ABSTRACT
        A study attempts to refine the discourse domain
hypothesis of second language learning, which holds that a second
language is acquired with reference to speaker-specific topic areas
rather than as a general, context-independent competence, by
examining the discourse domains developed by one non-native speaker
of English in conversations with two native interlocutors. All
subjects were male graduate students in the United States. The
natives interviewed the non-native speaker in turn, immediately after
one another, and the resulting conversations were recorded and
transcribed. Three domains were selected for further analysis,
focusing on content elaboration, stability within a single encounter,
and personal importance to the speaker. The analysis highlights the
role played by interlocutors in the formation, development, and
presentation of a speaker's discourse domain, and suggests that the
properties of elaboration, stability, and personal importance are key
variables for a discourse domain model in second language research.
(MSE)

Discourse Domains Revisited: Expertise and Investment in Conversation

Shona Whyte

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Selinker and Douglas' discourse domain hypothesis holds that second language acquisition takes place within domains of discourse which are created by and important to the learner. This paper aims to refine the definition of the discourse domain construct by examining the discourse domains developed by one nonnative speaker in conversations with two native interlocutors.

The discourse domain is viewed as an extension of an established model for background knowledge, the schema, and is shown to exhibit greater development than the schema on three parameters: 1) Content elaboration: a discourse domain incorporates more information and is more complex than a schema; 2) Stability: although domains differ from learned routines in their openness to interlocutor input. they are less likely to undergo radical alteration during a single encounter than schemata; and 3) Personal importance: unlike a schema, which may be a temporary expedient for one conversation, a domain is developed over time because of its importance in the speaker's life.

This study highlights the role played by interlocutors in the formation, development, and presentation of a speaker's discourse domain, and suggests that the properties of elaboration, stability, and importance are key variables for a discourse domain model in second language research.

This paper investigates the discourse domain hypothesis advanced by Selinker and Douglas (1985), which holds that a second language is acquired with reference to speaker-specific topic areas rather than as a general, context-independent competence:

> the important SLA processes, such as language transfer, fossilization, and backsliding, as well as avoidance, do not occur globally across ILs, but rather differentially within discourse domains (Selinker and Douglas, 1985, p. 0190).

Although the authors do not provide a precise definition of the discourse domain, they describe domains as "various 'slices of life' that are important and/or necessary for ... learners to talk and/or write about" (Selinker and Douglas, 1985, p. 190), and suggest the topic areas of 'major field,' 'own life,' and 'own culture' as examples of domains created by international students in the US. In later work, they propose the following criteria for domain identification:

3

importance to the learner, interactional salience, discontinuous-ness, control of content (in that the learner knows about the topic, but not necessarily the language to express it), and the fact that such domains are highly personal (Selinker and Douglas, 1987, p. 469).

This paper seeks to examine some of these features with a view to refining the definition of the discourse domain.

Given the important claims advanced by Selinker and Douglas in their discourse domain hypothesis, for example the assertion that acquisition processes are triggered by specific contexts, and that performance, including grammatical accuracy, varies according to context, such a clarification of the domain construct is clearly necessary. Very little other work in context-based second language acquisition, however, has investigated the domain hypothesis *per se*, although a number of investigators have used the domain construct indirectly. Woken and Swales (1989) examined the effect of content expertise on non-native performance by having three nonnative computer science majors instruct American peers in the use of a word processing program. The patterns of language behavior they observed contrast sharply with learner performance in typical NS-NNS research situations. Zuengler (1989) also focused on the effect of topic knowledge on speaker performance in a study which compared native-nonnative dyads conversing on 'major field' and 'neutral' topics. A closer investigation of the different variables involved in the development of a discourse domain can shed new light on research findings such as these.

However, since discourse domain research is still at an embryonic stage, with no well-developed definitions to build on, it seems logical to look to existing models of a speaker's background knowledge for a starting point. One model of particular relevance is the schema. Schemata have been described variously by cognitive psychologists as "active, developing patterns" and the "active organization of past reactions, or of past experiences" (Bartlett, 1932/67, p. 201); by sociolinguists as "structures of expectation" (Tannen, 1979, p.138); and by discourse analysts as "information from the encountered discourse, together with knowledge from past experience" (Brown and Yule, 1983, p. 249). Clearly a schema is a knowledge framework which influences the processing of new information, and is in turn affected by that new information.

It seems plausible to view the discourse domain as a similar dynamic structure which shapes and is shaped by the speaker's perception of incoming material. Of course domain and schema differ, since schemata are general-purpose structures created to deal with everyday experiences, while domains have special properties such as personal importance to the speaker, interactional salience, and an elaborated content. However, it is also obvious that no domain can suddenly emerge in all its complexity as a *fait accompli*: a discourse domain is created over time, as a result of the speaker's investment in a topic, which in turn increases its interactional salience, leading perhaps to greater content elaboration and thus investing the topic with even more importance for the speaker. A domain must develop, therefore, like a schema, and indeed must develop from a schema.

4

The present study will take the approach that there is a close connection between schemata and discourse domains; namely, that they are part of a continuum representing the level of development of a speaker's background knowledge for a given topic. This notion is represented in Figure 1. Analysis of the data in this paper will show the discourse domain to be a particularly well-developed, stable, and personally important schema. In so doing, the paper therefore establishes the features of content elaboration, stability, and personal importance as relevant to a definition of the discourse domain and hence important parameters for research within the discourse domain framework.

