



# What Are They Gonna Think About Me? An Innovative Text Analysis on Social Anxiety and Taijin Kyofusho Through MADIT Methodology

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## Abstract

Meaning and translation are never-ending issues that constantly challenge researchers who work in cross-cultural settings, especially when the focus is on how people use language to express and interact in relation to their distress experiences. Many efforts have been undertaken in order to try to understand and manage the content variance that can emerge from context and linguistic differences. The present study aims at offering its contribution on this topic by presenting MADIT methodology, an innovative textual analysis that focuses on the processual use of language. Using the theoretical references of Dialogic Science, language is analysed as an interactive process, leading the researchers to observe the modalities through which language is used (the how) instead of the different contents brought by speakers (the what). After discussing the theoretical differences between content and processual analysis, we present MADIT methodology through a comparative explorative study on the discursive production about taijin kyofusho and social anxiety in Japanese and Italian contexts. The results pointed out how, going beyond the content differences and focusing on the processual interactive reality generated through language, it is possible to observe cross-cultural similarities in the use of language to shape distress experiences.

**Keywords** Language analysis · Cross-cultural psychology · MADIT · Taijin kyofusho · Social anxiety · Interaction

## Introduction

### Taijin Kyofusho: from Cultural Bound Syndromes to Idiom of Distress

DSM-5 defines “taijin kyofusho” as a “cultural syndrome characterised by anxiety about and avoidance of interpersonal situations due to the thought, feeling, or conviction that one’s appearance and actions in social interactions are inadequate or offensive to others”

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(APA, 2013). Individuals diagnosed with *taijin kyofusho* tend to focus on the impact they can have on other people, believing that they may be a threat to the group's cohesiveness by causing them discomfort (Bhardway et al., 2021). Major concerns are facial blushing, having an offensive body odour, inappropriate gaze or body deformity (APA, 2013). The symptomatology of this syndrome is very close to the one of "social phobia" (Essau et al., 2012a): both "social phobia" and "*taijin kyofusho*" refer to a form of distress connected with social situations. What distinguishes them is that individuals with "social phobia" are afraid to embarrass themselves, while individuals diagnosed with *taijin kyofusho* fear that they may offend others, bringing shame upon their social or familiar group (Essau et al., 2012a; Suzuki et al., 2003). Furthermore, *taijin kyofusho* symptoms tend to be more exacerbated in social situations with acquaintances, such as talking to colleagues, and less so when interacting with strangers or intimate friends and family. Fear symptoms of social phobia, instead, are related to being in social or performance situations, in which the person is exposed to unfamiliar people or to possible scrutiny by others (Essau et al., 2012a).

The distinctive symptoms of *taijin kyofusho* occur especially in societies that place a strong emphasis on the self-conscious maintenance of appropriate social behaviour in hierarchical interpersonal relationships, especially in Japan (Essau et al., 2012a, b; Woody et al., 2015): in Japanese, *taijin* means "in relation to others" and *kyofusho* "fear or phobia"; namely "fear of others" (Zhang et al., 2001; Bhardwaj et al., 2021), but also in Korean (APA, 2013; Vriends et al., 2013). For these reasons, as can also be seen from the definition reported above, DSM-5 conceptualises *Taijin Kyofusho* as a "cultural syndrome", meaning that it occurs especially in specific cultural contexts.

The concept of "culture-bound syndrome" (CBS from now on) first appeared in the DSM nosography in 1994, with the fourth version of the manual. The introduction of this concept aimed to understand culture not as a merely confounding factor of the diagnostic process, but as a different worldview with impact on illness experience (Kirmayer, 2006). Culture-bound syndrome helped to draw the attention to the contingent dimension of mental disorders, showing how they are constructed and related to political, social and economic dimensions (Guinart et al., 2019; Kaiser & Weaver, 2019; Kleinmann, 1977). However, some criticism arose among the scientific community. The concern was related to an "uncritical and static" presentation of these syndromes, reifying them through a detachment process from the interactive and "vital" context of origin that produces them (Kaiser & Weaver, 2019). Other issues of CBS were related to finding of patterns of "cultural-symptoms" in different cultural contexts (more recent studies, in fact, found cases of *taijin kyofusho* also in Switzerland, Australia, New Zealand and the USA (Vriends et al., 2013; APA, 2013), lack of a cohesive presentation of symptoms characterising CBS, diversity in aetiological attributions, vulnerability groups and symptoms that risk to influence the cultural label (Kohrt et al., 2014).

