Grammatical Categories and Translatability across Languages

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This talk is, like many, autobiographical in origin. It grew out of my experience in study and learning an exotic language of New Guinea, Yimas, spoken by about 200 people in a village of the same name in the East Sepik Province. Yimas is a language of a type as far away as could be imagined from my native language English and the other familiar languages of western Europe. To illustrate briefly, Yimas can often express in a single word what would correspond to a sentence in English:

(1)   ampa-pay-ma-taŋ -wura-na-uŋ
        me to you-first-inside-for-get-let-sago
        'let me get sago from inside for you first'

Further, grammatical features which play a central role in English are commonly irrelevant for Yimas. For example, word order in English is pivotal to the meaning of sentences:

(2)   1.   The man saw the women
        2.   The women saw the man

But Yimas is typically indifferent to word order. The following two sentences have exactly the same meaning:

(3)   1.   'The man saw the women'
              panmal   pu-n-tay   ŋaykum
              man   them-he-saw   women

        2.   ŋaykum   pu-n-tay   panmal
              women   them-he-saw   man

In fact, any of the possible six permutations of the above three words is grammatical, and all have the same meaning. This is because the prefixes to the verb mark the semantics of the sentence: who is doing what to whom. *pu-* indicates that the object of the sentence is plural, hence *ŋaykum* 'women', while *n-* indicates that the subject is singular, so *panmal* 'man'. Thus, all six sentences must have the meaning of sentence (2.1). If one wanted to express the meaning of (2.2), then the prefixes must be switched, but again any word order is acceptable:

(4)   panmal   ŋaykum   na-mpu-tay
        man   women   him-they-saw
        'The women saw the man'

In (4), *mpu-* expresses a plural subject, *ŋaykum* 'women', and *na-*, a singular object, *panmal* 'man'.

But let me return to my main theme, the experience of learning the language. Yimas *is* exotic, but, as we shall see, it is even more alien than these examples indicate. What provided most of the feeling of being in unexplored territory when learning Yimas was the unfamiliarity of some of the concepts expressed by the grammatical categories of the language, categories unmatched in either the common European languages I knew or even the more trendy Southeast Asian ones. It was learning to use these correctly, rather than the complex word structure or unusual syntax, that provided the greatest intellectual challenge in acquiring the language. Learning to use these required me to attend to the situation of talking in a somewhat different way, in a sense, to see the world through Yimas eyes, rather than English ones.

Let me give a simple example, a grammatical category I am pleased to say was not too difficult to master—that of number. English has a rather simple category of number; we distinguish singular, meaning one, from plural, meaning more than one, in both pronouns (*he* or *she* versus *they*) and nouns *(cat* versus *cats)*. Yimas in its inimitable way is a little more elaborated. It distinguishes a singular (one), a dual (two), a paucal (three to about six) and a plural (more than six) for its pronouns, and a singular, dual and plural for its nouns as these examples demonstrate:

(5) mn   mrm   mŋkt   mum
     'he'   'they-two'   'they-few'   'they-many'

     trŋ   trŋkl   trŋki
     'tooth'   'teeth-two' teeth-more-than-two'

So, in speaking Yimas I could no longer go along blithely in my English-centricity, using one form for something when there was only one, and another when there were more than one; no, I had to distinguish was it just two, a few, or more than a few. I had to pay attention to the context of talking rather differently than if speaking English. At first, this altered way of attending to the world was quite conscious, almost as if I had a voice in my head saying 'Bill, make sure you notice the number'. But after I mastered the category, the discrimination became quite unconscious, no different from the way I would correctly use *he* versus *they* in English. The closest thing I can compare this process to is learning how to drive. At first, everything surrounding the driver's seat is unfamiliar and new; one has to attend consciously to what one does with the clutch, the brake, the steering wheel, etc. After driving for a few months, however, everything becomes automatic and one makes these various driving movements unconsciously. So was my experience of learning the Yimas category of number.