Figure 1. The Schema-Domain Continuum.
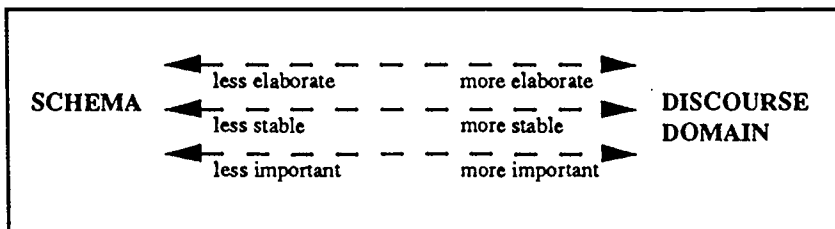
METHODOLOGY

The data for this paper were taken from a larger data set involving 2 native speakers and 8 nonnatives in native-nonnative dyads. The present study involved 3 male graduate students in their twenties at Indiana University, unfamiliar with one another: F, a French mathematics student, with a 2 year-old TOEFL score of 500, who had spent 12 months in the US; B, a British geography student, who had been in the US for 2 months; and A, an American music student. The natives interviewed the nonnative in turn, immediately after one another, and the resulting 25 minute conversations were audiotaped and transcribed.[1]

Table 1 shows the domains activated in each conversation, subdivided into episodes. Although subjects were left free as to the content of their conversations (with the researcher suggesting the NNS' experiences in the States, their studies, and own country as fall-back topics) the range of topics was remarkably similar across conversations, and reflected for the most part the NNS' discourse domains. For this reason, F's knowledge frameworks are referred to as domains and his interlocutors' as schemata in much of the discussion to follow. As far as participation is concerned, A and B tended to play a dominant role in initiating and pursuing topics; domains or episodes initiated by F, the nonnative speaker, are marked with an asterisk. The numbers in brackets indicate the time to the nearest minute.

From this breakdown, three sections were selected for analysis: the domains 'F's life history' and 'F's major field' allow comparison of the same domain on different occasions; while the domain 'Europe versus the US' allows comparison of

behavior in a domain which is common to B and F as European students in the United States with other episodes in the conversation where content expertise is less evenly distributed.

Table 1. Conversation Episodes

CONVERSATION 1	B & F	CONVERSATION 2	A & F
1 F'S LIFE HISTORY	[0-5]	1 French people	[0-2]
F's birth place	0-1	Common ground	0-2
Education	1-2		
MILITARY SERVICE	3-5		
2 F'S STUDIES	[5-11]	2 F'S STUDIES	[2-14]
WHY MATH?	5-6	(Common acquaintances)	2-3
APPLICATIONS OF MATH	6-9	Chaos	3-8
Indiana University	9-11	APPLICATIONS OF MATH	8-11
		WHY MATH?	11-14
3 F's plans/reasons for		3 F's plans/reasons for	
coming to the US	[11-13]	coming to the US	[14-17]
Why the US?	11-12	Job prospects	14-15
Graduation	12-13	Why the US?	15-16
		Graduation	16-17
4 Europe vs the US	[13-21]	4 A's studies*	[17-22]
Adjusting to the US	13-17	IU Music School	17-18
Students	17-19	French bass players	18-19
Living in the US	19-20	French students at IU	
(Experiences in England		Music School	19-21
/Ireland)	20-21	(French stereotypes)	21-22
5 Bloomington	[21-26]	5 F'S LIFE HISTORY	[22-25]
Friends	21-23	Education	22-23
International Center	23-24	MILITARY SERVICE	23-25
Travel in the US	24-25		
Geography*	25-26		

6

ANALYSIS

To make a case for a theory of discourse domains, it must be shown that the notion can account for similarities and differences in language behavior on separate occasions. It must also be shown that the domain construct differs from the interlocutor's schema in some important sense, since this framework holds that a discourse domain is more fully developed, more fixed, and more personal than a schema. This analysis treats each of these properties in turn.

Content Elaboration

Beginning with the most obvious defining feature of a discourse domain, the speaker's content expertise, there is clear evidence in the opening of the domain 'F's studies' in each conversation that the creator of the domain has much greater content competence than his interlocutor. We would expect F to have much greater knowledge of his major field than his interlocutors (a geography major and a music major) but there is a particular problem associated with the study of mathematics: it is difficult to talk about in layman's terms and, conversely, to find an informed non-mathematician is rare. This phenomenon surfaces in the data in a certain reluctance on the part of F to engage the topic, and in consequent efforts by A and B to show credentials as worthy interlocutors on the subject, which both do by citing information gleaned from other students of mathematics. A engages the topic as follows:[2]

(1)   Conversation 2   [AF: F's studies 2-14; 3]

A So are you in the same, d'you study the same kind, are you in the
   same uh area as Ivan?
F Yeah we're in the same in the same field, yeah, same sort of thing
A Chaos, are you studying chaos?
F Oh, if you wanna, if you like high-tech names, maybe
A [laughs] He just kind of /explain/
F   /there/ isl
A   Iwas tryin' to explain something
   to me, some math theory of chaos,
F This is, this isl
A   II have actually no idea what he was talking aboutl
F   IThere, there there is a
   connection with mathematical theory of chaos
   [4 min lecture on the theory of chaos][2]

A has nominated the topic of F's studies by asking whether F is 'in the same area' as a common acquaintance, but admits he has 'no idea' what the area might be. In response, F launches into a 4 minute lecture on the mathematical theory of chaos. F is thus clearly the knower in this topic area; his domain is more fully developed than the schema of his interlocutor.