To take over these limitations, the construct of "idiom of distress" was introduced. The main idea was to explore how people experience distress through an analysis of what they say and do about it (Kaiser & Weaver, 2019), focusing on the social and personal meaning of these words: this has been used to identify collective and individual areas of coping, social support and intervention (Lewis-Fernandez & Kirmayer, 2019). This construct is due to the work of Mark Nichter (1981; see also Nichter, 2010) and it gained rapidly large consensus among the scientific community, as the amount of work made with it testifies (for a review, see Kaiser & Weaver, 2019; Kohrt et al., 2014; Cork et al., 2019). Other attempts to overcome the use of the term CBS have been made through the constructs of "cultural syndrome", "popular category of distress" and "explanatory model" (Kohrt et al., 2014; APA, 2013). To aggregate these different constructs, DSM-5 used the term "cultural

concept of distress” (CCD) to refer to the “ways cultural groups experience, understand and communicate suffering behavioural problems, or troubling thoughts and emotions” (APA, 2013) stating in addition that “all forms of distress are locally shaped, including DSM disorders” (APA, 2013). The appearance of CCD in the DSM-5 marks the interest and attention of the scientific community towards the ways in which the cultural background shapes the expression of distress.

Therefore, on the one hand, the observation of an increasing interest in the study of how people use the language to express their distress is possible. On the other hand, recent reviews highlighted some criticalities in the methods adopted to study, compare and use the CCD (for a review, see Cork et al., 2019; Kohrt et al., 2014). Deepening these criticalities, the core issue in the scientific observation of CCD is translation, which “permeates” the entire field of study of CCD (Cork et al., 2019): from information gathering to the ways idioms are translated and contextualised in terms of local meaning and used during the intervention. For example, a possible issue, as the works of Cassaniti (2019) show, is that the same idiom of distress can be used to describe a wide range of different experiences, highlighting the polysemic dimension of these words to be understood in relation to the specific communicative contexts in which they are used. Moreover, idioms of distress are embedded in a dense framework of interactions between local and global meanings, making specific ethnographic analysis necessary to understand the particular meaning attributed to the studied term (Lewis-Fernandez & Kyrnayer, 2019; Mendenhall et al., 2019). In the last years, scholars have tried to deal with these issues in many innovative and different ways; however, there is still a lack of a common guideline for the study of idioms of distress (Weaver et al., 2022).

Consequently, *taijin kyofusho* can be understood as a content used by people living in specific areas of the world to express, communicate and generate their experience of suffering. Introducing the construct of idiom of distress, we highlighted some issues connected to the content analysis of these words. Therefore, in continuity with the work inaugurated by Richter, we present an approach that, focusing on the processual use of language by speakers, aims to offer an innovative contribution to the study on how people generate, through language, their experience of distress.

## From Content to Process Analysis of Language through Dialogic Science

Dialogic Science (Turchi et al., 2022; a; b; 2021) is a research program that, thanks to the formalisation of natural language use, allows the study and the analysis of how speakers interact and generate their reality of sense through language; i.e. how they create different “discursive configurations”, as frameworks of rhetorical-argumentative links between different contents that shape the reality from an interactive point of view, where the language is the main tool that human beings use to generate the reality itself while interacting with each other (see Turchi et al., 2014a, b, 2021). Therefore, we emphasise how the object of Dialogic Science is the *language* as theorised by Wittgenstein (2009), making it necessary to distinguish language from the different local idioms. In fact, the first refers to a feature of humankind that allows humans to interact using a system of symbols and a set of rules to use these symbols. The latter refers instead to the local “shapes” that language can assume: French, Swahili, Italian, Japanese and all the other idioms and dialects used around the world. In other words, the language is considered what all idioms have in common (Turchi et al., 2021).

