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Abstract:
The present article addresses the issue of pedagogical instruction in English grammatical tenses at higher levels of language proficiency. It describes a treatment design called 3-D grammar pedagogy or the *Organic Approach Deductivised* which consists mainly in teaching the semantics of the said grammatical structures based on the assumption that formal accuracy is already given in the case of advanced learners. The details of the treatment are presented in Section 2, while its implementation as well as the results of the study carried into its effectiveness followed by the resulting conclusions and teaching implications can be found in Section 3. The discussion, however, starts with the theoretical underpinnings of the 3-D/ OAD pedagogy, with particular regard to what it means to teach grammar semantics. These considerations are based on the Cultural Intelligence hypothesis developed by M. Tomasello and collaborators (M. Tomasello 1999 and 2005; H. Moll and M. Tomasello 2007; E. Hermann et al. 2007) stemming from L. S. Vygotsky's (1978) concept of cultural learning and his intelligence hypothesis (Section 1).

Introduction

In recent years we have been facing a renewed interest in instructing SL/FL learners on formal aspects of language. This tendency – commonly referred to as focus-on-form or form-focused instruction (FonF) – originated from the growing disappointment with the purely communicative language teaching noted by many researchers (M. Long 1983a, 1988, 1991; S. Fotos 1993, 1998; J. Williams 1995; R. Ellis – numerous publications on instructed learning; and many others). Very much in relation to this commonly expressed criticism of the predominantly communicative classroom, R. Lyster, H. Mori (2006) argued for a form-meaning equilibrium which, as they put it in their counterbalance hypothesis, rests on "instructional activities and interactional feedback" acting as "counterbalance to a classroom's predominant communicative orientation" (R. Lyster, H. Mori 2006: 269).

In fact, such an equilibrium is proposed by most publications on the topic. R. Ellis (1994) as well as C. Doughty and J. Williams (2004) – to mention just two of the numerous works – show that the best results in the language classroom are achieved if instruction is carried out in a meaningful, communicative context.

Reflecting on the instructed learning research, R. Ellis (2008b, p. http://asian-efl-journal.com/September_05_re.php) puts forward ten principles underlying focus on form, in which we find a number of references to the above-mentioned balance between form- and meaning-focus (principles 2 and 3), as well as related equilibria – instruction-communication (principles 6, 7 and 10) and control-naturalness (principles 1 and 4) – introduced with the learner in focus (principles 5 and 9):

Principle 1: Instruction needs to ensure that learners develop both a rich repertoire of formulaic expressions and a rule-based competence.
Principle 2: Instruction needs to ensure that learners focus predominantly on meaning.
Principle 3: Instruction needs to ensure that learners also focus on form.
Principle 4: Instruction needs to be predominantly directed at developing implicit knowledge of the L2 while not neglecting explicit knowledge.
Principle 5: Instruction needs to take into account the learner's 'built-in syllabus'.
Principle 6: Successful instructed language learning requires extensive L2 input.
Principle 7: Successful instructed language learning also requires opportunities for output.
Principle 8: The opportunity to interact in the L2 is central to developing L2 proficiency.
Principle 9: Instruction needs to take account of individual differences in learners.
Principle 10: In assessing learners' L2 proficiency, it is important to examine free as well as controlled production.

Using R. Ellis's principles as a point of departure, we can say that in paying attention to both form and meaning, it is important to acknowledge the importance of memory and its role in online language processing as well as the significance of the learner's analytic ability and the necessity to look at language in ways that go beyond an assembly of formulae, into the territory of the rules of a complex system. Besides, it is indispensible to provide classroom opportunities for both input and output as the two are necessary for language learning, as well as to keep in mind factors related to the type of instruction, with special regard to the question of the interface between explicit and implicit knowledge of the target language. All in all, we need a teaching philosophy which encompasses a variety of techniques, carrying a promise of an integrative instructional approach accounting for learner differences – language aptitude or personality profiles, among others – as well as certain task and context demands.

The justifiability of these recommendations notwithstanding – especially that they are based on the results of numerous studies (cf., among others, C. Doughty

and J. Williams 2004) – the in-service teacher is always slightly anxious about translating such theoretical guidelines into appropriate classroom practice. Especially, if (s)he is treading on the considerably unexplored theory of teaching grammar to the advanced language learner, an issue that is of particular interest to the present article. The very popular claim that there is no grammar to be taught to such a language user has to be refuted based both on teaching experience and research findings. The former, including the (non-native) teacher's own language biography, is a source of numerous observations of learner language use which is correct – at least in the light of respectable grammar books – but sounds non-native-like and, as such, seems inappropriate or artificial. In turn, when it comes to research evidence, K. Bardovi-Harlig and T. Bofman (1989), A. Housen (2002) and M. Kilhstedt (2002) observe that in advanced language learners formal accuracy and form-meaning mappings actually do *not* proceed simultaneously: students who are formally proficient are often not fully aware of the semantic distinctions between different structures. As a result, it is fully legitimate to claim, that teaching grammar to the advanced language learner is necessary, and that such instruction should focus less on the purely formal properties of different structures and more on the form-meaning mappings. This means that what is generally effective as focus-on-form at lower levels may need a critical look in the case of grammar pedagogy aimed at a more proficient L2 learner.