However, when we look at the second example, taken from F's conversation with B, we can see that the same domain opens in a very different way. B asks about F's choice of major, and receives a description of F's school career in reply·

(2)   Conversation 1   [BF: F's studies 5-11; 5]

B Yeah. So when did you first think [laugh] <u>when did you first
   think about ever being a mathematician</u>? I mean you must be
   pretty good to be at IU and to be a mathematician or pretty good
   compared to most people as far as maths are concerned. So were
   you a <u>were you a child prodigy /at math/</u>?
F   /No/ no no never anything like this
   uhl
B   lWere your parents very pushy or?
F Not that much actually /the thing is/
B   /Was/ your dad a mathematician?
F Well maybe that has some influence. My father has nothing to do
   with mathematics but one of my brothers I mean my brother, I
   have only one, he is um he is a mathematician, he's doing
   research. I don't know if that maybe that has an influence. The
   thing is after high school I did two years you know the French
   system is like you have to do two years preparation before getting
   in the School of Engineers and these two years are only
   mathematics and physics. So that's   the first time I've been
B   /mhm/
F doing mathematics earnestly and I sort of realized I liked it. And
   then <u>I got into the School of Engineers, uh, where I didn't do
   much and where I stayed for a couple of years and then after that
   school I realized that after all, you know maybe engineering stuff
   wasn't that interesting and </u>ꞏ

How can we account for this difference in F's presentation of his major field
to different interlocutors? Clearly the difference lies with the interlocutor. In the
second example, B has taken the role of interviewer, asking a very straightforward,
task-oriented question: "when did you first think about ever being a mathemati-
cian?" Crucially, B has demonstrated no schema for the topic of mathematics. F's
answer is therefore a general, non-technical one, falling back on the only shared
knowledge they have at this point in the conversation - his life history. In the first
example, on the other hand, A does demonstrate some schema, albeit very sketchy.
He cites another mathematician, "Ivan," and the name of an area of math, "the the-
ory of chaos." In return, he gets a very different picture of F's major field.

These examples show the greater content elaboration involved in a discourse
domain, as well as the role of the interlocutor's schemata in determining the presen-
tation of that domain on a particular occasion. A second pair of extracts, this time
from the 'F's life history' domain, show similar contrast and, in particular, high-
light the importance of timing within a conversation in shaping the way a domain is
presented.

In the 'military service' episode, both native interlocutors demonstrate that
they are aware that France has compulsory military service and that most French
udents find the experience unpleasant. Both have also recently interviewed an-

other French student who is planning to avoid army service by working in the French overseas development network, as a 'coopérant' in a developing country, so they are aware that it is possible to avoid the army. It appears, however, that A has a more fully developed schema than B for the topic of military service in France, since he has a number of French acquaintances who have substituted 'coopération' or overseas study for army service. In addition, this schema has very recently been activated, since immediately previous to his conversation with F, he interviewed a third French subject who was studying at Indiana University instead of doing army service.

The salience of this schema to A manifests itself in the conversation in the form of insistent questions about what exactly F was required to do during his service. These questions continue in spite of a certain reluctance on the part of F to engage this topic, which seems to have unpleasant memories for him:

(3)   Conversation 2   [AF: F's life history 22-25; 23]

F I graduated from that school and then I went to the military for one year
A What did you do /in the military?/
F   /in Nancy/ I was uh you see where is Nancy it's close to Germany
A No I /don't/
F   /it's in/ the /north east/
..   /yeah/ in Alsace or something?
F Close /to it./ Very close to Alsace. So I spent a year there
A   /yeah/
A What did you have to do?
F Well they put me for the first five month they put me they put me in a in a officer division officer training camp uh I didn't wanna but uh that's where they put me, so after I graduated from this thing after five month I was a sub-lieutenant and they put me in a regiment in Lorraine and I spent seven month there, as a sub-lieutenant
A But what so you were an officer?
F Yeah so uh well basically I was teaching some sort of military science
A Yeah military sci- what really?
F Well it was more like my regiment was doing uh constructions so
A Oh so your engineering was it engineering-related?
F No it was military like explosives and how /to blow/ a building
A   /oh/
A Oh structural?
F Mm military
A So do you know about do you know about explosives?
F Yeah that was the thing I was doing I was teaching how to use explosives how to blow a bridge how to blow a house where to put explosives

One explanation for this interest on the part of A is that he has a well-developed schema for the topic, which has recently been activated and indeed updated, and that the topic is therefore at least temporarily salient for him. In addition, a closer examination of the schema outlined above will reveal that there is an obvious gap in A's knowledge: he has no experience talking to Frenchmen who actually did army service. This may account for the rather general nature of his questions, which provide no 'hook' on which F can frame an answer and thus may partially explain the latter's failure to engage the topic immediately.

This episode contrasts with what occurred in Conversation 1, where the 'life history' domain was invoked at the very beginning of the conversation. Timing is important here. It is typically at the beginning of a conversation with an unfamiliar partner that the greatest topic negotiation takes place, since the interlocutors have no way of knowing which schemata, or indeed domains, they share. The situation is further complicated in this case by difficulties F was having in understanding B's British accent. Before the military service topic is initiated, there have been two requests by F for repetition of questions, one false start where B fails to recall a piece of information and has to change topic, and one refusal to engage a topic by F. These considerations, together with the somewhat sketchy background knowledge B has of the topic, lead me to claim that B's interest in engaging the topic of military service is very different from A's in the conversation above. In his role of interviewer, B is quite simply interested in getting his subject talking - the topic itself is of secondary concern.

B's intention is made clear in the conversation by his provision of an easy hook for F to latch onto: "Did you enjoy it?"

(4)   Conversation 1   [BF: F's life history 0-5: 3]

F Then I went to the military for one year, I went to Nancy.
B What was that like?
F Mm?
B The military, what was the military like?
F The military like   What was it like?
B   /mm/
F Uh uhn|
B |Did you enjoy it?
F No noone enjoys noone enjoys it
B They make sure you don't enjoy it?
F Yeah they really made sure I didn't enjoy it   Yeah I
B   /Really? [laugh]/
F mean the first five month were like they put me in a some sort of
   you know what they call ROTC here?   Reserve
B   /Yeah/
F Officer Training Corps, they put me in something like this for five
   month it was like hell I had to get up at, five thirty every
   morning and stuff like this uh play at war with the ugly Russians

These examples indicate that even a presumably well-developed and practiced domain like the speaker's life history is not routinized in the least: the information F provides on two occasions in the space of one hour varies. Since the only variable manipulated is that of the interlocutor, it seems logical to conclude that this inter-locutor has an effect on the way a domain is activated and developed. This inference is supported at a very superficial level by F's question: "you know what they call ROTC here?", clear evidence that he is checking on his interlocutor's background knowledge of the topic.