Moreover, Dialogic Science focuses on the ostensive property of language, i.e. the property of language to assume a different value every time the symbolic unit is used. More specifically,

Dialogic Science uses a formalised language to describe the ways in which natural language is used to interact; each one of these ways is conceptualised as a specific *rule of use* of natural language (Turchi et al., 2022). To date, this research program conceptualised 24 rules of language use, to which correspond 24 “Discursive Repertoires”<sup>1</sup> (DRs; Turchi et al., 2014a; for a deeper understanding of the different Discursive Repertoires and the discursive-interactive framework they generate, see the paragraph 2, and the attached materials in Turchi et al., 2021).

Focusing on the usage value of language allows the researcher to overcome the content differences that characterise each idiom and to observe the interactive scenario that the use of these contents generates. Hence, if the comparative research usually focuses on the content offered by the respondents (Hoffman et al., 2010; Vriends et al., 2013), distinguishing, for example, individualistic and collectivistic contents, independent and interdependent self-construal’s content (for a review see Hoffman et al., 2010), the focus on processual dimension allows the researcher to observe and measure also how all these contents are used to generate a reality of sense and interact with others (Turchi et al., 2021).

To clarify the difference between a content analysis (of meaning) and a processual one (rule of use), here are some examples: (1) a) “Being patient is not always the best behaviour”, b) “I’m a patient of my doctor”; (2) a) “All the patients are sick”, b) “Yesterday, during lunch, I saw some patients waiting outside the doctor’s office”.

In the first case (1), it is possible to distinguish two different meanings of the same word “patient”. In the second couple of sentences (2), the word “patient” has always the same meaning; however, it is used in two different ways: in the first case (a) to state an absolute and certain reality, with a lack of common references and thus allowing no other possible reality; conversely, in the second case (b), the language is used to describe a fact, a situation, providing the interlocutor with shareable references, thus opening to further interaction and to the generation of other different reality of sense.

At the same time, given the relevance that the construct of “sense” plays within Dialogic Science, to emphasise the similarities and the differences between the discourse analysis performed by the Dialogic Science and the ones conducted by other discourse analysis approaches is fundamental, i.e. the different disciplines focused on analysing “how language is used by humans to interact and to do things” (Jones, 2018). On a general level, as stated before, Dialogic Science share with these approaches the focus on the interactive reality made available by language (Rodney, 2018; Tannen et al., 2015). At the same time, comparing Dialogic Science with, for example, the approach and the works of Van Dijk (2015), we observed that the former misses the focus on the explication of the power relationships and the links to the context’s characteristics underlying the use of language present in the latter (Van Dijk, 2008, 2009). Dialogic Science, in fact, is more focused on how the rhetorical argumentative structures shape the reality of sense the speakers weave in the interaction, than the sociological and ideological elements underlying the discursive interaction.

Making a second example, we compared Dialogic Science with the diatextual approach presented by Mininni et al. (2014). Although sharing some common points (such as the intrinsic value posed on the uncertainty of linguistic interaction), they differ for the relevance placed on the rigorousness and the formalisation of the analytic process, by the former, and the relevance given to the context and meaning, by the latter. As stated before, in

<sup>1</sup> “A finite mode of constructing reality, linguistically understood, with pragmatic value, which groups together even more enunciated (called “archipelagos of meaning”), articulated in concatenated sentences and diffused with a value of assertion of truth, aimed at generating (building)/maintaining a narrative coherence” (Turchi et al., 2021).

fact, the aim of Dialogic Science is not so much to observe how meaning is constructed, as well how this construction is linked to the sociological and contextual characteristics were the enunciation takes place, but rather to describe the kinds of interactions that particular language use modalities can promote.

Thus, given the characteristics of the theoretical approach adopted, as well as the elements of premise set forth above, the aim of this explorative study is to describe and compare the modalities through which people with different cultural backgrounds use the idiom of distress of “social phobia” and “taijin kyofusho” to interact, configure and give shape to a reality of sense. In doing so, our aim is to contribute to the research program on the idiom of distress, providing transcultural and “transidiomatic” scientific data on *how* people use language when they talk about distress experiences. Moreover, thanks to the measures provided by Dialogic Science, these data can be used to anticipate future interactive situations that could be generated by specific ways of using language to talk about social phobia and taijin kyofusho: following the flow of language makes the knowledge about its evolvment possible, thanks to the narrative coherence (the “glue” linking the various contents) that is designed between the different narrations (see the next section for further details on this last aspect and the discussions for some examples). This allows to manage possible critical situations with more effective strategies.