But just as a driver experiences the driving seat of a car very differently from a non-driver, I began to feel that in some subtle and difficult to specify ways, I experienced the world differently in my Yimas incarnation from my English one. It is the purpose of this talk to tease out and clarify just what these differences might be. And the base of the difference seems to be the age old question of the relationship, if any, between language and thought. What made speaking Yimas so different from speaking English (and any other language I ever learned) was the strangeness of the concepts, which seemed totally unrelated from my English point of view. Using the various grammatical categories to express these concepts required me to attend to the world differently, to regard things in a situation of having central relevance that would be quite irrelevant in speaking English. On first entering this brave new world, all these discriminations were very consciously made, but on mastering them, they became more automatic, although I could never describe them as being unconscious, for I always had the feeling of altered

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experience in speaking Yimas. And the reason they became more automatic is that these new concepts became part of my thought patterns in a very real sense, part of me came to think like a Yimas.

So, before proceeding further in these confessions of a field linguist, I want to look a bit at what has been said about the relationship between language and thought, between words and concepts, between sentences and propositions in the other major disciplines that study such things: psychology and philosophy. Obviously, the closest interrelationship between language and thought possible is that they are identical: thought is just internal language, speaking to oneself in one's native language (this incidentally is the Yimas folk philosophy view: 'to think' is 'to feel thoughts-words'). But this is probably too strong: at its logical extreme it would make it impossible for an English speaker ever to acquire Yimas. If all thought concepts were coterminous with English words, how could one ever learn Yimas with its alien concepts? Further, all of us have had the 'tip of the tongue' phenomenon, in which we seem to have a clear concept in mind, but are unable to find the words for it. Finally, all of us have probably had the 'Eureka' effect of a flash insight into the solution of a problem, after which we settle down and put it into words. All of this suggests a somewhat more indirect relationship between language and thought than complete isomorphy. Indicators of just what the connection might be come from cognitive psychology.

The crucial area in psychology for investigating questions of the relationship between language and thought involves the way speech utterances are retained in long term memory. Important experiments in this area were done by Sachs in the sixties. Subjects were asked to listen to passages on various topics. These were interrupted midway, and the subjects were given a recognition memory test for a sentence that occurred 0, 40, or 80 syllables back. The test consisted of presenting subjects with a sentence and asking them if it was identical to one which occurred in the passage or not. For example, if they had listened to a passage about Galileo, they might be presented with the following four sentences:

(6) 1. He sent a letter about it to Galileo, the great Italian
         scientist
     2. He sent Galileo, the great Italian scientist, a letter about it

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3. A letter about it was sent to Galileo, the great Italian scientist
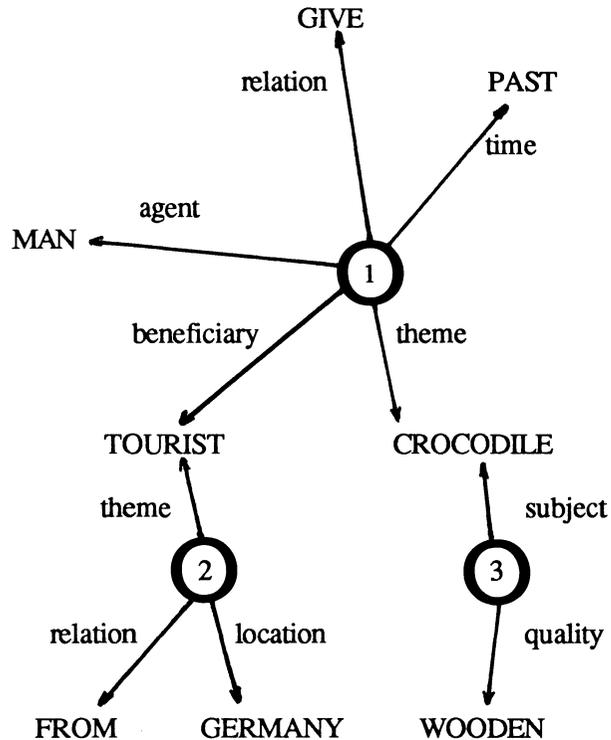4. Galileo, the great Italian scientist, sent him a letter about it

The actual sentence in the text was 1. Note that 1, 2 and 3 are simple paraphrases of each other, but 4 has a quite different meaning. At a delay of 80 syllables (20-25 secs), subjects rarely made the error of thinking they had heard sentence 4, although they frequently believed they had heard sentences 2 and 3, rather than 1. This indicates that what was remembered was not the sentence itself, but its meaning, or in more logical guise, the proposition that the sentence expresses. In other words, the actual sentence heard was quickly converted into a propositional representation for storage in long term memory. This suggests that what really mediates the relationship between language and thought is some internal mental representation in the form of a proposition.