Stability

The next examples illustrate another dimension of knowledge organization: stability in the structure of background knowledge. From the definitions given, we would expect a domain to be more fixed and a schema more open to change. This hypothesis is supported by data from the episode 'applications of math,' a subcom-ponent of F's major field domain, where we find that in both conversations, there is discussion of the relationship between F's major - applied mathematics - and the real world.

In Conversation 2, the 'applications of math' episode is initiated after five minutes' conversation on the mathematical theory of chaos, which A has asked F to explain. A attempts to relate this discussion to F's own research:

(5a)   Conversation 2   [AF: F's studies 2-24; 8]

A So are these kind of things I mean I'm just fascinated by studying
   something math this kind of thing <u>it's not applied mathematics at
   all</u> right you're just studying something that's
F This is|
A |<u>It's more like an art</u>. Is anything is the kind of thing you do
   used by industry or

The connection A makes between pure mathematics and art seems to indicate that he views the world of research in a manner that could be represented as below, and that he would place both himself (a musician) and F (a mathematician) on the same side of the scale, as shown in Figure2:

Figure 2. A's Math Schema.
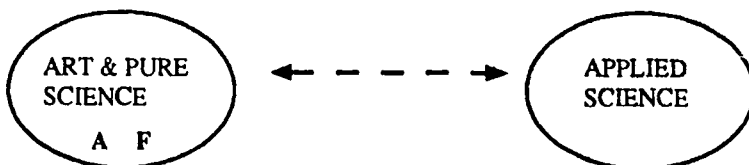
This evidence leads F first to check that this is indeed A's view and then to attempt to alter A's schema:

(5b)   Conversation 2   [AF: F's studies 2-24; 8]

F (continuing from above) No.   Uh ... because <u>what do you mean by applied /mathematics/</u>?

A   /I don't/ know uh well like this Marc is he's working on wire casings you know for Dupont that's great I I'm not a scientist

F   / yeah/

A obviously|

F |Yeah OK he's working on something that some day some industry can use for an industrial process that can make you money uh, I don't   think that's my case and I don't

A   /right, right/

F think that's Ivan's case ... Uh, it's very much (??) some sort of fundamental (??) Now in in, so it's not applied mathematics in this sense you understand the expression applied, but in the sense,

A |Am I right by using the word applied is that applied meaning /that someone would/

F   /Yeah this is/ exactly what I'm saying.   The thing is that mathematicians say applied mathematics to say, to define something that you would not call applied mathematics. I guess if you say applied mathematics you mean mathematics which can be used by some industry|

A |Like a computer?

F Exactly uh <u>when mathematicians say applied mathematics it's it's less restrictive it means mathematics that is connected to studying a problem which exists in the real world</u>

A   /oh OK/

F So in that sense what Ivan is doing and what I'm doing is applied mathematics because you can find examples in fluid mechanics in meteorology in whatever so in that sense it's applied mathematics.   But as far as using this in some industrial   process or anything like predicting the weather or, no,

A No that's it's you guys that's not what you're doing?

F I wouldn't say it's applied

Thus the schema A presents with "it's not applied mathematics at all right ... It's more like an art" is the hook which allows F to develop his contribution. Note that, once again, a third person (Marc, an organic chemist, thus very much an applied scientist) is invoked by A to support his case. This, together with his question "Am I right by using the word applied?" testifies to A's awareness that his schema for this topic area is somewhat sketchy.

In Conversation 1, the 'applications of mathematics' episode begins after only one minute of discussion of the topic of mathematics, a discussion which involved no detailed theory of mathematics but simply concerned F's decision to study mathematics. Thus B has provided no evidence of his competence in the topic, and F's answer differs greatly from the information he gave A:

(6)   Conversation 1   [BF: F's studies 5-11; 6]

B ... I mean I said why are you doing maths PhD I mean <u>it hasn't</u>
<u>really got much application for the real world</u>, um
F Mm? The real world?
B The real world, yeah
F Mm I mean doing mathematics is just so vague. Some things
have applications, some don't
(...)
F Like the equations I'm working are somehow related to the
migration of petroleum in in petroleum deposits so it it is pretty
much uh related to a physical situation that exists. Now whether
the things I do are relevant   about these equations or not
B   /OK yeah/
F well that's another story,   I mean   the motivation
B   /yeah/
B <u>Well no no no I think I think that's uh relevant I think it's very</u>
<u>very important if you're going to spend a lot of time energy and</u>
<u>money on. I think academia for academia's sake is, uh is dubious</u>
<u>to say the least.</u>

F ... Oh well I mean this is a matter of taste I guess, but
<u>I wouldn't say so</u>l
B   lI don't, well, OK all right
F The thing is the following I happen to be working this problem
because I was introduced to these problems first as an engineer and
then I tried   to study them as a mathematician which is
B   /mm/
F slightly different but I wouldn't mind <u>I would enjoy I think</u>
<u>working on something which has absolutely no connection</u>
<u>with the</u>   <u>real world. Like what I used to call</u>
B   /mm/
F <u>intellectual masturbation</u>

Once again, F has derived a clue to B's schema for mathematics from hi
comment "it hasn't really got much application for the real world", and takes this a
the hook on which to develop an answer. B appears to have a similar division c
disciplines as A, but he positions himself (as a geography student) on the opposit
end of the spectrum to F, as can be seen in Figure 3:

Figure 3. B's Math Schema.

ART & PURE
SCIENCE

F

← – – – →

APPLIED
SCIENCE

B
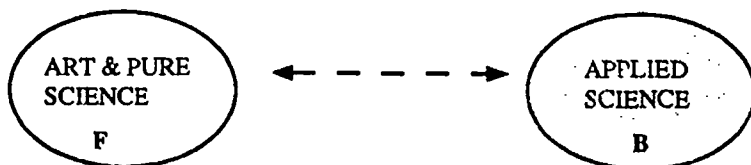
As in the first conversation, F finds himself in a position where he wants to alter his interlocutor's views on his subject, but this time he is moving in the opposite direction, emphasizing the 'purer' aspect of mathematics over its applications, in response to the implication that only applied science has merit.