## Methods

### Theoretical and Methodological References

To pursue the aim described above, we referred to the theoretical references provided by Dialogic Science.<sup>2</sup> It places itself within the Narrativistic Paradigm (Turchi et al., 2021, 2014a) and has its roots in the works of Wittgenstein (2009), Harré and Gillet (1994) and Luckmann and Berger (1991). The methodology consistent with the paradigmatic reference is the Methodology for the Analysis of Computerised Text Data (MADIT—Pinto et al., 2022a; Pinto et al., 2022b; Turchi et al., 2022; Turchi et al. 2022a; Turchi et al., 2021; Iudici et al., 2019; Iudici et al., 2020).

The theoretical references of Dialogic Science and MADIT methodology allow the researcher to describe and measure the use of natural language through a formalised language. This formalised language is constituted of 24 Discursive Repertories, each one representing a specific modality of using language with particular properties (see Attached Materials of Turchi et al., 2021). Every DR has its definition and consists of one or more properties: each one outlines an a priori rule that takes shape when it is used by people to interact with each other. Thanks to language and its rules, humans design infinite narrative realities that can change throughout the time or that can be kept as they are in the more steady and immutable possible way.

Based on their characteristics, the 24 Repertories are divided into three typologies: Generative, Stabilisation and Hybrid. The Generative Repertories’ typology consists of language use modalities that are characterised by promoting the generation of novel discursive configuration (i.e. narrative reality) and the reconfiguration of already available configurations

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<sup>2</sup> “Science that has as its object of knowledge the use of the symbolic units that compose ordinary language, which gives form to discursive configurations; [it is] that cognitive apparatus that formalises the dialogical process (or discursive process)” (Turchi et al., 2021).

(i.e. realities), opening the possibilities of changing the current interactive scenarios. The Stabilisation Repertories' typology, instead, is constituted by language use modalities that contribute to keep the discursive configurations identical to themselves, stable, proposing a single interactive possibility. The Hybrid Repertories' typology consists of rules of natural language use that can take both a stabilisation or generative orientation depending on the class of the repertories with which they are interacting (see the "Result" section for some excerpts of text that account for the different rules of use and related typology). All three Repertories' typologies contribute to the design and configuration of the reality of sense: the latter is shaped through interaction, since the language is the main tool that human beings use to interact with each other, and to create the reality in which they live. Therefore, even if the Stabilisation Repertories design an unchangeable reality, they still contribute to its generation: they support its creation and evolution, though in a level that is lower than the one of the Generative Repertories. Therefore, humans could not use only the Generative DRs, nor only the Stabilisation ones. In the first case, people would live in a constant changeable reality, where we would not have any steady anchor in our lives, which would be unstable. On the other hand, using only Stabilisation DRs would make the change impossible, so the reality would remain as it is and could never be different.

In this sense, the formalisation of the Discursive Repertories and their specific characteristics allow the tracking of rigorous and fixed relations between the repertories themselves, ranking and distributing them on the periodic and semi-radial table of Discursive Repertories (see Attached Material of Turchi et al., 2021), generating a rigorous measure of the modalities of natural language use. So, thanks to these properties of the Discursive Repertories, we have been able to measure the dialogical weight (dW) of each Discursive Repertory and, in turn, the one of the discursive configurations generated by the respondents. Dialogical weight can assume values between 0.1 and 0.9, and it is a measure of the generativity of the modalities of language use employed by the speakers. A text with a low dialogic weight is characterised mainly by Stabilisation Repertories, which generates a configuration of reality of sense that tends to remain stable and unchanged. On the other hand, a text with a high dialogical weight is mainly characterised by Generative Repertories, which means that the configuration of reality is mutable and open to possibilities of change. As an example, referring to the object of this paper, if the modalities used to shape the interaction in a social situation have a low dialogical weight, we could anticipate a low possibility of change of the narrative configuration. In this way, if the social interactions are designed through critical and negative contents, they will be configured (shaped) in the same way over and over again. On the contrary, if the modalities used will have a high dialogical weight, it is possible to anticipate a transformation of the reality itself, linked precisely to the different interactive possibilities that the generative repertories make possible, beyond the connotation of social interactions as critical or uncritical. This helps us to understand that the reality generated by interaction, using the 24 DRs, tends to be consistent with itself, maintaining an internal coherence that helps us in describing the current reality and the ways it could evolve in the future. This is made possible thanks to the dialogical properties of the DRs and the dialogical weight that gives us a measure of the possibility of change of the current reality.

