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[39] Ibíd p. 13.

[40] Ibíd. p. 28.

[41] Ibíd. p. 67.

[42] Ibíd. p. 68.

[43] Ibíd. p. 102.

[44] Ibídem.

[45] Ibídem.

[46] Straumann, Heinrich. Op. Cit. pp. 69-70.

[47] Caldwell, Erskine. Op. Cit. pp. 156-158

[48] Ibíd. p. 167.

[49] Ibíd. p. 181.

[50] Ibíd. p. 182.

[51] Ibíd. p. 190.

INPUT HYPOTHESIS FOR OR AGAINST OUTPUT HYPOTHESIS?

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Introduction

Second language acquisition research[1] has demonstrated that only exposure to L2 input is not sufficient to facilitate language acquisition and that the limited grammar instruction fostered by communicative and proficiency-based teaching approaches facilitates lexicalization of communication and fossilization of errors. If Widdowson's[2] view of grammar "as a necessary communicative resource" is to be accepted, instead of grammar as a collection of forms and prescriptive rules, a new approach to grammar needs to be developed, not as a static system of rules to be memorized but as a dynamic system comprised of structures with an interconnected context dependent form, meaning, and use.[3]

According to Ellis[4] one of the major contributions of SLA research to teacher' practice is the finding that differences between input and intake depends on the learner. Also related to the role of learners in the acquisition process, Pica[5] establishes that the negotiation between the learners and their interlocutors gives the former time and opportunity to catalogue the input in order to be able to process it. The simple act of asking for clarification has very positive results. She also mentions Swain's recommendation to promote learners' production of comprehensible output during interaction in meaningful contexts.

Long & Robinson[6] refer to the lack of success of both, the methods based on language grammar, which they group under the name Focus on FormS, and the ones based on language meaning referred to as Focus on Meaning. They propose a third way, Focus on Form. This is based on the interactionist approach, which holds that language learning cannot be explained either by innatist or environmentalist theories. It supports that language development depends on learners interaction and that the interaction between learners has been found as good as, or superior to,

interactions between learners and native speakers. Focus on form refers to how focal attentional resources are allocated. These include noticing and implicit or explicit negative feedback in order to foster the intake process.

Although Focus on Form classroom-based research findings are still contradictory the future of this new approach to Second Language Acquisition Research is promissory. This paper will present two representatives of this third option: The Output Hypothesis and the Input Hypothesis.

The questions this paper want to answer are: 1) What are the origins or development of these two hypotheses; 2) what research supports each hypothesis; 3) what do they offer to the instruction of a second language. The expected outcome is a better understanding of both positions and a possibility of reconciliation of their apparent antagonism. Due to a combination of time and library constraints it was not possible to present a more balanced perspective, therefore the section devoted to the Output Hypothesis is more developed. Nevertheless, it can be considered an overview of the topic.

Output hypothesis antecedents

> *"learners need to be pushed to make use of their resources;*
> *they need to have their linguistic abilities stretched to their fullest;*
> *they need to reflect on their output and consider ways of*
> *modifying it to enhance comprehensibility, appropriateness and*
> *accuracy.*
> *This could be approached both through teacher-led and*
> *collaboratively structured sessions."*
> Swain,[7]

In a 1990 article Lapkin, Swain & Shapson mentioned that French achievement of immersion students could be considered fairly close to native like proficiency in the receptive skills listening and reading comprehension. Nevertheless, in reference to the productive skills, speaking and writing, immersion students lagged far behind the same level of achievement. A previous study by Swain and Carroll has suggested that the traditional grammar drilling was not effective for increasing the accuracy of French.

Among other questions for the 90s agenda these two seemed rather relevant to the emergence of the input hypothesis: 1) what is the optimal design of the analytical component of the English and the French language arts curriculum of the immersion program? 2) How can analytical and experiential techniques best be combined/integrated to complement each other? Lapkin, Swain & Shapson.[8]

Another relevant issue in this agenda was to investigate if divergent questioning elicited longer and more complex responses in French. This would promote meaningful output processing of the target language in the content subjects and would be of great support for second language learning.