This episode provides evidence that the native interlocutor's demonstration of background knowledge (as distinct from simple possession of that knowledge, which we examined in the 'life' domain) influences the speaker's presentation of his domain. In the 'applications of math' episode, it appeared that F reacted to his interlocutor's schema as it developed within the activation of the domain. In Conversation 1, there was little or no chance for F to test his interlocutor's schema, and his contribution was very closely tied to the hook in B's opening question. In Conversation 2, however, the participants spent five minutes developing A's math schema, and as a result, A received a more detailed answer to the same underlying question concerning F's views on the position of math in the overall scheme of things. The crucial point is that not only did A have a more elaborate schema for math, but F was aware of this, having been closely involved in its creation.
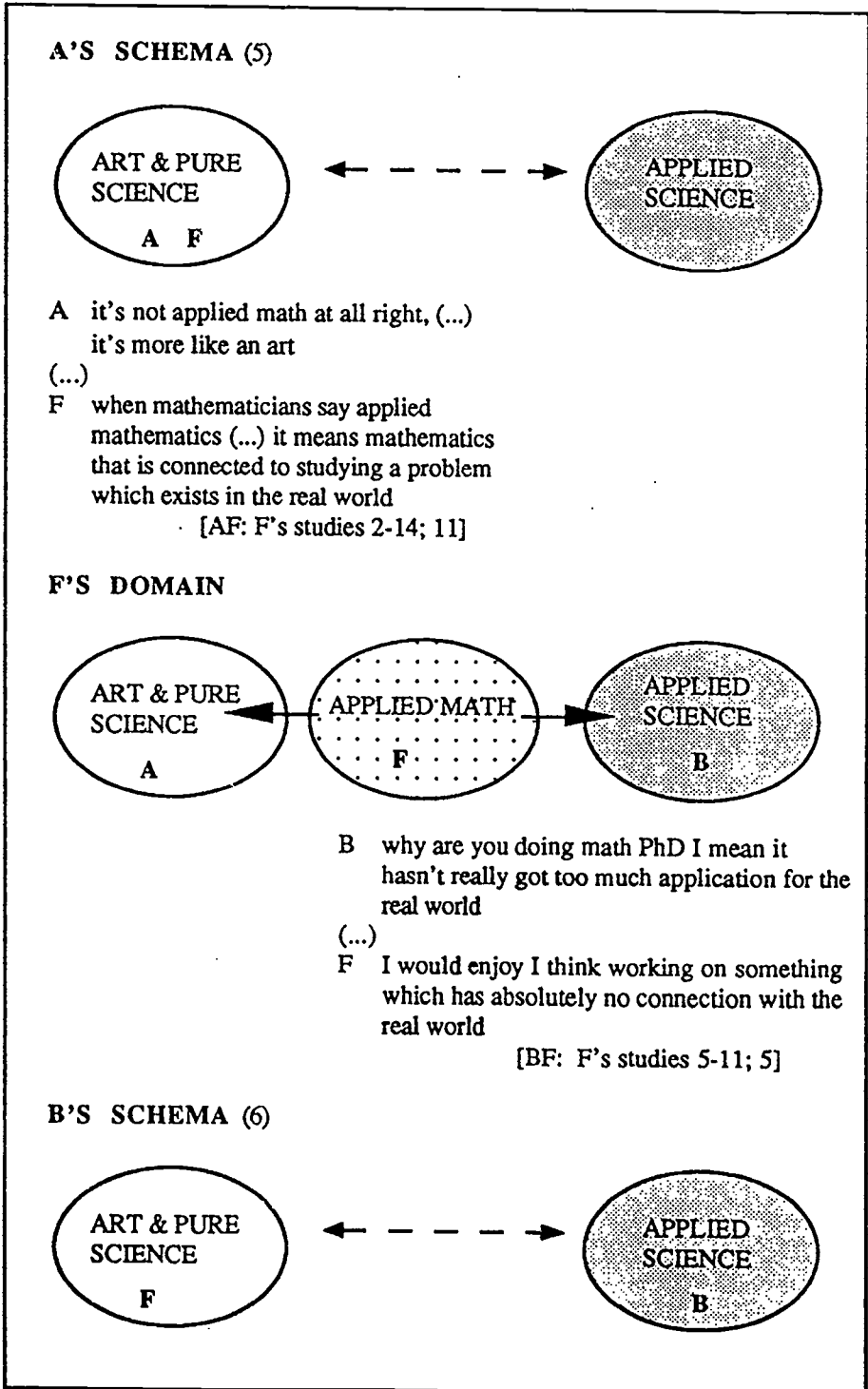
It is clear from these examples that the domain F has developed for what he is doing in mathematics, while not routinized, is fairly solid. When presented with one interlocutor who is "fascinated" by the connection he sees between math and art, and another who denounces "academia for academia's sake" in favor of the applied sciences, his own standpoint does not waver. The same cannot be said for B's schema, since B backs down immediately from his position when F disagrees. Thus a domain may be less open to local alteration than a schema.

However, although F does not alter his own standpoint, he does tailor his contribution very clearly to the positions established by his interlocutors, as is shown in Figure 4. He argues in Conversation 1 for the virtues of pure science and in Conversation 2 for some connection between mathematics and "the real world" (with the fact that he carries this term across from the first conversation indicating that he is taking his interlocutors' views into account). In each case, he is bringing his interlocutor from a different point on the scale towards his own position in the center by invoking the opposite extreme. On both occasions, he is careful to situate his own studies somewhere between the two extremes of pure and applied science, which in itself indicates a more elaborate schema than either A or B demonstrate.