This article sets out to address the issue of grammar instruction, with particular regard to teaching English grammatical tenses, at higher levels of language proficiency. In doing so, it proposes a treatment design, which has been named 3-D grammar pedagogy or the *Organic Approach Deductivised*. The article presents the details of the treatment (Section 2), its implementation as well as the results of the study carried into its effectiveness (Section 3) followed by the resulting conclusions and teaching implications. First of all, however, the theoretical underpinnings of the 3-D/ OAD pedagogy are put forward, with particular regard to what it means to teach meaning, operationalised here as the instruction on the semantics of grammar. These considerations are based on the Cultural Intelligence hypothesis developed by M. Tomasello and collaborators (M. Tomasello 1999, 2005; H. Moll, M. Tomasello 2007; E. Hermann et al. 2007) stemming from L. S. Vygotsky's (1978) concept of cultural learning and his intelligence hypothesis (Section 1).

1. Cultural learning of grammar semantics

Before we define cultural learning of the formal aspects of a second/ foreign language, we need to briefly look at the main theories of meaning and meaning acquisition, investigating the very concept of cultural – or intersubjective – learning.

Discussing this issue we need to start as far back as Aristotle and his objective realism, in the light of which the learning of meaning is motivated by experience which is the same for every human being, as it results from contact with the same objective reality. This claim, informing what we know as traditional (structural) semantics, has been refuted by cognitive linguistics. The rationale for this is best explained by R. Langacker's (1987) concept of the encyclopaedic nature of meaning as personal – subjective rather than universal or objective – arising from human experience, which is very individual. As a result, the meaning is, so to say, in the mind of the beholder, the *homo loquens* in speech production and the *homo audiens* in reception.

Such an understanding of meaning – encyclopaedic, personal, subjective – is best explained in such theoretical constructs as the architecture of mental spaces (G. Fauconnier 1994, 1997) with its holistic semantic models, including frames (Ch. Fillmore, numerous publications), scripts (R.C. Schank, R. P. Abelson 1977) or the prototype theory (E. Rosch 1975a,b, 2003).

Mental spaces, to start with the first concept, are defined as "domains that we set up as we talk or listen, and that we structure with elements, roles, strategies and relations" (G. Fauconnier 1994: 2). These domains are both constructed and heralded by grammatical constructions which range from single morphemes or simple conjunctions such as *if* to more elaborate discourse markers and structures like *John believes that*; *In the movie*; or grammatical tenses, which are of particular interest to the present argument. The spaces that open within this architecture or scaffolding are filled in by conceptual content which can be more static (like the already mentioned frames) or dynamic (scripts).

As for the nature of this conceptual content, it is often described as holistic – frames and scripts are often called holistic semantic models. This corresponds to L. Wittgenstein's postulate of the gestalt quality of meaning – its total unanalisability described by his recommendation "Don't think, look" (L. Wittgenstein 1953 reprinted in B. Aarts et al. 2004: 41). This question is an interesting one and will be given some consideration here, because the answer to this is far from straightforward.

On the one hand, there are numerous arguments against the gestalt position and in favour of the compositionality of thought and, consequently, of the meaning/sense we make of the surrounding reality. One of such constructs is the already-mentioned prototype theory (E. Rosch 1975a,b; see also J.R. Taylor 2008), which, in its approach to meaning compositionality, is not very much unlike the traditional, truth-conditional semantics. Representatives of a given category are classified as prototypical and peripheral based on whether or not they possess a number of attributes. These attributes are analyzable and countable and, as such, are conceptually close to the conditions of structural semantics, the main difference lying in their being more or less representative rather than sufficient

and necessary. The possibility of meaning componentiality and – consequently – analysis is also proposed by T. Regier (1996 cited in E. Dąbrowska 2004: 111) in his computer model of representations. He claims that any instance of processing – including the processing of meaning – will be constrained by three types of structures: an orientation-combination structure, a map-comparison structure, and a motion-trajectory structure (E. Dąbrowska, following T. Regier 2004: 111). E. Dąbrowska (2004) argues for a similar, tri-partite motivation in human cognition. Finally, as R. Jackendoff (2002, 2004) claims, there has to be a kind of conceptual architecture "characterised in terms of a finite set of mental primitives and a finite set of principles of mental combination that collectively describe the set of possible concepts expressed by sentences" (R. Jackendoff 2004: 324). As a result, conceptual schemata are compositional, because – in the course of the above-mentioned "mental combination" – the principles manipulate the set of primitives into conceptual sets. As for the intrinsic organisation of such sets, R. Jackendoff (2004) further subdivides the conceptual structure and describes it by means of: the argument structure as well as ontological categories such as Thing, Event, State, Place, Path, Property, and Amount which correspond to the basic syntactic constituents of a sentence (the phrases); organisation of semantic fields, with certain words – like *go* – appearing across categories/ semantic fields forming "intuitively related paradigms" (R. Jackendoff 2004: 333); and, finally conceptualisation of boundedness (punctuality, telicity, etc) and aggregation. Considering the three subcomponents of conceptual structure R. Jackendoff writes (2004: 338): "[b]eneath the surface complexity of natural language concepts lies a highly abstract formal algebraic system that lays out the major parameters of thought".