Having said this, however, the question immediately arises as to what are the features of these internal mental representations? Are they closely tied to the actual native language spoken, so that they reflect the language utterance stripped of extraneous syntactic packaging alternates (e.g. equivalent to a simple active sentence in English)? Or are they universal, reflecting a universal language of thought, mapping on to actual spoken languages by rather trivial language specific realization rules, a view much beloved by rationalist philosophers like Leibniz or Jerry Fodor and linguists like Chomsky or Wierzbicka? The answer I will argue for in this lecture is that it is a bit of both. Behind each sentence is a propositional representation of universal form, but linked to that representation and, importantly, part of its meaning, are schemas and networks of knowledge that reflect the native language and native culture in which that language is spoken. To understand what that would mean we need to look in more detail at the structure of these mental representations. (I am not unaware of the very serious objections to the idea of mental representations raised by philosophers like Wittgenstein or biologists like Humberto Maturana. It may be that their objections are fatal to the whole programme proposed here (and to cognitive science, generally), but it is beyond the scope of my talk to more than mention them, and to hope that ultimately what I am trying to do will be compatible with their views.)

Consider the following possible propositional representation (8) for sentence (7)

(7) The man gave the tourist from Germany the wooden crocodile

(8)

GIVE

relation   PAST

time

agent
MAN

beneficiary   theme

TOURIST   CROCODILE

theme   subject

relation   location   quality

FROM   GERMANY   WOODEN

This is what is known as a propositional network representation. What is immediately striking about it is the luxuriant use of English words to label the nodes and relations: GIVE, PAST, WOODEN, agent, location, and, indeed, even relation itself. Of course, what is immediately claimed is that these are not really meant as English words, but as labels for the concepts behind these words, merely convenient tags for universal concepts, for which, it would be argued, we could just as easily use Yimas labels. Well, if we are going to accept this sleight of hand, the notion of universal concept had better be a well defined notion, and as we shall see, it isn't.

For something to be well defined, we need to specify necessary and sufficient conditions for its use. For example, the concept of 'bird', say, will be well defined if we can provide a set of statements like (1) has feathers; (2) has two legs and a beak; (3) has wings and can fly, which will be shared uniquely by all members of its class and no others. So the defining set of attributes of the category determine which items are members and which are not. In such a view, concept or category boundaries are sharp; it makes no sense to say that some members are better exemplars than others. A chicken is either a bird or it is not; end of story.

Pathbreaking work by Eleanor Rosch in the 1970s blasted this traditional view of conceptualization, so that it is no longer tenable. She demonstrated that an exhaustive set of attributes was not criterial for a category. Attributes tend to cluster together in the real world and often are highly correlated (feathers usually occur with two legs, a beak, wings and the ability to fly), and recognition of categories tends to exploit these redundancies by grouping together objects which share these attributes, but these are not criterial for the class. Rather categories are built around a central prototypical member. This is a representative exemplar of that class which shares most features with other members of the category and the fewest with items outside of it. For example, a rosella would be a more typical bird than a chicken or a penguin and certainly more so than a cassowary (in fact in many New Guinea cultures the cassowary is not considered a bird at all, and classified, if at all, with the pig, rather than other birds). Thus, Rosch's work severely taxes the idea of strong and fixed boundaries between categories; with the actual experiences of speakers in the real world they tend to have fuzzy boundaries and to blend into one another. The Platonic view of a concept with a timeless and unique essence, defined critically by a set of attributes, seems an endangered species. Incidentally, here Rosch exhibits a potential affinity with Wittgenstein. For him, concepts are neither mental constructs nor abstract ideas, but *abilities*, which individuals can employ in ways acceptable to the rest of the language community as a way of doing things. If we reinterpret Rosch's findings to say that a concept is a judgement about distance from a prototypical exemplar, a judgement largely due to the communities' con-ventions, the similarity between hers and Wittgenstein's ideas is immediately apparent.