Swain was an important researcher in the follow-up study mentioned above and a passage from that research serves as an introduction for one of the articles where she presents her Output Hypothesis. In this article the following definition is presented "The output hypothesis proposes that through producing language, either spoken or written, language acquisition/learning may occur[9]."[10]. For her the learners needed practice producing output for four reasons: an opportunity for meaningful practice of their resources; a way to push them to move from semantic to syntactic processing; an opportunity to test their hypothesis about the language; and finally as a way to receive feedback about the well-formedness of their utterances.

In this same article she proposes collaborative activities that focus on the discussion of the language itself, and students' own output. Her main concerns are "to seek evidence that second language learning occurs, in part, through the analytic processes that output and feedback can engender, as educators we need to encourage our students to be more responsible for their own learning."[11] There are no references to the role of input, or to cognitive processes in this article.

Swain & Lapkin[12] restate in this way the output hypothesis; in producing the L2, a learner will on occasion become aware of (i.e. notice) a linguistic problem (brought to his/her attention either by external feedback (e.g. clarification requests) or internal feedback).

Noticing the problem pushes the learner to modify his/her output. In doing so, the learner may sometimes be forced into a more syntactic processing mode that may occur in comprehension. Thus output may set noticing in train, triggering mental processes that lead to modified output. Then they describe the purpose of the paper "to determine if learner's own output does, on occasion, serve as an attention getting device, and if it does, does it sometimes serve to stimulate the learners to engage in linguistic analysis"?

The hypothesis is now much more elaborated. It includes terms as "noticing", "triggering mental processes", "attention-getting-device". The research they conducted, verbalized protocols of a writing activity, gives support both to the fact that learners moved from the semantic to the grammatical processing when noticing a gap in their output, as to the identification of the cognitive processes involved in this move: generating alternatives, assessing those alternatives, and applying the resulting knowledge (formulating and testing hypothesis about linguistics forms and functions). They coined the term Language Related Episode (LRE) to refer to a segment of the protocol where the students talked about a problem encountered and how they did or did not solve it.

There is now a scheme (flow diagram) of the relationship between output and second language learning (fig. 1). And in the acknowledgements of this article Swain & Lapkin[13] they thank their revisers and offer reasons for not recognizing the role of the social context and/or the neurological bases for SLA in their paper.
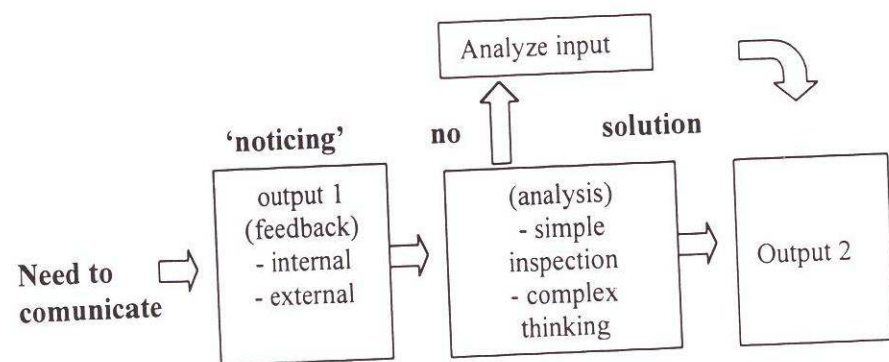

Fig. 1 Output Hypothesis Swain & Lapkin[14]

The authors refer here to input tangentially. "It is important to reiterate that output is not the only source of second language learning... When learners cannot work out a solution, they may turn to input, this time with more focused attention, searching for relevant input."[15]

In a more recent article Swain[16] states: "Three functions of output have been proposed that relate more to accuracy than fluency in second language learning.'" Noticing, hypothesis formulation and testing, and 'metatalk' -the language learners use to refer to the problems they notice in their use of the target language. She comments that her current working assumption is that this 'metatalk' is language used for cognitive purposes: solving problems. Noticing, hypothesis formulation, and 'metatalk' are available both for researchers and students to reflect in the learning process. She sees 'metatalk' as a pedagogical means.

Time after that, perhaps trying to make up for not having recognized in the past the role of social context for SLA, Swain presents an article in a volume that explores the "implications for second language learning and teaching of a sociocultural theory of mind[17]. There she states that collaborative dialogue is dialogue that constructs linguistic knowledge, "It is language use mediating language learning."[18] The fundamental of her hypothesis remains the same "Output may stimulate learners to move from the semantic, open-ended, strategic processing prevalent in comprehension to the complete grammatical processing needed for accurate production. Student's meaningful production of language –output– would thus seem to have a potentially significant role in language development." There is still the role of output as a promoter of noticing and as an opportunity to test hypothesis. Nevertheless apparently she is not very comfortable with the term anymore and proposes to the reader a change of denomination for the rest of the article replacing output for, among other expressions, collaborative dialogue (!).