There are, however, areas of conceptualisation, where the above-described mathematics of semantic primitives seems to fail. When discussing lexical schemata and defending the very concept, R. Jackendoff admits that these schemata may differ between individuals as well as have a certain degree of indeterminacy. A good example of this are colour categories, where, as E. Dąbrowska (2004) observes, semantic decomposition is only partial and leaves "an unanalysed residue" (ibid. p. 106). This is why the construct of conceptual semantics needs enrichment. One such extension is Spatial Semantics (R. Jackendoff 2002, 2004) with its three subcomponents: (a) spatial structure of objects, (b) focal values in continuous domains and (c) preference rule systems which help encode spatial (=visual) and other sensory understandings of the physical world. All these subcomponents require the processing of input which involves analysis (most practicably along the lines proposed by E. Rosch and T. Regier) *combined with* gestalt perception, the *don't think, look* processing mode proposed by L. Wittgenstein.

Understood in such a way, meaning – analysable and ontological on the one hand and, on the other, encyclopaedic, psychological and, in fact, personal

– is actually (surprising as it may appear in the light of its just acknowledged subjectivity) shared between individuals. Modern studies of meaning are carried out from the perspective of intersubjectivity rather than subjectivity of experience (cf. Ch. Sinha 1999, among others). In the light of such a proposal, meanings are not Aristotelian mental objects but cognitive acts of conceptual construal. Such acts, certainly very subjective, are nonetheless primarily aimed at "making sense in an intersubjectively shared universe of discourse which is continuous with (not separate from) the material world in which other (non-discoursive) human activities are carried out" (Ch. Sinha 1999: 232). As a result, meaning making needs to involve joint reference of discourse participants – rather than truth, as declared within the objective, Aristotelian stance – because otherwise communication will not be possible. Contemporary discussions of intersubjectivity relate the said joint reference of discourse participants to their shared knowledge or co-conception of the world (M. Overstreet 1999: 66); an earlier-used term – reciprocity of perspectives – implied assuming mutual experiences and disregarding personal differences.

An interesting perspective on such co-conception of meaning is M. Tomasello's (1999, 2005) theory of mind or, as he himself puts it, the theory of intention reading, in the light of which language learning – including the learning of meaning – is part of a broader process of collaborative cultural adaptation. As H. Moll and M. Tomasello (2007) point out – referring to L. S. Vygotsky's (1978) general theory of culture – while other primates are motivated by social competition, humans are driven by group collaboration. Development of technologies, cultural institutions and – most importantly to the present article – the acquisition of symbolic systems like language are driven by such cooperation. This claim is based on what H. Moll and M. Tomasello (2007: 1) call the Vygotskyian intelligence hypothesis and what is later developed by E. Hermann et al. (2007) as the Cultural Intelligence Hypothesis.

Related to both hypotheses is the afore-mentioned M. Tomasello's theory of mind. It is based on the acknowledgement that human beings possess "the foundational skill of understanding intentions" (M. Tomasello et al. 2005: 675) which hinges on the following abilities (M. Tomasello 2005: 3; abridged from research to date):

- the ability to share attention with other persons to objects and events of mutual interest;
- the ability to follow the attention and gesturing of other persons to distal objects and events outside the immediate interaction;
- the ability to actively direct the attention of others to distal objects and events; and
- the ability to culturally (imitatively) learn the intentional actions of others, including their communicative acts underlain by communicative intentions.

These four abilities are reinforced, as M. Tomasello (2005: 4) points out, by pattern-finding and skills including: forming perceptual and conceptual categories; construing schemas for recurrent patterns; performing statistically based distributional analysis of sequences; and creating analogies across two or more complex wholes. As such, they "are necessary for children to acquire the *appropriate use* of any and all linguistic symbols including complex linguistic expressions and constructions" (M. Tomasello 2005: 4; emphasis mine).

Such *appropriate use*, which implies the application of both a contextually suitable and grammatically accurate form[1], the former boiling down to a well-chosen meaning carried by the form in question, is what the cultural learning of any language results in. In other words, owing to our ability to read other people's minds, we imitate the observable (linguistic) action together with the non-observable intention behind this action. In doing so, we learn the forms *and* the meanings expressed by the language in a way that makes it possible for us to communicate similar meanings in subsequent contexts of this type. The answer to the question of how exactly this happens was offered much earlier by L. S. Vygotsky (1986: 9), who claimed that "*The conception of ... meaning*[2] *[is] a unit of both* ***generalizing thought*** *and* ***social interchange***". This can be schematically represented in the following way (Figure 1):

