9*	**34**
B	**11**	*40.7*	**16**	*59.3*	**27**	Dg	**13**	*52.0*	**12**	*48.0*	**25**	B	**6**	*85.7*	**1**	*14.3*	**7**
C	**7**	*46.7*	**8**	*53.3*	**15**	Gr	**15**	*41.7*	**21**	*58.3*	**36**	C	**6**	*31.6*	**13**	*68.4*	**19**
D	**9**	*60.0*	**6**	*40.0*	**15**	--	--	--	--	--	--	D	**1**	*20.0*	**4**	*80.0*	**5**
--	--	--	--	--	--	--	--	--	--	--	--	E	/	/	/	/	/
--	--	--	--	--	--	--	--	--	--	--	--	F	/	/	/	/	/
Tot	**29**		**36**		**65**	***Tot***	**29**		**36**		**65**	***Tot***	**29**		**36**		**65**

915

916 **Table S5: Main features of the sample (sub-sample "Employment", job owners)**

Legend (*age*)	**Legend (*education*)**	**Legend (*employment*)**
A = 18-29 yy	El = Elementary level	A = Line workers
B = 30-39 yy	Dg = High School degree	B = Managers
C = 40-49 yy	Gr = Graduates / Post-graduates	C = Graduated technicians / Professionals
D = 50 yy and over		D = Artisans / Entrepreneurs
		E = Students
		F = Unemployed / Others

917

918 The table provides a quantitative description of the sub-sample "Employment"

919 (participants with a regular employment only) with regards to age (left columns),

920 education level (central columns) and employment (right columns) of the participants; see

921 Legends for the used symbols. Data is shown as totals and split down by gender (***M*** =

922 males; ***F*** = Females).

923

924

	All the Questions (13 items)			*Quest. #2 excluded (11 items)*		
	Words	**Char.(SE)**	**Char.(SI)**	**Words**	**Char.(SE)**	**Char.(SI)**
TOTALS	16,094	89,685	104,200	14,128	79,097	91,843
General means per item	1,238	6,899	8,015	1,284	7,191	8,349
% Gen. means per item	*7.7%*	*7.7%*	*7.7%*	*9,1%*	*9,1%*	*9,1%*
CV(%)	*21.0%*	*20.3%*	*20.5%*	*18.78%*	*17.19%*	*17.56%*
General means per person	158	879	1,022	139	776	900
Gen. means per person-item	12.1	68	79	12.6	71	82

925

926 **Table S6: Descriptive analysis of the text amounts' distribution with respect to the**

927 **questionnaire's items.**

928 [Legend: Char.(SE) / (SI) = Character amounts, (Spaces Excluded) / (Spaces Included); CV(%) =

929 percent Coefficient of Variation]

930

931 The table shows totals and some statistical indexes (some means and percent coefficient

932 of variation) referred to the words' and characters' amounts resulting from the texts of the

933 respondents' answers. Indexes are calculated on questions' items, in two ways: on all the

934 opened items (13 items, left part of the table); on all the items excluding Question #2 (11

935 items, right part of the table, see text for the reasons of exclusion). Further information in

936 Fig. S1.

937

938

939
940

	"Strict" answers			*Concrete elements*			*Totals*		
	Words	**Ch.(SE)**	**Ch.(SI)**	**Words**	**Ch.(SE)**	**Ch.(SI)**	**Words**	**Ch.(SE)**	**Ch.(SI)**
TOTALS	6,463	35,484	41,461	7,665	43,613	50,382	14,128	79,097	91,843
% on General total	*45.7%*	*44.9%*	*45.1%*	*54.3%*	*55.1%*	*54.9%*	*100 %*	*100 %*	*100 %*
Gen. means p. person	63.4	348	407	75.1	428	494	138,5	775	900
CV(%)	*48.58%*	*43.63%*	*44.80%*	*45.56%*	*45.46%*	*45.75%*	*47.77%*	*46.13%*	*46.61%*
Minimum	8	73	76	4	25	28	4	25	28
Maximum	175	905	1,075	185	1,030	1,180	185	1,030	1,180

941
942 **Table S7: Descriptive analysis of the sample distribution with respect to the text**
943 **amounts they provided.**

944 [Legend: Ch.(SE) / (SI) = Character amounts, (Spaces Excluded) / (Spaces Included); CV(%) =
945 percent Coefficient of Variation]

946

947 The table shows totals and some statistical indexes (some means, percent coefficient of
948 variation and minimum / maximum) referred to the words' and characters' amounts
949 provided by the respondents through their answers. Answers to Question #2 have been
950 excluded (see text for the reasons of exclusion). In the left part, data from the answers to
951 the first item of the questions ("strict" answer); in the central part, to the second item
952 (concrete elements). Total values are displayed in the right part of the table. Further
953 information in Fig. S2, S3.