Considering all the above, MADIT methodology offers a praxis of textual analysis: it consists of five steps that support the analyst in the study of the language interaction and in the representation of the reality of sense (so, the investigation construct, that in this case is the social phobia and the *taijin kyofusho*). The various steps allow the analyst to observe the text, keeping the aim of the study in mind; the analyst uses the guiding question to divide the text into excerpts, different for the type of rhetorical link used, and to name the different DRs, one for each part of text. The final discursive configuration is given by the framework of DRs that characterise the overall text.

## Participants

To collect the data used to observe how the use of language and the cultural background interact with each other, the investigatory group was organised according to two variables: cultural background and current residence. Moreover, to “stress” the interaction between language use modalities and the two variables studied, we created two “mixed groups”, where the cultural background and the current residence were intertwined. As said before, the aim of this study was to describe how people use natural language to talk about distress experiences, so focusing on how the common knowledge about these experiences is linguistically conveyed by the interviewees, no other inclusion criteria other than the cultural background and the residence were considered. In this regard, we highlight how none of the participants had been diagnosed with one of the two syndromes at the time of the survey. We explained the difference between social phobia and *taijin kyofusho* in the informed consent, signed by participants before filling in the questionnaire.

The survey, therefore, was administered to an investigatory group ( $N=32$ ) consisting of the following:

- Italian citizens living in Italy ( $N=11$ ; 2 males, 9 females; age: 19–32)
- Italian citizens living in Japan ( $N=7$ ; 2 males, 3 females; age: 20–63)
- Japanese citizens living in Japan ( $N=9$ ; 1 male, 8 females; age: 31–47)
- Japanese citizens living in Italy ( $N=5$ ; 3 males, 4 females; age: 26–48)

The Japanese participants have been contacted with the help of cultural associations and foundations on the Italian territory: the “Cultural Office Italy Japan”, the “Japanese Association of Rome”, the “Japanese Association of Northern Italy” and the “Japanese School of Rome”.

## Investigation and Analysis Protocol

In order to provide a description of the way language is used to generate the configuration of “*taijin kyofusho*” and “social phobia syndrome”, across the 4 different groups of participants, we designed 4 ad-hoc questionnaires, which combined close and open-ended questions (see Attached Material). The questionnaires have been translated by a specialised agency and have been administered in Italian or Japanese depending on the preferred language of the respondent. The questions were intended to investigate different aspects of the constructs depending on the group considered (Table 1).

We analysed the collected text using MADIT methodology to name the Discursive Repertoires used, and then the software D.I.Ana.<sup>3</sup> to organise them and calculate the dialogical weight.

The administration of the questionnaire assumed different modalities according to the different groups. For the first group (Italian living in Italy), protocols have been directly administered with paper questionnaires. Italians living in Japan have been contacted through social networks and filled out the questionnaire online. The third and fourth group questionnaires

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<sup>3</sup> Dialogical Interface for ANALYSIS is a spreadsheet useful for the researcher who uses the MADIT methodology. It allows the analysis of the text, the production of the measure of the investigation objects through the application of the semi-radial periodic table of Discursive Repertoires (Turchi et al., 2021), the use of Dialogical Weight and Dialogical Moment. The tool produces also a content analysis of the analysed text. The tool has been built by the MADIT. Scientific Committee at the FISPPA Department of University of Padova.