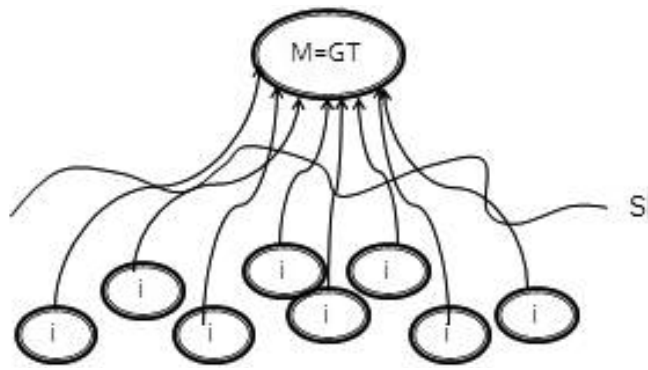

Figure 1: Cultural learning of meaning (informed by L. S. Vygotsky 1986)

In the diagramme, each (i) stands for an instance of use of a particular form. Based on numerous instantiations of this kind, we arrive at L. S. Vygotsky's *generalised thought* (GT) or the meaning of a given form which is stored in our

[1] which will be of lesser interest here as it does not constitute the main problem of advanced learners (cf. K. Bardovi-Harlig and T. Bofman (1989) M. Kihlstedt (2002) earlier in this article).

[2] L.S. Vygotsky limits the statement to word meaning. The mechanism, however, seems to have a much wider scope, hence the modification of the quote.

mental lexicon. All this is filtered through SI – social interaction – in the course of which we verify our thought generalisations by mind-reading the intentions of our interlocutors/ observed discourse participants.

If we apply this model to learning English grammatical tenses, we can theorise that the semantics of, for example, the continuous aspect of the past, present and future will be acquired in the following way (Figure 2): individual instantiations of use of the said aspect will carry one of the intended meanings: incompletion, temporariness, iteration/ habit, highlighting/ prominence, volition, emotion, matter of course, politeness (based on D. Mindt 2000).

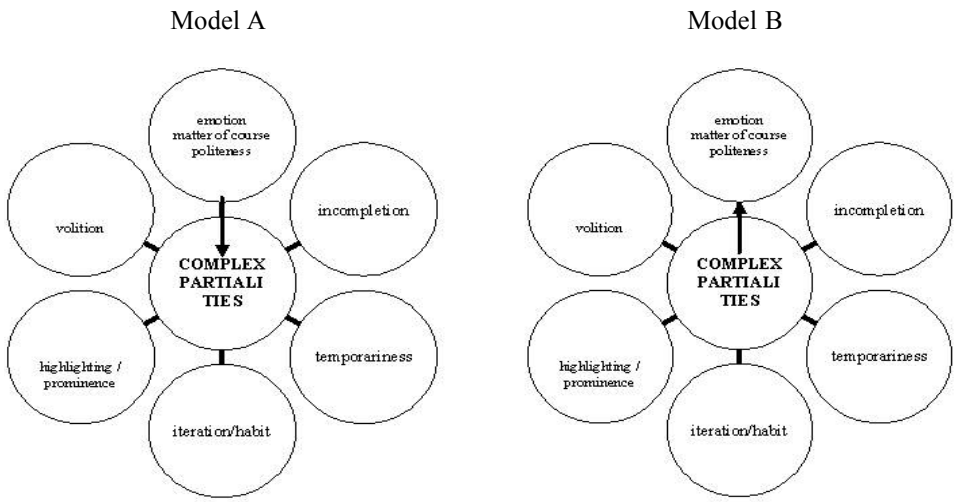

Figure 2. The cultural learning of meaning in language (L1)

Due to massive exposure to language forms carrying all of the above-listed meanings, a human child learning English as his/her mother tongue will arrive at the generalised thought – the semantics of the continuous aspect – of complex partialities[3] (Figure 2, model A). This generalised thought, once conceptually settled, will underlie each instance of the use of the continuous aspect (Figure 2, model B).

If such is the process of learning form-meaning mappings in the mother tongue, it seems legitimate to assume that human cultural intelligence will potentially be helpful in learning second and foreign languages, even for late bilinguals, as M. Tomasello's "foundational skill of understanding intentions" (M. Tomasello et al. 2005: 675) hinges on cognitive abilities (cf. earlier in this article) which

[3] This term has been coined by disanalogy to *simple totalities*, the semantics of the simple aspect proposed by M. Lewis (1986).

are not age-sensitive[4]. If this is so, the questions that need to be answered are: *1) How far is the concept of cultural intelligence utilised in the contemporary language learning methodology?* and *2) Will the process, if applied in teaching SL/FL grammar, follow a similar route in organised learning contexts, especially TEFL[5] educational milieus, in which both the exposure to language data and the opportunities for mind reading are limited?* These two issues are addressed below.

2. Contemporary grammar pedagogy. From 2-D to 3-D instruction

As mentioned earlier in the present article, the contemporary approach to teaching form-meaning mappings – focus-on-form (hence FonF) – is a balanced method catering to the needs of both those dissatisfied with traditional grammar-based approaches as well as the ones who find/ have found fault with the purely communicative, meaning-first-and-only classroom. This claim is confirmed by the impression one gets while studying FonF literature to date. In its light, form-focused pedagogy is a broad concept, a continuum in fact, covering on array of instructional modes ranging from implicit teaching (input structuring, input flooding, input enhancement) through consciousness (awareness) raising to explicit teaching, either inductive or deductive. In spite of this instructional variety, research in this area consistently shows (cf. R. Ellis 2002 – a review of studies; R. Erlam 2003, R. Lyster 2004, C. Doughty and J. Williams 2004 – a collection of studies, J. Philp/ S. Loewen/ R. Ellis 2006) that the best educational result is achieved if some form of instruction is combined with exposure to the taught structures in the communicative contexts, in both input- (B. VanPatten, numerous publications) and output-oriented (M. Swain 1985) activities.