Paralleling a series of experiments by a Russian researcher, where material forms of activity were transformed into mental forms of activity, Swain presents the research of a former PhD student. Holunga conducted a study with advanced second language learners where metacognitive strategies were either verbalized (group MV), not verbalized (group M), or were not taught to the students (control group), as communicative activities were carried on. The MV group scored best in the *post tests*, the M group did too, but only in the discrete-item method. The control group did not improve at all. Interpreting through the lens of the Russian researcher, the author sees how the external speech mediated their language learning. "Verbalization helped them to become aware of their problem, predict their linguistic needs, set goals for themselves, monitor their own language use, and evaluate their own success... Test results suggest that their collaborative efforts, mediated by dialogue, supported their internalization of correct grammatical forms."[19] (This paragraph reminded me of a quotation of Donato & McCormick in Mitchell & Miles[20]

Output hypothesis research

It was already established that Swain is a well known researcher who has participated almost from its start in the Canadian immersion program. Here I will give a quick overview of research published by her in the same chronological order presented in the previous section. The research done involved kids from the French immersion program and was performed either out of the classroom or in the classroom.

1993. There is no research reported in this article, though she refers to the work of a colleague, Kowal. The researcher is working on the following activity, a reconstruction of a passage that they have listened several times. Prior to listening to the passage the students had been instructed as a class about a specific grammatical feature which is high lightened in the passage itself. The expectation is that the learning will be enhanced through student's negotiation of form as they reconstruct the meaning of the text.[21]

She gives some guidelines for instruction based on the observations made in class. For example she encourages strategies used by teachers that foster the "reprocessing by students of their initial output."[22] Instead of recasting and giving the correct form, teachers should ask students what they do mean, whenever they use an inappropriate word or structure. These are the type of activities proposed: Collaborative activities where the focus of discussion is the target language itself; students reflect together on their own output.

1995. 18 students from grade 8 early French immersion class. A think-aloud writing task was recorded. Each student would be given a theme that they had covered in class, received instructions on how to think aloud while writing. Then the researcher would model the think aloud process, and the student would practice it solving a multiplication problem. Then the student would be given the specific writing task and told to write in French. The students would be allowed to use English or French for the think aloud but not to use a dictionary or any other aid in order to make them work out their own solutions. Once the task was finished, the student would be asked to edit it using a red pen and think aloud during the process.

1998. 48 students from two grade 8 classes early French immersion class. A *dictogloss* activity consists of a short paragraph dictated at normal speed twice, students take notes individually and reconstruct the text in pairs. There was one modeling session. In one of the groups, called the metalinguistic (M), the researcher and the teacher modeled how to reconstruct the text providing the rules and metalinguistic terminology. In the comparison group (C) the researcher and the teacher modeled how to reconstruct the text without providing the rule or the terminology. There were two practice sessions for the students before the one that was tape-recorded. After that a tailor made dyad specific posttest. Each test was designed according to the problems encountered by each pair of students working out the *dictogloss* of the tape recorded session. The results showed that group M produced more LRE (14.8) than group C (5.8) and also more 'metatalk.' In reference to the learning outcomes, though the focus of the lesson was the use of the *passe compose* versus the *imparfait*, students focused in other features during the *dictogloss*, so researchers decided to assess the postest with four categories: 1) problem solved correctly 2) problem not solved or disagreement with the solution, 3) problem solved incorrectly or disagreement about problem solution, 4) other. Some of the findings were: Metatalk varies with the type of task and also differs from group to group. Modeling and then practicing can enhance collaborative work. There is an emphasis on the need to continue documenting learning during collaborative work. And the importance to test what students do, not what the researcher assumes will be understood from her prompt.