From these two episodes, a composite picture of F's mathematics domain might be arrived at as represented in the central portion of Figure 4. If this post hoc reconstruction of F's math discourse domain from the evidence of two conversations seems to account for certain features of these conversations, then it may also provide a model for how this discourse domain really was created by the speaker. In other words, domains may simply be created by repeated activation of a salient topic area in interaction with different interlocutors. So much is in line with Selinker and Douglas' claims. Yet such a reconstruction also implies a decisive role played by these interlocutors - after all, it seems that the above representation is at least as much a product of their schema as of F's organization of knowledge.

All this points to a hypothesis where a speaker's discourse domain is distinguished from the schema built by his interlocutor in its stability - it is open to elabo-

Figure 4. F's Math Domain Presentation

A'S SCHEMA (5)

ART & PURE SCIENCE

A F

⬅ — — — ➡

APPLIED SCIENCE

A it's not applied math at all right, (...)
   it's more like an art
(...)
F when mathematicians say applied
   mathematics (...) it means mathematics
   that is connected to studying a problem
   which exists in the real world
   · [AF: F's studies 2-14; 11]

F'S DOMAIN

ART & PURE SCIENCE

A

⬅ APPLIED MATH

F

➡ APPLIED SCIENCE

B

B why are you doing math PhD I mean it
   hasn't really got too much application for the
   real world
(...)
F I would enjoy I think working on something
   which has absolutely no connection with the
   real world
   [BF: F's studies 5-11; 5]

B'S SCHEMA (6)

ART & PURE SCIENCE

F

⬅ — — — ➡

APPLIED SCIENCE

B

ration though not to radical alteration; its degree of elaboration - it is much more detailed than the interlocutors' schemata; and -- as a consequence of these properties -- its incorporation of elements of the schemata of different interlocutors encountered by the speaker during the creation of his domain.

Moving on to the next episode, concerning F's choice of major, we can see further evidence of the development of background knowledge within the course of an encounter. In Conversation 2, the discussion of the domain F's studies takes up the whole of the first half of the conversation: A introduces the topic, F explains the theory of chaos, they discuss the applications of math, then proceed to F's reasons for choosing to study math, as shown in (7).

(7)   Conversation 2   [AF: F's studies 2-14; 11]

A What kind of people end up as mathematicians I mean were you
    always just math was just very easy for you or why   why
F   /no/
A because you would think if you're very good I mean the people I
    knew that were good in math in high school or even in college they
    they would go and become engineers or something but who, you
    really have to love math to stay in math as an academic discipline
    right?
F Yeah, I guess it's a matter of taste yeah. Uh, I guess the main
    problem with math is that uh, noone makes a lot of money from
    doing applied mathematics, but anyone that is able to do
    mathematics is also able to do|
A |Make a lot of /money/   /yeah/
F   /be an engineer/   therefore to
    make a lot of money so maybe it requires both being able, but, not
    being too concerned about making money

In A's formulation of his question, we can see he includes material which must have already been in his schema before the conversation. Yet I would also argue that the question reflects the ten minutes of conversation immediately preceding, since it is during that time that A's schema has been developing, largely due to input from F. The question imputes a certain altruism - or at least lack of materialism - to the decision to study math as an academic discipline, and F's answer confirms this suggestion.

This contrasts quite sharply with the same episode in Conversation 1, shown in (2), which is framed "Were you a child prodigy at maths?" Here, the question is similar, asking about F's decision to study math, but its form, and F's response are quite different. One reason for this difference could be the timing, which reflects the participants *awareness of each others* domains and schemata. In (2), the question opens discussion of the domain 'F's studies,' and comes only 5 minutes into the conversation as a whole. Thus no schema-building has occurred as in (7). It seems, therefore, that a schema can be developed throughout an interaction, and that this development can affect the way in which the creator of a domain will present his views.

Personal Importance

So far we have seen differences between domains and schemata in terms of level of development and stability, and have looked at the interaction of the two types of knowledge organization in discourse. A third element in the framework is personal importance, and this is of particular interest since Selinker and Douglas consider it a defining feature of the discourse domain. The importance of a particular topic to a speaker is not always easy to see in a conversation, for although we have already seen one case of a clash between one speaker's domain and his inter-locutor's schema in (6), the rules of normal interaction usually forestall such overt disagreement between participants. Thus the interaction of domain and schema is not a particularly fruitful area for the investigation of domain importance. A better opportunity is afforded in an episode where both interlocutors have a domain for the topic, since their behavior in this instance can be compared with the rest of the inter-action to examine the effect of personal importance on interaction.

Extracts (8) through (11) are taken from the second half of Conversation 1 where B and F share a domain for 'Europe versus the US.' This was the longest topic engaged, taking 8 out of 26 minutes. It showed other features, too, which lead me to claim that the domain holds greater personal importance for both speakers than has been evident in the rest of the conversation.

One such feature concerns turn-taking patterns: in this domain, turns are more evenly shared and less frequently interrupted than in other parts of the conversation. This suggests a departure from the interviewer-interviewee role relationship seen elsewhere, with the topic taking precedence over other situational considerations. B's style in particular changes from the fairly standard interview-type question we have seen so far, to a less neutral form, and F immediately picks up on the implica-tions:

(8) ·   Conversation 1   [BF: Europe vs the US 13-21; 13]

B   You've just been to Corsica? Did you when you came back here
     did you I mean what did you think of the States I mean for me if I
     went back to England I mean having just being in the middle of
     adjusting now uh to <u>the American way of life which is very</u>
     <u>distinctly different from the European way of life</u> uh I would I
     don't know I think it would cause some, some major changes in
     my my attitude towards the States
F   Well I guess, uh, the first thing I could say is maybe it's different
     because I've been here for a year and you've been here like a
     month or what?   I'll tell you what
B   /yeah/

F   when I first came here I stayed for something like nine months
     without going home and then I went back to France and that was a
     sufficiently long period of time so that I could have two
     different modes of feeling, thinking, speaking working whatever,
     the   French mode and the American or the semi-American

B   /mm/
F   mode so it's it's kind of funny because the first time I went to
     France I thought jeez what a difference and blah blah blah and, and
     now the second time I went to France I came back here I thought
     well it's like I have really <u>two different modes of thinking not of</u>
     <u>thinking I would say of behaving there's the French one and the</u>
     <u>American</u> and I feel quite OK in both

Thus instead of the interviewer using a schema to get the interviewee to dis-
cuss his domain, we have the participants establishing a common domain. There is
no information gap as between schema and domain, hence no need for clarification
and verification of each others' contributions and knowledge. The resultant pattern
of contributions is smoother than in episodes from F's discourse domains.