**Table 1** Aims of the questions in the different protocols

<b>1) Protocol for Italians living in Italy</b>	<b>2) Protocol for Italian living in Japan</b>	<b>3) Protocol for Japanese living in Japan</b>	<b>4) Japanese living in Italy</b>
Describe the subject's knowledge and opportunity for knowledge about social phobia syndrome	Describe how the subject configures his/her proficiency in Italian and Japanese language	Describe the subject's knowledge and opportunity for knowledge about social phobia syndrome (or <i>tajim kyofusho</i> )	Describe how the subject configures his/her proficiency in Italian and Japanese language
Describe the subject's expertise on social phobia syndrome	Describe the subject's knowledge and opportunity for knowledge about social phobia syndrome	Describe the subject's knowledge and opportunity for knowledge about social phobia syndrome (or <i>tajim kyofusho</i> )	Describe the subject's knowledge and opportunity for knowledge about social phobia syndrome (or <i>tajim kyofusho</i> )
Describe how the subject configures social phobia syndrome	Describe the subject's expertise on social phobia syndrome	Describe the subject's expertise on social phobia syndrome	Describe the subject's expertise on social phobia syndrome
Describe how the subject configures social phobia syndrome	Describe how the subject configures social phobia syndrome	Describe how the subject configures social phobia syndrome	Describe how the subject configures social phobia syndrome
	Describe how the subject configures social phobia syndrome among Japanese and Italian citizens.		Describe how the subject configures social phobia syndrome among Japanese and Italian citizens.
			Describe how the subject configures his/her relationship with others after learning Italian.



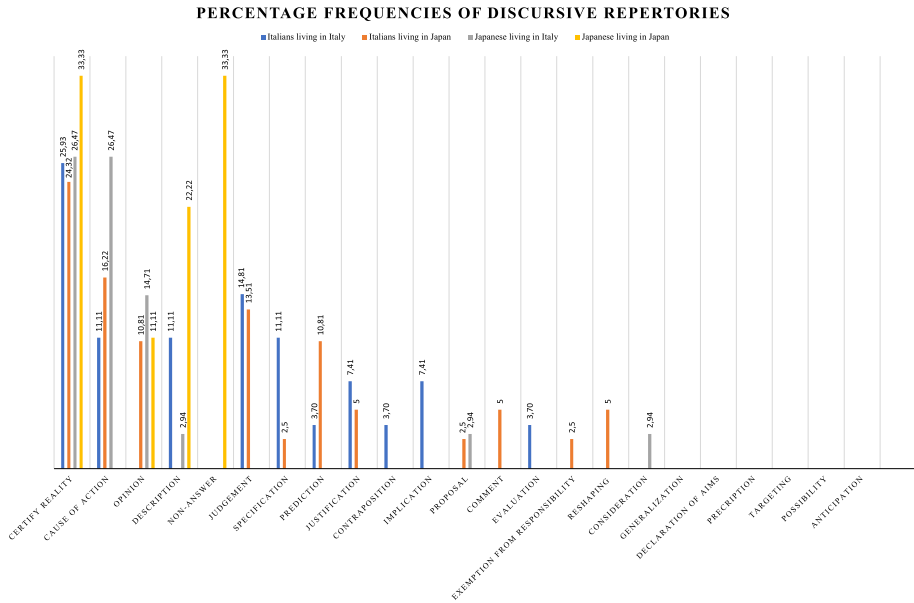


Fig. 1 Percentage frequencies of Discursive Repertoires

have been administered through associations (see Paragraph 2.2 for details) that provide associational support to Japanese living abroad. Through the same associations, Japanese living in Japan have been contacted.

## Results

The following figure represents the total percentages of occurrence of all the Discursive Repertoires used by the participants in their answers (Fig. 1). The repertoires are divided into the four different groups described above.

The following table represents both the dialogical weight calculated for the different groups and the average of the different measures, in order to give synthetic data.

As we can see from Table 2, the average dialogical weight is quite low: 0.3dW. This data can be explained by the fact that the most used repertoires belong to the Stabilisation typology. In fact, the most frequent DRy across the four groups is “Certify Reality”. This DR belongs to the Stabilisation typology and is characterised by the fact that it generates a reality of sense that poses itself as a given, absolute and immutable fact.<sup>4</sup> An example of the use of the “Certify Reality” DR is “I can’t even talk to the tobacconist. At the grocery store I avoid getting things at the counter and I’m embarrassed” or “I experience a kind of perpetual panic when I have to interact with other people”. As we can see from the examples, the reality of sense generated by this modality is shaped as certain, not open to the

<sup>4</sup> “Discursive modality that configures reality by stating a clear, certain and unalterable state of thing. The possibility of transformation is unforeseen for this reality” (Turchi et al., 2021).