If we relate the instruction-plus-exposure methodology to the cultural learning of meaning, we can see that each of the two aspects of instruction relates to two different elements: the instruction, or *didactics*, regardless of the mode (implicit or explicit; inductive or deductive) will correspond to rules (respectively, unverbalised or verbalised; induced by the learners from the studied language data or presented in the teacher-fronted, traditional way), and, consequently to generalised thought (GT) while the communicative context, or *demonstration*[6],

[4] If we assume that there is a critical period for learning languages at all. This article does not intend to address this issue. If interested, cf. the discussion in D. Singleton and L. Ryan (2004).

[5] TELF = Teaching English as a Foreign Language.

[6] The labelling I apply is schematic and serves the clarity of the presentation of my concept. I am fully aware that good *didactics* needs to involve the *demonstration* of examples alongside the presented rules. In my model, however, *demonstration* is used in a limited sense of *language use* (both input and output).

will be present in the number of instantiations (i), either received or produced (Figure 3).

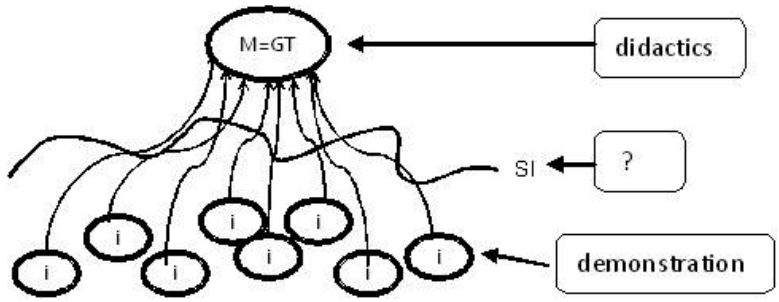

Figure 3. The cultural learning of meaning vis à vis form-focused instruction

The question mark in Figure 3, which illustrates the analogies described above, indicates a certain concern about the potential negligence of intention reading in the process I would like to express in this article. While it may be argued that the communicative context provides ample opportunities for the mind reading of fellow discourse participants, there are well grounded reasons for scepticism. First of all, if the learning takes place in the classroom and the communicative exchanges are among the learners themselves, it is questionable if their form-meaning mappings will be of native-like quality and as such, will enable effective learning of the semantics of grammar. As a result, there may be a lot of interlanguage – rather than target language – meaning acquisition. Secondly, even if, alongside communicative activities, learners are exposed to native-like input, human cultural intelligence may fail to exercise its full potential and bring the expected results because of the lack of what we may call massive exposure, which is a condition *sine qua non* of the acquisition of the mother tongue. Learning naturally, in turn, while offering exposure, may fail to provide the blueprint for generalised thought and, consequently, lead to the formation of wrong hypotheses about the learned language and its form-meaning pairings, especially in the case of more peripheral mappings of this kind.

A perfectly legitimate counterargument to the reservations expressed above can be based on the fact that the studies on FonF instruction to date demonstrate learning outcomes that are generally satisfactory. However, these studies describe the results of FonF treatment undertaken in low proficiency groups. The optimistic picture changes considerably – and the reservations become fully justified – if we look at how advanced language learners handle target form-meaning mappings. Based on the research into advanced learners carried out by A. Housen (2002) as well as studies by K. Bardovi-Harlig and T. Bofman (1989) and M. Kilhstedt (2002), we can state once again that the mastery of the two mapping poles

(form vs. meaning) does *not* proceed simultaneously: learners who are formally proficient are often not fully aware of the semantic distinctions between different structures. As a result, in the interlanguage systems of such learners form will always precede meaning (W. Klein 1994). What should be pointed out here is that the form-meaning discrepancy is far from negligible. As K. Bardovi-Harlig and T. Bofman (1989) found, based on their analysis of the essays of proficient learners – i.e. learners who, to use M. Kihlstedt's (2002) words, demonstrate a considerable morphological mastery – errors of use were 7.5 times the rate of formal errors. The reason why this unfavourable tendency correlates with language development is that:

> it is not until the morphology begins to spread to other aspectual categories in increasingly less prototypical combinations that the system exhibits potentially native-like contrasts... it is not until contrasts are possible in interlanguage that grammatical aspect becomes a true viewpoint aspect (K. Bardovi-Harlig 2005: 399).

For such a viewpoint grammar to emerge, a suitable instructional mode catering to the needs of the advanced learner needs to be devised. Even though, in an earlier publication (K. Bardovi-Harlig 2000) the cited K. Bardovi-Harlig does not believe instruction can effectively influence the rate and quality of language learning, I would like to put forward a hypothesis – answering Question 1 posed at the end of Section 1 – that the problems advanced language experience are the result of a certain instructional deficiency – the negligence of cultural learning based on intention reading. To arrive at the third, so-far missing D of my model, I call such learning reasoning *by default*, in second/ foreign language learning. In other words, I propose that the gap between the successful development of formal mastery and the insufficient mastery of the semantics of structure can be levelled if we replaced the 2-D (didactics + demonstration) pedagogy with a 3-D treatment (didactics + demonstration + default).