A second point concerns the difference in maturity of the domains each
speaker has developed. B has only been in the country for two months, and his
discourse domain appears to be in the process of developing, as he admits in a later
episode in this domain:

(9)   Conversation 1   [BF: Europe vs the US 13-21; 17]

F   I still think there is some sort of common culture common to all
     Europeans.   Uh
                   /mm/
B   Yeah I mean I probably would have disagreed had you said that to
     me in England. I mean having seen the difference having seen the
     alternative I think you're probably right

He is also experiencing unanticipated culture shock. A recurring feature of his
conversations with other international students has been his concern about assimila-
tion and acculturation, for which he uses the term 'naturalization.' Perhaps because
of the very novelty of this domain to him, he tends to forget that this may also be a
sensitive issue for his interlocutor. The following example is not unique in the data:

(10)   Conversation 2   [BF: Europe vs the US 13-21; 14]

B   I mean would you consider yourself fairly naturalized American I
     mean I can I can notice from some the way you say some things

B   like 'excuse me' that sort of thing sort of American rising
     intonation
F   Yes but you know I mean I'm not a native speaker and so
     whatever I say of   course it has to sound American and
B   /sure/
F   not English because I didn't stay much in England I spent six
             weeks in my entire life   so you know so I guess this
B   /mm/   /mm/
F   thing that I am doing in terms of taking American intonations of
     course the British guy wouldn't do that

18

B   No sure but what I'm saying my point is that do you consider
     yourself that you are fairly nat- that you are fairly accustomed and
     naturalized to America? You say you have two ways of thinking,
     two ways of feeling uh

     F is clearly resistant to the implication that he may be becoming American-
ized, particularly an implication based on his speech patterns, over which he feels
he has little control. B is obliged to defend his position by quoting F's own words
back to him.
     It may be that the process of domain-building is associated with a particularly
high level of involvement with the topic, rather than with the conversational proc-
ess. B's behavior in this segment contrasts sharply with his contribution at the be-
ginning of the conversation, when he initiated talk about F's life domain purely in
order to get the conversation going, as shown in (4).
     It seems that this episode where two domains meet is characterized by a higher
level of involvement on the part of both interlocutors. From the opening question
and answer in (8), there appears to be a large amount of overlap between their
domains, with both speakers viewing themselves primarily as Europeans who hap-
pen to be living in the US. When B suggests, in extract (10), that F might be becom-
ing Americanized, F immediately perceives a mismatch between their domains, and
therefore sets about correcting this impression by making his views of the 'Ameri-
can way of life' more explicit:

(11)   Conversation 2   [BF: Europe vs the US 13-21; 14]

F   No I think two ways of thinking is exaggerating because there are
     some kind of basic philosophies in America in the American
     situation whatever which I don't think I will ever you know
     totally accept
B   Like?
F   Oh like uh what is the first thing in life, of course it's money and
     you know things like this
B   And what what would a Frenchman say? Sex?
F   Yeah I guess so

B   [laugh] And then?   [laugh]
F   /oh/
F   I don't know, food or, any kind of, nice things you
     know? This kind of obsession about efficiency and
B   /yeah, yeah/
F   production you know, I feel quite quite different about these
     things

The speakers have once more reached a point of agreement, and in doing so have crucially elaborated their domains by making value judgements about the relative desirability of American and European ways of life.

This discussion of 'Europe vs the United States' is easily the most expansive and least guarded in either of the two conversations investigated. The participants' behavior may well be influenced by the emotive nature of the topic itself and its peculiar relevance to both of their lives, and both of these factors play a part in the creation of a domain. It would seem that when both speakers have a domain for a particular topic area, they have greater motivation to engage and develop the topic, and to reach some kind of agreement in their views of that topic. This interest is consistent with the domain hypothesis, which holds that domains are created in areas of personal importance to the learner - personal importance implying perhaps a need to gain outside approval for strongly-held beliefs.

Examination of this episode has indicated, however, that it is not only the learner's domain, but the interaction of two domains which produces particularly lively conversation. There seems no reason to distinguish the background knowledge accumulated by the native speaker from that of the nonnative by the labels 'schema' and 'domain', since in this episode at least, there is no transfer of knowledge from NNS to NS in the way we observ. d in discussion of 'F's life' and 'F's major field' domains. Instead, the conversation revolves around the presentation and comparison of the speakers' domains, with the main concern being to reach some form of agreement which will allow each partner to continue discussion of the topic fairly freely. As this episode unfolds, both participants agree on differences between Europe and the US, and situate themselves firmly on the European side of the Atlantic. The discussion shows greater emotional involvement and correspondingly less neutral opinions than are evident in the rest of the interaction.

CONCLUSION

What, then, has been revealed about the nature of discourse domains from this investigation? This paper set out to examine some of the implications of the domain hypothesis, looking in particular at the level of elaboration of the discourse domain, in comparison with the less developed schema model; its stability or resistance to new knowledge arising in an encounter, with the discourse domain appearing less open to change than the schema; and its personal importance, again in comparison with the more general schema. While the conclusions that may be drawn from the findings reported in this case study are necessarily limited, key questions and pointers to further research have been highlighted.