954
955

Blocks	"H" Choosers				"S" Choosers			
	"H" Evaluation		"S" Evaluation(*)		"H" Evaluation		"S" Evaluation(*)	
	+	-	+	-	+	-	+	-
1	0	0	0	0	0	1	1	0
2	16	13	6	10	13	75	23	4
3	6	1	7	5	5	6	50	4
4	3	1	7	1	4	16	52	0
5	0	0	1	0	0	1	7	0
TOTAL	**25**	**15**	**21**	**16**	**22**	**99**	**133**	**8**

(*) The sequence of the blocks belonging to Message "H" is the original one (as it appears in the actual message); the sequence belonging to Message "S" is *converted* (see SI, Section 10 and Note 7, for details).

Table S8: Block preference analysis (I) – Amount of expressed REFERENCES.

[Legend: +/- = type of predicted effect (resolution or escalation of the conflict) of Message "H" and Message "S" on XX.]

The table displays the "preference" for different blocks, expressed through the amount of references to each block. Data is disaggregated for H/S choice and for type of expressed predictions (+/-) on Message "H" and Message "S" effects. Respondents, while evaluating the "H" message, seem to be mainly focused on the same block (the Block #2), regardless of their H/S choice. On the opposite, while evaluating the "S" message, they mainly focus on different blocks, depending on the choice they expressed.

General Totals		***Means***
Total references to Msg "H" blocks	**161**	***1,59*** references/participant
Total references to Msg "S" blocks	**178**	***1,76*** references/participant
Total references expressed by "H" choosers	**77**	***2,96*** references/participant
Total references expressed by "S" choosers	**262**	***3,49*** references/participant
General total	**339**	***3,36*** references/participant

Table S9: Block preference analysis (I) – Additional data.

The table displays some additional information about data displayed in previous Table S8. Additional data consists of total expressed references and mean values about references per participant.

Blocks	"H" Choosers				"S" Choosers			
	"H" Evaluation		"S" Evaluation(*)		"H" Evaluation		"S" Evaluation(*)	
	+	-	+	-	+	-	+	-
1	0	0	0	0	0	1	1	0
2	13	9	6	10	10	43	18	4
3	5	1	7	3	3	5	34	3
4	3	1	4	1	4	15	35	0
5	0	0	1	0	0	1	7	0
TOTAL	**21**	**11**	**18**	**14**	**17**	**65**	**95**	**7**

(*) The sequence of the blocks belonging to Message "H" is the original one (as it appears in the actual message); the sequence belonging to Message "S" is *converted* (see SI, Section 10 and Note 7, for details).

Table S10: Block preference analysis (II) – Amount of PARTICIPANTS expressing references.

[Legend: +/- = type of predicted effect (resolution or escalation of the conflict) of Message "H" and Message "S" on XX.]

The table displays the "preference" for different blocks, expressed through the amount of participants that refer to each block. Data is disaggregated for H/S choice and for type of expressed predictions (+/-) on Message "H" and Message "S" effects. Respondents, while evaluating the "H" message, seem to be mainly focused on the same block (the Block #2), regardless of their H/S choice. On the opposite, while evaluating the "S" message, they mainly focus on different blocks, depending on the choice they expressed.

997
998

General Totals		***Means***
Total people referring to msg "H" blocks	**114**	***1,13*** referred blocks/participant
Total people referring to msg "S" blocks	**134**	***1,33*** referred blocks/participant
Total "H" choosers' block evaluations	**64**	***2,46*** referred blocks/participant
Total "S" choosers' block evaluations	**184**	***2,45*** referred blocks/participant
General total	**248**	***2,46*** referred blocks/participant

999
1000 **Table S11: Block preference analysis (II) – Additional data.**

1001 The table displays some additional information about data displayed in previous Table
1002 S10. Additional data consists of total people expressing references and mean values about
1003 referred blocks per participant.

1004
1005
1006