In turn, addressing Question 2 of whether such a 3-D pedagogy would allow language learning to follow a route similar to the cultural learning of meaning in L1, we need to consider a number of constraints on the second/ foreign language learning, most of which have already been mentioned in this article and include: social interaction with non-native rather than native speakers and limited exposure to form-meaning instantiations in discourse in controlled language environments; or the lack of the pedagogical input in natural milieus, which can be equally detrimental in terms of pedagogical effectiveness. This is why it seems that we cannot count on the generalised thought of the semantics of grammar – in either of the two educational contexts – to emerge as a result of the inductive browsing, as is the case in native language learning cf. Figure 2A). Yet, the same route of acquisition but walked in the opposite direction may be an option worth considering. In such a case, the generalised thought (GT=M) – based on the

two factors which, as mentioned above, are rather scarce in controlled language environments: instantiation and social interaction – should be, taught explicitly, potentially in a traditional, teacher-fronted way. In such a case the conceptual route followed in the course of grammar instruction will lead from such schematised knowledge of grammar semantics – including potential intentions of speakers, analysed overtly as part of the instruction – towards different instantiations of a given form-meaning mapping (Figure 4, model A). Once the initial understanding of a certain form-meaning pairing is established, a mirror mental process may be induced, in which the learner is encouraged to analyse different samples of use and to look for the aspects of the schematic meaning (GT) in them (Figure 4 model B). It is postulated here that the latter learning phase will bring the best results if each studied instantiation is part of a situational context which is both broad and clear enough for the learner to be able to *mind-read* the intentions of its participants.

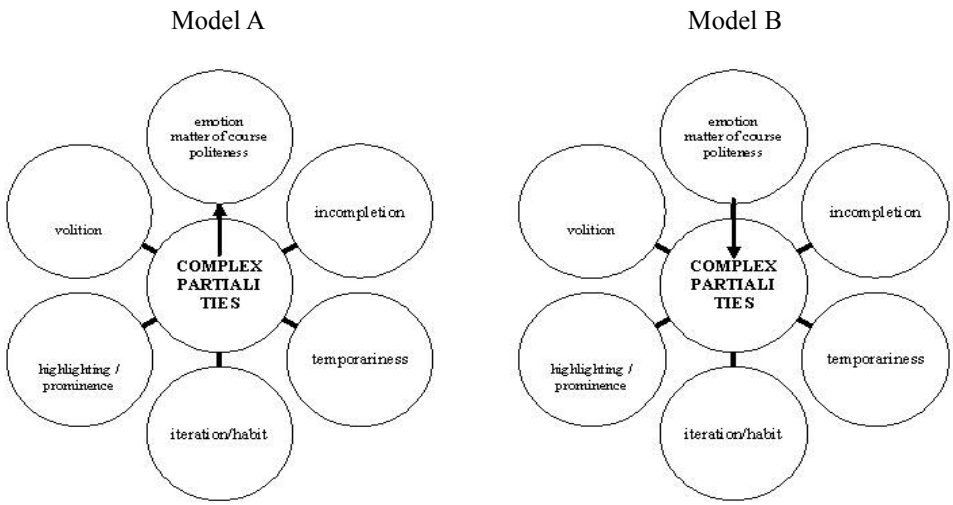

Figure 4. Cultural learning of foreign language meaning (L2/ FL)

A 3-D pedagogical treatment, based on the above-delineated instructional mode, was devised and implemented in a group of advanced (estimated level C1/ C2) learners of English as a foreign language in Poland. The treatment was applied in teaching English grammatical tenses, and included a three-step procedure, which covered:

- teaching the semantics of a given form – the deductive, explicit FonF component;
- examining the form in multiple situational contexts. It was decided that in controlled foreign language teaching contexts the best way to expose

the learner to varied, event-based target language input is by means of film watching. Consequently, a hundred-strong collection of Anglophone films was chosen as study material – the organic, implicit/inductive FonF component; and

- reasoning by default, or intention reading, carried out through an analysis of the data in a series of while-watching as well as post-watching tasks, in which the teacher and the students tried to identify the intentions of the speakers motivating their choice of a given – and not any other – grammatical tense – the cultural learning component.

Owing to the visual nature of the used stimulus (films), the last component of the treatment had the potential to activate the process of intention reading along the lines of T. Regier's (1996) three sensorimotor constraints on processing – orientation-combination; map-comparison; and motion-trajectory (cf. earlier in this article). It can be hypothesised that the understanding of form-meaning mappings studied in this way potentially hinged on the three types of perception-based processes. First of all, temporal expressions used in a watched film episode could be conceptualised in terms of *distance* – emotional and social – between the scene participants – as well as *relations*: interpersonal relations between the interlocutors and their multifarious interactions with the broadly understood environment (the orientation-combination structure). The scene was also organised – and, consequently, interpreted – in terms of viewpoints and perspectives of its participants (the motion-trajectory structure). Finally, while watching, learners could – for comparison – map the situational frames of individual scenes onto the frames of previously watched episodes (the map-comparison structure). Additionally, each scene being a perceptual gestalt helped supplement the analysis with Wittgenstein's *don't think, look* processing mode. In this way the treatment catered to the potential non-compositional meaning residue (E. Dąbrowska 2004) of the currently studied form.