It was hypothesized that a domain would differ from a schema in terms of the content expertise of the speaker. Though possibly discontinuous, a domain would be developed over a period of time and would therefore be both more elaborate and more deeply rooted that a schema. Schemata seem to be more sketchy and temporary in nature, since they may be created on the spot as a local expedient to facilitate interaction. This investigation seems to support this hypothesis, although it indicates that there may be differences both between speakers' domains and their sche-

mata in terms of longevity. It was shown that a schema could contain no more than the most basic general world knowledge (e.g. B's math schema), or might be developed over time (A's French military schema) or in the course of one interaction (A's math schema). A difference was also found in the level of maturity of domains, with F's 12 month experience as a European student in the US resulting in a more developed domain than B's, a product of some 2 months. It was suggested that the level of development of a domain might be manifested in the level of involvement with content shown by the speaker, with new domains proving more absorbing than older ones.

The level of stability shown in participants' domains and schemata seems more a function of the level of development of the speaker's knowledge rather than a property of either domains or schemata. A new domain seemed to be open to alteration in the same way as a tentative schema, while a well-developed schema, though less common than an elaborate domain, seemed to share with the domain a certain solidity. This finding fits with the continuum model of background knowledge shown in Figure 1, where the domain and the schema are seen as similar structures which differ only in the degree to which certain features are exhibited.

As far as the personal nature of the domain is concerned, this paper has shown that one consequence of Selinker and Douglas' hypothesis that domains have "interactional salience" is that the interaction and the interlocutors must be taken into consideration. The nonnative speaker in this study had not developed routines for his domains, but rather adapted the form of his presentation to his perception of his interlocutor's schema for this topic area. The more personal nature of a domain as compared to a schema was illustrated by the higher level of involvement and more emotive nature of the 'Europe vs United States' episode, where both interlocutors had domains. In contrast, even highly developed schemata, such as A's 'French military' one, which was developed over several years and reactivated shortly before the conversation in question, cannot produce the same level of intensity. It would seem, therefore, that the personal experience element of a domain is crucial to its creation and subsequent activation.

One way of relating the three parameters examined in this paper to the notions of domain and schema is shown in Figure 5 on the following page.

In this representation, the schema is shown as a broad, loose structure. The outer ring represents the most sketchy schema, where knowledge is severely limited, tentatively controlled, and of little import to the speaker. However, as the schema-domain continuum shown in Figure 1 implies, any schema can, with application, become a domain; any topic is a potential domain topic. The concentric rings in Figure 5 represent increasingly developed schemata, and the domain is shown as a more tightly constructed, complex, and important core of information. This representation also captures the individual features discussed in this paper as factors which are involved in domain creation and which continue to characterize the fully-developed structure: elaboration, stability, and importance.

This study has revealed important differences in terms of the activation of the same domains for the same speaker across different conversations. It has shown that these differences are related to the interlocutor's knowledge, to the speaker's assess-

Figure 5. Domain Formation.
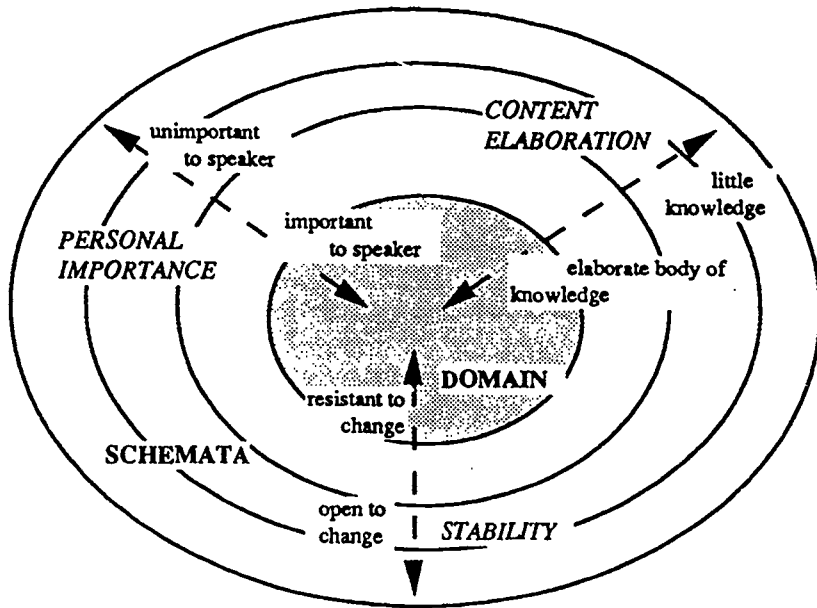
ment of that knowledge, and to the level of personal investment the interlocutor manifests in the topic area. And it has demonstrated that there are a number of variables involved in the notion of discourse domain -- three features were investigated in this paper, but other parameters may well be relevant to a useful definition of the domain construct. Clarification of the different factors involved in this complex area of discourse is therefore necessary before progress in the area of discourse domain theory can be made.

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THE AUTHOR

The author is a graduate student in linguistics at Indiana University with research interests within second language acquisition in interlanguage pragmatics and discourse analysis.

NOTES

[1]The burden of carrying the conversation was placed on the NSs. Since the original research focus was interlanguage modification (following Pica, 1988), A and B were further instructed to provide opportunities for the NNSs to adjust their English towards more target-like production. They were urged not to be uncooperative, but to interject when they did not understand what their interlocutor was saying. Both A and B reported that they had little opportunity for this kind of intervention with the subject of this study.

[2]Transcription conventions:

| | latching: no break between utterances
/ / backchanneling without attempting to take turn
/ / overlapping speech
/ /
, phrase final intonation (pause)
. sentence final falling intonation
... longer pause
(6 secs) anything above 5 secs' pause timed
[laugh] any action or gesture in square brackets
(??) unintelligible speech

(based on Bardovi-Harlig and Hartford 1990, Tannen 1979)

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