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So, if concepts cannot be construed entirely in their own terms by a set of criterial attributes, how are they to be construed? To answer this question I have to introduce what I believe to be the most exciting new idea to appear in cognitive science in the last 20 years, one which comes in its modern usage from the field of artificial intelligence—the idea of *schemas*. The idea actually surfaced first in the philosophy of Kant; he used schemas as a mediating representation between the abstract *a priori* pure reason categories of the mind and raw sensory data. The schema is activated by raw sensory experience, but provides an interpretation of that experience for and in the terms of the rational categories of the mind.

In its modern guise, the notion of schemas first appears in the work of F. C. Bartlett on memory in Cambridge in the 1920s and was reported in his book, *Remembering*. Bartlett had his subjects listen to various exotic stories and then asked them to recall the plots at various subsequent intervals. He found that they were not able to recall such input accurately and that the inaccuracies exhibit regular patterns. Subjects would revise the plots until they came to resemble standard stories they had heard, a prototypical wild west story, for example. Bartlett explained his findings in terms of the notion of schemas: the typical memory system used by humans involves the use of abstract cognitive structures, schemas which arise from prior experience, with the result that information has come to be organized in specific ways. Bartlett's pioneering work was largely forgotten in psychology in America during the behaviourist reign of terror from the 1930s through the 1960s and was only reintroduced into cognitive science from artificial intelligence in the 1970s.

Schemas are very useful in modelling the Rosch notion of fuzzy categories, for they allow variation in the objects which might fit a particular schema. If schemas encode our knowledge about categories, then we ought to see a change from less typical to more typical members of the category as the features of the members better satisfy the schema constraints. For example, for the category 'bird' consider the following sentences:

(9)　1.　I heard a bird twittering outside my window
　　　2.　A bird flew down and began eating a worm

The words 'twittering', 'flew' and 'eating a worm' call up clear schemas about birds and their behaviour that we all carry. Rosch replaced the category name in these examples with a central member ('robin'), a less central member ('eagle') and a peripheral member ('chicken'), and asked subjects to rate the sensibleness of the resulting sentences. The scoring of the sentences for sensibleness correlated closely with the centrality of the category member: high scores for central members, lower scores for less central members. Clearly, people associated centrality of category membership with likely role playing in a typical schema for that category. As further evidence for the fundamental role of schemas in understanding, consider the following two short texts:

(10)   With hocked gems financing him, our hero bravely defied all scornful laughter that tried to prevent his scheme. Your eyes deceive he had said; an egg not a table correctly typified this unexplored planet. Now, three sturdy sisters sought proof forging along sometimes through calm vastness, yet more often over turbulent peaks and valleys. Days became weeks, as many doubters spread fearful rumours about the edge. At last from nowhere welcome winged creatures appeared signifying momentous success.

(11)   The procedure is actually quite simple. First you arrange things into different groups depending on their makeup. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo any particular endeavour. That is, it is better to do two things at once than too many...

On first reading these texts, you doubtless found them very difficult to process and would probably have done very poorly on recall experiments. On being told they were about Christopher Columbus sailing to America and a washing machine, respectively, they immediately become much more comprehensible and memorable. This is because those titles called up schemas in your memory which guided your understanding. Such is the pivotal role of schemas in all cognitive processing of language; understanding something anew without a prior script is very difficult.