This pedagogic innovation was research-tested for its effectiveness. The design of the study, its chronology, results, analysis and conclusions are presented in Section 3.

3. 3-D grammar pedagogy and the advanced language learner. The study

The 3-D grammar pedagogy was implemented in two groups of Polish advanced learners of English. The treatment and the accompanying study took place in the years 2006–2009. It was a classic experiment, with a pre-test, a post-test and a delayed post-test; on each of the three tests the experimental groups were compared with two control groups: a same-level group of Polish advanced learners of English and a group of native speakers. The Polish subjects were second year

students of the English Studies at the University of Bielsko-Biała, Poland (of traditional university age: 20–22; a vast majority: female); the native speaker controls, selected by analogy, were second year students of the English Studies at Transylvania University and Ashbury College. In addition to the main study – which is presented in detail in A. Turula (2011) – a small-scale investigation of the nature and the development of the intention-reading ability in non-native speakers of the target language was carried out in the second experimental group in the years 2007–2009[7]. This study – its design, course and outcomes – will be presented here.

The research instruments used in the intention-reading study were two grammar tests and think-aloud protocols (TAPs). Both the tests and the TAPs were completed by 10 students from the experimental group as well as their controls – a group of 10 native speakers (NS) of English[8], all of whom were teachers of English as a foreign language in Poland, either with the required qualifications (CELTA/DELTA) or in the process of completing their certification; all of them had at least one year of teaching experience. The two selection criteria of the NS controls – their professional competence and TEFL practice – were seen as important in order to guarantee access to the declarative/declarativised knowledge of English grammar (with regard to the *didactics* component of the treatment).

The grammar tests used in the study consisted of 10–12 testing units (a sample unit is presented in Figure 5), each of which was a short extract from an Anglophone film, with a brief introduction of the situation and a gapped dialogue.

A woman who has long refused to marry the commodore is trying to win a favour with him. That is why she says:
'Commodore, I [1] _____(beg) you please, do this for me as a wedding gift.'
The woman's father, who's listening to the conversation and is very much in favour of the marriage, asks (hopefully)
'Elisabeth, [2] _____you_____ (accept) the commodore's proposal?

Figure 5. Grammar test unit – a sample

The testees, both non-native and native, were asked to fill in the gaps and to explain their choice of a particular grammatical tense. These comments were recorded, transcribed into a an approximately 35,000-word tapescript, categorised (for the applied categories cf. Figure 6) and subjected to an analysis and inter-group (NS vs. NNS) comparison.

[7] pre-test – October 2007; post-test – January 2008; delayed post-test – January 2009.
[8] four BE, three AE and three AuE speakers.

Category of rationale offered	Sample answer
R – rules (which, in fact stand for the clichés repeated after pedagogical grammars currently in use)	*The speaker uses the present continuous tense because what is happening is happening at the moment of speaking.*
S(i) – semantics; interpretation (all effort aimed at determining the rationale behind the speaker's choice of this particular, and not any other, grammatical form)	*The future simple tense is used for firmness.*
S(t) – semantics; translation (translating the grammar form into its L1 equivalent)	*'I beg you' meaning 'I implore you'; or rendering the utterance in Polish (the NNS testees' mother tongue)*
[A] – attempt (unsuccessful, at rules or semantic interpretation	any kind of form or meaning error
SG(kw) – sounds good because of certain key word(s)	*Present perfect sounds good with 'never'.*
SG(f) – sounds good because it is part of a formula/lexical chunk	*Present perfect sounds good with this particular verb.*
SG(tx) – sounds good because as part of the text	*The be going to form is used here for stylistic reasons: it's used throughout the passage and it sounds good and consistent.*
SG(e) – sounds good because it fits into the event schema	*'I'm going to come in' is what my mother would say when she wanted to enter my room.*
SG(i) – sounds good but no explication is offered (intuition)	*It simply sounds good. I can't explain why.*
TT – (overt) transfer of training (the justifications offered by the NNS on post-test which directly refer to class discussions of form--meaning mappings)	*This is continuous for politeness. We talked about it in our class.*

Table 1. Categories of the rationales offered by the NS and NNS testees in Study 3