Input Hypothesis

We define input processing as making
form-meaning connections from the linguistic data in the input
for purposes of constructing a linguistic system.
Lee & VanPatten,[23]

Bill VanPatten is a researcher and a Spanish teacher at the University of Illinois at Urbana-Champaign. His point of departure for input hypothesis is opposed to that of output hypothesis. Swain argues that input is not sufficient for acquisition given her experience as a researcher for the Canadian French immersion program, where young kids from K-12 receive at least 50% or 40% of their instruction in the target language. The exposure of these kids to French at school is four maybe five hours a day. On the other hand, VanPatten reacts against the fact that traditional grammar practice privileges not only form but mainly its output to develop learners accuracy and fluency.

VanPatten explanation of the rationale for his hypothesis refers to three sets of process in language acquisition: The first converts input to intake, the second accounts for the accommodation of intake and the restructuring of the learner's developing linguistic system, and the last one accounts for certain aspects of language production like monitoring, accessing, etc. Input

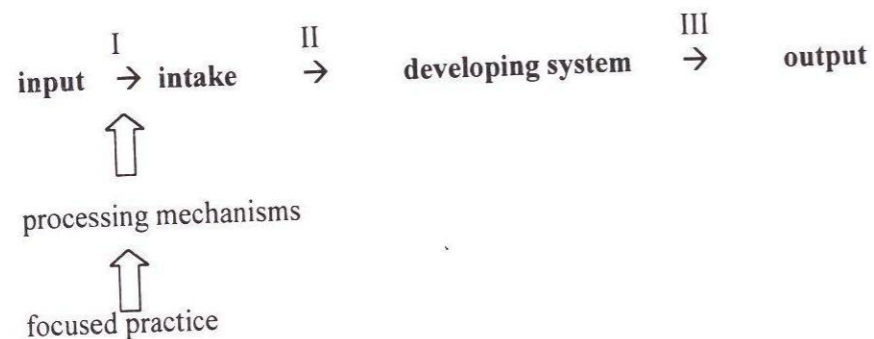processing refers to the strategies and mechanisms that promote form-meaning connection and converts input to intake[24]

I   II   III

input → intake → developing system → output

⇑

processing mechanisms

⇑

focused practice

Fig 2. Processes in second language acquisition[25]

The idea is to foster forms being processed in the input, have students attend to grammatical information and give them the opportunity to make correct form-meaning connections through *explicit instruction in processing input* (Fig. 2). Up to this stage learner are not asked to produce the grammatical item.

To research such hypothesis the researchers focus on the word order strategy, used by learners to process input, which refers to the natural tendency of learners "to assign argument structure to an input string."[26] They compare traditional explicit instruction focused on manipulated output with explicit instruction in processing input. Their objectives is to test if altering the way learners process input has an impact in their developing systems and their output, and if this method has the same effect as traditional grammar instruction.

They compare the performance of 129 students (six groups) of second year university level Spanish classes after receiving instruction reflecting two different approaches: traditional grammar teaching and output practice, and processing instruction. The latter included teaching the subjects how to interpret OVS strings correctly (word order). First contrasting the grammatical concepts of object and subject of a verb and then presenting subject and object pronouns. The instruction highlighted that the position of object pronouns in Spanish can be either SVO or OVS.

Students were divided in three groups. One received traditional instruction, another processing instruction and the last received no-instruction at all. Researchers used a pre-test/postest procedure using a split-

block design. The second day off instruction, after class, learners had their first postest. A second postest was administered after a week and a month later a third one. The test consisted of interpretation and production tasks. For the interpretation tasks learners matched aural sentences containing different word orders (SVO/OVS) with one of two pictures. For the production section they completed sentences using the target structure according to a visual clue.

From the analyzed data they concluded that processing instruction has an effect on the developing system of the learners and also in the their production, although in a different way since the ones in the processing instruction group could interpret better than the ones on the traditional instruction. VanPatten & Cadierno (1993:237) suggested that differences in the production were not significant probably to the way data were analyzed. The researchers comment that it has not been proved yet that these results under controlled conditions can be transferred to more spontaneous circumstances. They also underline that they are not advocating for abandoning communicative activities and output tasks, but suggest that instructors could also develop focused output activities to "encourage learners to be accurate while also attending to meaning."[27]

There is a slight change of terminology when VanPatten when he uses *structured-input activities* instead of *explicit instruction in processing input*[28] These activities would go from referentially oriented to learner centered. In the former learners would be asked about the truth-value of a sentence and would progress to the latter which includes activities that general personalize the activity. Now he adds the processing of output to his model.