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Now I can return to the item which launched this discussion of conceptualization and schemas, the propositional network representation in (8). The moral of the preceding discussion is that a representation does not exist in isolation, but that it is embedded in a schema, indeed, multiple schemas. The English words in capitals represent concepts, but in so doing they tie into the schemas, which these concepts are involved in and in turn defined by. Some schemas or parts of schemas are undoubtedly universal, because of universals of human experience. For example, the singing of birds is probably part of a schema for that category for all human beings, albeit not a criterial one, e.g. emus. It is this universality of schemas or parts of them which is the grist for the mill for proponents of universalist representations like Wierzbicka. This is certainly part of the story, but it is far from all of it. Equally important are the schemas which are language and culture specific. For example, what is the isolated New Guinea highlander, who has never been out of his valley nor seen someone from outside it nor ever heard or seen the mass media, to make of the concept 'tourist'? Very little, I suggest, for he has no schema to embed it in. When in course of time, tourists invade his valley, he is quite likely to develop a schema for them and the associated concept, but I submit the structure of that schema is always going to be different from that of the tourist's own schema, and in this sense, the word is a different concept and has a different meaning for villager and tourist. Thus, translatability between different languages (ultimately different cultures) is possible on the basis of universalist based schemas, but this is only a part of the meaning. What remains outside shared schemas remains untranslated.

This problem is rather more acute with regard to the English words written in small letters in (8), the labels for the semantic relations among the vocabulary based concepts in the proposition. Are these labels for universal concepts? Are they the same for all languages, with strictly universalist schemas, or are they again hybrids of universalist and language specific schemas? Again, the answer seems to be the latter. To illustrate this point, I will consider two of the semantic relations in the propositional network representation in (8), agent and beneficiary, and then consider the schemas associated with these in English and two languages of New Guinea.

First, let us consider the notion of agent. The basic universalist

schema associated with this concept is that someone does an action and that he wants to do so. The idea of volition, the force of the will, seems central for the schema that defines agent. This may seem simple but it isn't, as philosophers have shown repeatedly over the years. The notion of the will and the associated concept of wanting is anything but straightforward. For the notion of wanting, I would argue, is very much a cultural construction, a function of the schemas we use to define it. This becomes immediately apparent as soon as we encounter a language which has a rather different conceptualization of the notion of agent.

Such a different conceptualization of the agent is found in some languages of the Western and Southern Highlands of Papua New Guinea. The marker of the agent is a suffix, called the ergative, which marks a performer of an action who wants to do an action and does accomplish it. So far so good, everything seems as in English, but as we might suspect, the problem consists in what counts as wanting. Consider the examples in (12) from Podopa, the language of a Southern Highlands Province:

(12) 1. naaǫ o   make   dạ-né   diadepó
          you sagopalm   young   we-ERG   cut down
          'We deliberately cut down your young sago palm'

      2. ne   tikipaae   dạ   tukióné   naanopó
          other   part   we   open   eat
          'We were going to cut open and eat part of it'

The ergative marker indicates that the performer is acting independently, is self-motivated and exerts his personal control over the situation; while its lack indicates that he is performing according to set social obligations, not according to his own independent will, and does not assert his personal control over the situation. For example, with utterances describing the gathering, preparation and exchange of food, the ergative marker is considered socially inappropriate. It would highlight the performer's personal and independent role in the activities associated with food and would mark him as boastful or stingy. As all activities associated with food are governed by strict social conventions, the absence of the ergative marker is the normal and socially sanctioned usage. This is certainly a very different notion of the concept of wanting

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than that of native English speakers. Podopa speakers have a range of schemas associated with proper social behaviours which define wanting, and this in turn defines agent. As studies of other New Guinea societies have stressed, Podopa speakers understand themselves as points in an enormously constraining network of reciprocal social responsibilities, responsibilities met through exchanges. Food, for example, is not seen as a nourishment resource but as an exchange resource. What is crucial here is that the self is not conceived as an isolated entity coming into social contact through an accord exercised by his own free will, but rather as a point defined by his ordained exchange relationships with all other points in the system. Acting within this system, then, cannot be viewed as entailing wanting, but acting outside it can, for in that case the performer alters the set social interrelationships by a free social action chosen by his free will. Such are the schemas of self and action that Podopa speakers associate with wanting, and in turn these schemas necessarily define agent in this language. The universalist schema of wanting and doing is still valid, but it must be embedded in quite specific language and culture schemas of self and action.