**Table 2** Average dialogical weight for the different groups

Group	Dialogical weight	Group	Dialogical weight
Italian living in Italy	0.4	Japanese living in Italy	0.3
Italian living in Japan	0.3	Japanese living in Japan	0.5
<b>Average dialogical weight</b>		0.3	

possibility of a change and, lowering the dialogical weight of the configuration, it allows us to anticipate a maintenance of the state of things.

Another DR used across the four groups (except for the group of Japanese living in Japan) is “Cause of Action”.<sup>5</sup> This DR belongs to the Stabilisation typology as well, and it is characterised by defining reality through factual empirical links of cause-effect, with valence of truth, which determines the course of events in terms of immutability. An example of the use of this DR is “I went out for a walk, I got nervous because there were too many people around” or “it is difficult to communicate with people because each time he is afraid of being offended by the surrounding people”. Also in these cases, the reality of sense is generated in terms of certainty, but we can observe that the “logic” of the text is different from the ones reported before: in this case, in fact, the language is used to create a causal link between two elements.

“Opinion”<sup>6</sup> is another Stabilisation DR used across the groups. This DR makes explicit that what is said is valid and circumscribed within a proper and exclusive dimension of the narrating voice. An example of the use of this DR is “I wouldn’t know how can be an Italian afraid of others, they always seem to me so quiet to say what they think”. This kind of text expresses a purely personal point of view that could be interpreted and misunderstood from other people, since it does not make the criteria used to say what is been said explicit: people who listen to this narration would need to make more questions, in order to collect all the useful elements and information for having the whole picture available (for example, why he/she said Italians are quiet to say what they think, or what situation is he/she thinking of).

Moreover, we can observe a frequent use of the Generative DR “Description”,<sup>7</sup> especially by the Japanese people living in Japan. This modality uses common elements to generate the reality of sense and to make it shareable with others, opening in this way the possible interaction and so promoting the transformation of the narrative reality. As an example, we can consider the following excerpts “He experienced social anxiety symptoms when one day, at the time of COVID pandemic, during a video lecture with about 100 other people, he was unable to turn on the microphone to make his own judgement about a topic, he began to feel palpitations, his palms were sweating”. The “Description” DR provides shareable elements that can be used by the other speakers to offer a contribution to discursive interaction, generating

<sup>5</sup> “Discursive modality that configures reality through empirical-factual connections of cause-effects with value of truth, which determine an immutable course of events. The argumentation is not epistemologically founded” (Turchi et al., 2021).

<sup>6</sup> “Discursive modality that configures reality by making explicit that the contents are valid and delimited within narrator’s own and exclusive perspective” (Turchi et al., 2021).

<sup>7</sup> “Discursive modality that configures reality as a common heritage that does not belong exclusively to any narrator, and it needs everyone’s contribution to be maintained. It configures a current or past reality as if the narrator were responding to a question starting with “how” instead of “why”” (Turchi et al., 2021).

new realities. The use of this repertory among Japanese living in Japan (22.22%) and Italians living in Italy (11.11%) accounts for the higher dialogical weight of these two groups (respectively 0.5dW and 0.4dW) compared to the other two groups.

Finally, we can observe an extensive use of the “Non-Answer” DR,<sup>8</sup> which is a discursive modality used to avoid the question asked. This repertory uses, for example, expressions like “I don’t know”, establishing thus a “state of things” in which the narrator does not adhere properly to the process introduced by the question itself. The usage of this DR is due to the fact that some respondents did not know what *taijin kyofusho* is.

## Conclusions

This study had the aim of describing and comparing the modalities through which people with different cultural backgrounds use the idiom of distress of “social phobia” and “*taijin kyofusho*” to interact and design a reality of sense. We administered an open-ended questionnaire to a group of respondents that combined different cultural backgrounds and language proficiency (in Italian and Japanese).

On a general level, the results showed a cross-group use of Stabilisation DRs, especially the one of “Certify Reality”. The generalised use of this DR and its a priori definition allows us to state that, across the different cultural contexts regarding this study, when people talk about their own or someone else’s distress connected to social situations, they generate a reality of sense shaped as a matter of fact, an unalterable state of things.