When it comes to the results of the NNS group, the main rationale they give for their choices on the pre-test are grammatical rules (R=34%), followed by intuitive, unverbalisable choices (SG(i)=20%) and semantic interpretations – explanations, in which the testees considered the speakers' intended meaning (S(i)=14%). As for other categories, several unsuccessful attempts to get the semantics of the used form can be observed; and the main choices for the *sounds good* category are lexical chunks and events. On the post-test the main category of answers are semantic interpretations (S(i)=33%) and translations (S(t)=9%), followed by rules (R=18%) and unsuccessful attempts at interpreting the intentions behind the grammatical choice (S(i)[A]=14%). By comparison to the results of the pre-test,

we can note that the choices of the experimental group were subject to re-profiling, demonstrated in an increased preference for semantic interpretations, almost 1/3 of which were unsuccessful. As for other – minor – changes in the profile, there is a considerable decrease in the intuitive unverbalisable choices (8%; down from 20%). The three main categories mentioned above – semantic interpretations, rules and sounds good/ intuition – are also the areas of the main changes in the group's choices, as demonstrated by the pre-test and post-test profiles. Finally, when it comes to the delayed post-test results, the three main categories in which change can be observed are the ones identified on the pre-test and post-test: rules (R), semantic interpretations (S(i)) and *sounds good*/ intuition (SG(i)). Their ranking is similar to the one noted on the latter test: semantic interpretations of the intentions behind the choice and translations come first (S(i)=28%; S(t)=10%), followed by rules (R=25%) and intuitive choices (SG(i)=16). As for other observations that can be made on the basis of the pre-test/delayed post-test comparison, we can note that: (i) the number of semantic attempts is down, which indicates that there were fewer erroneous semantic interpretations; and (ii) the *sounds good* category is a blend of pre- and post-test results: the scores on the *text* (8%) and *key word* (4%) categories mirror those on the post-test and the pre-test favourite, *lexical chunk* (6%), is back.

As far as the NS controls are concerned, for Test 1, used as the pre-test and the delayed post-test in the experimental group, the main category of answers given by the native speakers are semantic interpretations (36%) followed very closely by intuitive choices (35%). The third type of answer is *sounds good as a lexical chunk*. The two remaining categories are rules (8%) and *sounds good as a part of text* (7%). The percentage rates for Test 2 (post-test in the experimental group) are very similar. The two main categories are – again – semantic interpretations (36%) and intuitive choices (34%). The remaining, significant groups of answers include: *sounds good as a lexical chunk* (8%); *sounds good as part of text* (8%); rules (7%); and *sounds good for the event in question*.

When we compare the results of the two groups, looking at the differences in the rationales offered for their grammatical choices – also seen and operationalised as the conceptual NS/NNS gap – it becomes evident that the three main areas of NS/NNS change in the distance between the native and the non-native tests are the categories of rules (R), semantic interpretations (S(i)) and *sounds good*/*intuitions*. When analysed statistically, the NS/NNS comparison (Figure 7; χ^2 and p values) shows significant differences between the two groups in all three categories on the pre-test; the differences are levelled but remain statistically significant for rules and intuitions on both the post-test and the delayed post-test. However, as a result of the applied treatment, the experimental group becomes near-native-like in the area of semantic interpretations (post-test), and the change is quite robust and time resistant (delayed post-test).

Test	values	rules (R)	semantic interpretations (S)	sounds good/intuition (i)
pre-test	χ^2	60.56	20.91	16.27
	p	.0000	.0000	.0001
post-test	χ^2	14.20	2.52	53.75
	p	.0002	.1123	.0000
delayed post-test	χ^2	30.13	.30	28.50
	p	p= .0000	.5832	.0000

Table 2. NS/NNS comparisons on pre-test, post-test and delayed post-test: rules, semantic interpretations, sounds good/intuitions

Interpreting the results, we can argue that the experimental group mentally shifted the grammar of time talk from the rulebook to the realm of the speaker, accepting the fact that the form-meaning pairings are in the mind – and the intentions – of the beholder, and, as such, are a question of choice.

4. Conclusions

In conclusion, we can say that there *is* grammar to be taught at higher levels of language proficiency. However, this claim is legitimate on condition that, in addition to recycling structures in terms of form or form-function mappings (which some advanced students may still need), the attention of the proficient FL learner is drawn to the semantics of grammar. In this respect, the effectiveness of the applied treatment confirms the agreed-on claim that the best result comes if forms are attended to in communicative contexts. In practice, as described in most of the relevant publications cited in the present work (R. Ellis 1994 and other works; C. Doughty/ J. Williams 2004; etc.), form-focused instruction means that authentic content is the point of departure for the subsequent study of formal aspects of language. Yet, as was demonstrated by the results of the experiment, such an instruction in form-meaning mappings should be supplemented by an additional cultural learning element, with the inclusion of which the 2-D instruction mode changes into the 3-D model described in the present article. This means that, in addition to FFI combining instruction and the communicative context (in both input and output options), focus on form should incorporate the intention-reading element, taking advantage of the cultural intelligence typical of the human mind.

Such an approach to grammar pedagogy has to involve taking focus on form beyond a typical coursebook into multimedia, including film-based and

computerised instruction, the former providing for the perceptual component of the learning of meaning. In this way the learner's knowledge of the semantics of grammar has a chance to be supplemented by the sensorimotor element, whose importance to meaning analysis is emphasised by E. Dąbrowska (2004). This helps the testees to analyse the semantics of grammar on both levels – conceptual and spatial (R. Jackendoff 2002, 2004) – based on verbal as well as non-verbal clues concerning the distance (the viewpoint, the perspective) as well as all kinds of physical – and, consequently, emotional and social – alignments created, maintained or broken by the interlocutors in the watched film clips.

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