As a final example, I want to return to Yimas and consider the semantic relationship of beneficiary of an action, by comparing the schemas for this concept in English with those in Yimas. The English data is drawn from Green (1974) and Goldberg (1989). As a first approximation for a basic universalist schema for this concept let's suggest: the agent of the action intends someone to receive an object and that that someone is happy as a result of the event. Typically, the beneficiary receives the object.

(13) 1. The man gave the tourist the wooden crocodile
      2. The nurse fed the sick man his soup

But all that is necessary is the intention that he receive it (good intentions being assumed).

(14) 1. Mary baked me a cake
      2. Harry promised Sally a pet snake
      3. The man offered her a free car

One schema that English associates with beneficiary but many other

languages do not is 'intended audience of a performance'. This makes sense in view of expressions like 'to give/have a performance'. A performance is a metaphorical object that the performer intends to present for the audience. So we have examples like:

(15) 1. She played us 'The Moonlight Sonata'
      2. She danced us the first act of a new ballet
      3. They hummed us 'La Marseillaise'

Many, perhaps most, of the languages of the world could not translate the sentences of (15) in the same way as those of (13) and (14), because the schemas underlying them are viewed as quite different. As we shall see, Yimas is one of these languages.

Yimas expresses the beneficiary in two different ways, according to whether he is physically present in the same location at the time the action is done or not. Examples are:

(16) 1. ura   k-ka-*taŋ* -yawra-t-akn
          coconut   it-I-COM-pick up-PAST-for him
          'I picked him up a coconut'
          [he was right there with me when I did it]

      2. yara   ya-ka-kra- *ŋa*-r-akn
          trees   them-I-cut-BEN-PAST-for him
          'I cut him those trees'
          [he was absent, maybe too sick or too weak to do it;
            but the wood is for him]

taŋ- COM (for commitative, meaning 'with', for reasons which will become apparent below) indicates the concurrent physical presence of the beneficiary during the action, while *ŋa*- BEN (also the form for the verb root meaning 'give') indicates its absence. Thus, the basic universalist schema suggested above for beneficiary must be immediately supplemented by two schemas which specify the physical presence or absence of the beneficiary and also whether transfer of the object is intended. *ŋa*- BEN requires intended physical transfer for the absent beneficiary, *taŋ*- COM, as we shall see, does not.

The use of a form meaning 'with' as a marker of beneficiary is

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quite striking and requires a closer scrutiny. That this is indeed its basic meaning is apparent from the following examples:

(17) 1. tampn   pu-kra-mampi-*taŋ* -wa-t
          later   they-us-again-COM-go-PAST
          'Later they went with us again'

      2. impa-n-*taŋ*-kwalca-t
          them-he-COM-rise-PAST
          'He got up with them'

But as we have seen, it can also express a beneficiary, someone for whose good an action is done.

(18) 1. Mitchell   kat   ya-ka-*taŋ* -wayk-r-akn
          Mitchell   cards them-I-COM-buy-PAST-for him
          'I bought Mitchell a (pack of) cards'

      2. upn tampiŋ   kn-*taŋ* -pampal-c-akn
          heart   it-she-COM-cook-PAST-for him
          'She cooked the heart for him'

But, most strikingly of all, it can also be used to indicate maleficiaries, someone who is badly affected and unhappy as a result of the action.

(19) 1. wampunŋ   k-mpu-kra-*taŋ*-mntk-t
          soya flour   it-they-on us-COM-finish-PAST
          'They used up all our sago flour'

      2. ma tmat-pan   na-kay-*taŋ*-awkura-kr-mpun
          other day-on   it-we-COM-gather-FUTURE-on-them
          'Someday we will steal it from them'

What does the commitative 'with' have to do with the beneficiary 'for' and the maleficiary 'on'? Approaching this problem from the English based schema of beneficiary proposed above will get us nowhere here. Rather we must recognise that we are dealing with a very different conceptualisation, a radically different schema, and one, as in Podopa, which is crucially tied to Yimas