Deepening the observation of the results, it is possible to observe that the second and third most used DRs are “Cause of Action” and “Opinion”. These two also belong to the Stabilisation typology, confirming that, across cultural background, the interactive framework generated by speakers regarding certain forms of distress tend to configure a stable scenario. Moreover, these observations match with the measure of the dialogical weight, which, on average, has a value of 0.3dW. In general, these results show how the criticalities and the strategies people use to face them are more likely to remain unchanged through time: the used repertories, mostly belonging to the Stabilisation typology, generate a stable interactive picture that represents an unchangeable, immutable and unalterable discursive reality. Making an example, if the contact with other people is narrated as critical, and the way the person usually face it is the avoidance of social interactions, the use of Stabilisation DRs maintains this interactive reality: the person would continue to feel the fear of the interaction with others and to use the avoidance strategy as an effective way to manage the fear, since DRs as “Certify Reality”, “Opinion”, or “Cause of Action” design a reality that keeps the coherence of the narrations solid and secure.

This cross-cultural tendency in using Stabilisation repertories support the distinction between *language* and *idioms* described in the introduction, showing how, if we go beyond the differences related to the contents and we focus on the process, it’s possible to observe how *language* is a species-specific feature of humans used in similar modalities to express distress.

Anyway, it is possible to observe how, except for the “Certify Reality”, all the other DRs are used by some groups of respondents and not by others. This aspect of the results is in contradiction with the previous argument for which language is transversal to cultural contexts.

<sup>8</sup> “Discursive modality that configures reality in order to avoid the asked question—according to CR’s processual properties—establishing a “state of things” in which the narrator does not adhere properly to the process introduced by the question itself” (Turchi et al., 2021).

Considering the research hypotheses, the ambivalence of these results can be explained by the low sample size which might have interfered with the manifestation of the variability of the discursive process.

Given this, future research on larger samples should be done, as well increasing the cultural backgrounds considered in the study. This would allow us to deepen the investigation of both the transcultural difference and similarities in language use modalities observed in this study, allowing us to understand if they are related to the intrinsic uncertainty that characterise the language process, or if they are due to some factor connected to cultural context: these factors could have a role in the design of the discursive reality, by virtue of the narrative coherence associated with some content used by people to shape their reality of sense. In fact, given the theoretical framework of Dialogic Science, all the different constructs that are typically used in psychology (as emotions, worries, biases, etc.) are observed through the lenses of language use rules, and so conceptualised as specific contents used by speakers to configure their reality of sense. Thus, it remains to be understood whether these specific contents are more likely to be characterised by a certain narrative coherence (i.e. the use of particular Discursive Repertoires) and, if so, how to be able to describe and understand these regularities.

On this regard, special attention should be paid to the Generative Repertoires. In fact, the results show how the DR of “Description” is mostly used by native idiom speakers (Italian living in Italy and Japanese living in Japan). This data could be linked to the fact that people, when speaking their first idiom, have a deeper familiarity with it and are more likely to use third-party references. The higher proficiency and the wider knowledge of the idiom might ease the use of third-party references and so promote a more generative asset, in which interactions can “move” to other interactive situations.

In conclusion, the results of this explorative research show, focusing on language use modalities, the possibility to observe a cross-cultural way to express distress connected to social situations. Furthermore, this study presented an innovative method for cross-cultural research in psychopathology and, in general, psychology. In fact, Dialogic Science and MADIT methodology, adopting a processual perspective and formalising the text analysis, provide a common theoretical and methodological ground for all the roles involved in the research on the cultural field. In the future, more research could be conducted using this methodology, and the measures it makes available could be used to make comparison and discussion using numeric data that are shareable. At the same time, the formalised language provided by Dialogic Science eases the implementation of informatic support for language analysis both for clinical (Orrù et al., 2022a) and social research (Orrù et al., 2022b), opening to new possibilities in the understanding of the relationship between language, distress and interaction.

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**Availability of Data and Material** Data are available previously request to authors, due to privacy matters.

## Declarations

**Ethics Approval and Consent to Participate** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the Ethics Committee of the University of Padova (n°4902). Informed consent was obtained from all individual participants involved in the study.

**Consent for Publication** Not applicable.

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