The output stage involves the exchange of previously unknown information, and requires learners to access a particular form or structure in order to express meaning. He suggests either to present grammar patterns explicitly before output. Another possibility is to present them after some success with a set of forms or structures. They can be presented as a summary of what has been learned[29]. He suggested these two sets of activities for input and output processing.

> **Binary options** (Yes/No; True/False; Agree/Disagree; Likely/Unlikely; Mom/Dad; Teacher/Student; Dog/Cat: Good/Bad, etc.)
>
> **Matching** (a picture to an input sentence; a name to an input sentence; an event to its cause -both can be input sentences-; an event to its logical consequence -both can be input sentences-; a name to an action; days of the week to an activity, events to other events, etc.)
>
> **Supplying information** (not requiring the target structure, but other type of information: hour, name, day, etc.)
>
> **Selecting alternatives** (either the stimulus or the alternatives contain the target form)
>
> **Surveys** (indicating agreement with a statement; indicating frequency of an activity; answering "Yes" or "No" to particular questions; finding a certain number of people who respond to an item in the same way, signature searches, etc.)

Fig. 3 Major types of activities for structured input.[30]

Fig. 4 Major types of response for structured output.[31]

> - Comparing with something else
> - Taking notes, then writing a paragraph about what was said
> - Making a list of follow up questions when interviewing a partner to get new in formation
> - Filling out a grid or chart based on what was said
> - Signing something
> - Indicating agreement or disagreement
> - Determining veracity of the statement
> - Responding using any of several scales
> - Drawing something
> - Answering questions

The author provides guidelines for structured input activities:

1. Teach one thing at a time (only the third person singular in present tense in English in the affirmative form)
2. Keep meaning in focus (form-meaning connection)
3. Learners must do something with the input (discriminate, select a picture, agree or disagree.
4. Use both oral and written input (learning styles)
5. Move from sentences to connected discourse (to focus on a form-meaning connection which cannot be inferred from the redundancy of longer discourse)

Keep the psycholinguistic processing strategies in mind (make learners develop semantic and grammatical mappings instead of using pragmatic strategies.

Conclusion

Although this can be considered a paper in progress, since the literature of VanPatten was not covered in the same proportion as Swain's, and despite the fact that I have not yet analyzed thoroughly their research experiments, there are some remarks that can be made. First, the contradiction between input and output hypotheses can be drawn from different perspectives about different realities. Swain comes from a reality where exposure to the target language since age 6 is fairly constant and meaningful all the time: immersion program. Thus she turns her eyes to a complementary focus of attention in the instruction of French language arts. VanPatten is immersed in a totally different situation, the teaching to undergraduate students who has a three-credit course in Spanish. Both the exposure to the target language and the age of students are important factors, among others, for choosing an instructional methodology. Since these learners are not sufficiently exposed to Spanish with not such evident success (though they are constantly forced to output activities) VanPatten turns his eyes to the possibility of forcing input to become intake. Then instead of competing hypothesis they could be seen as complementary since they emerged from different realities.

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Notes

[1] Larsen-Freeman and Long, 1991, Ellis, 1995: Pica, 1994.
[2] 1992: 334.
[3] Larsen-Freeman, 1997ᵃ.
[4] Hedge, 1993.
[5] 1994.
[6] 1998.
[7] 1993: 161.
[8] 1990: 654.
[9] Swain 1985.
[10] Swain, 1993: 159.
[11] Swain, 1993: 163.
[12] 1995: 373
[13] 1995: 388.
[14] 1995: 388.
[15] Swain & Lapkin, 1995: 386.
[16] 1998: 66.
[17] Lantolf, 2000: 1.
[18] Swain, 200: 97.
[19] Swain, 2000: 109.
[20] 1998: 148.
[21] Swain, 1993: 162-3.
[22] Swain, 1993:162.
[23] 1995: 96.
[24] VanPatten & Cadierno, 1993: 226.
[25] VanPatten & Cadierno, 1993: 226.
[26] VanPatten & Cadierno, 1993:228.
[27] VanPatten & Cadierno, 1993:239.
[28] 1995: 94.
[29] Lee & Van Patten, 1995: 127.
[30] (Lee & VanPatten, 1995:109-114.
[31] Lee & VanPatten, 1995: 123-4.