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conceptualizations of self and social action. For the Yimas, too, conceive of the social actor as someone embedded as a point in a network of preordained, reciprocal exchange responsibilities. Thus, an action which is done for someone who is present at the time of the action is done not so much *for* them, as *with* them, in view of the required reciprocal exchange responsibilities that the beneficiary then takes on. Further, because of the view of the self and social action which provides the schema for the use of *taŋ*- COM, it is not necessary that the participant be a beneficiary, i.e. feel good as a result of the action. All that is necessary is that the performer of the action do so within the network of reciprocal exchange responsibilities with a view to affect someone else. Hence, it is quite possible that a participant so indicated be deprived by a loss of property, i.e. be a maleficiary. Thus, the basic universalist schema for the beneficiary and the one underlying the concept as used in English is realised by two schemas in Yimas:

(20) 1. *taŋ*- schema
        (1) performer acts on object within preordained network
            of exchange relationships
        (2) someone else is affected by that action, for good or ill
        (3) performer typically intends to cause that effect
        (4) if action affects someone for good, that someone
            must be present

2. *ŋa*- schema
        (1) performer acts on object
        (2) performer intends to transfer object to someone else
        (3) that someone else is not present at the time and
            place of the act
        (4) that someone will feel happy as a result of the act

But the Yimas correspondences to the English concept of beneficiary do not stop with these two. The 'transfer of performance' schema illustrated in (15) corresponds to still a third Yimas form *taŋkway*- VIS.

(21) 1. na-mpu-*taŋkway*-iranta-irm-t
        her-they-VIS-dance-stand-PAST
        'They danced her a dance'

2. tpuk   ku-n-*taŋkway*-awl-mpi-ta-   -ak
    sago   it-she-VIS-get-and-put-PAST-for   him
    'She got him a sago pancake'

taŋkway- VIS means to do an action for/with/near someone while visually monitoring him, typically for their response. This visual scanning schema of *taŋkway*- is the third one to correspond to the Yimas notion of beneficiary.

It should be pointed out that the schema descriptions I have provided for English, Yimas and Podopa concepts are not definitions. They are simply to provide some prototypical conditions under which the relative language constructions are used. These need to be embedded in other schemas for full utilization and understanding. This is expecially apparent in the first line of the *taŋ*-schema in (20). Only a very complex array of further schemas could flesh out the preordained network of exchange relationships. These must necessarily be quite similar for the notion of scripts pioneered by Schank and Abelson (1977). An example of one, Eating in a Restaurant, is in (22):

(22)   Dining at a restaurant

Scene I: Entering
customer enters restaurant
customer looks for table
customer decides where to sit
customer goes to table
customer sits down

Scene II: Ordering
customer picks up menu
customer looks at menu
customer decides on food
customer signals waiter
waiter comes to table
customer orders food
waiter goes to cook
waiter gives order for cook
cook prepares food

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Scene III: Eating
> cook gives food to waiter
> waiter brings food to customer
> customer eats food

Scene IV: Exiting
> waiter writes bill
> waiter goes over to customer
> waiter gives bill to customer
> customer pays waiter/cashier
> customer leaves restaurant

It is claimed that a great deal of our sociocultural knowledge is known in a form like this script, some more fleshed out and elaborated, some less. What is critically important here, however, is that most of this knowledge is tacit, in the sense of Michael Polanyi. We do not think through the actions and scenes of a script, we simply do them, without reflection. They can come into conscious awareness if something out of the ordinary happens, say, we pay before we order, as in a well known restaurant in Boston mentioned by Schank, but the normal state of affairs is to run through the entire script unreflectingly. In this sense the propositional framework so beloved of philosophers and linguists may not be the best way to construe scripts; the truth or falsehood of the steps of a script are not at issue; what is relevant is that we perform them. The end result of all this, then, is that not only are the propositional network representations of (8) dependent on language and culture specific schemas for their interpretation, but in turn these schemas are dependent on sociocultural scripts, whose 'meaning' (and I use this word hesitantly in this context) may not even be representable in propositional terms at all.

What are the implications of all this for translation? It would seem that we could certainly expect to be able to translate propositional network representations like those in (8) into an equivalent representation with the forms of another language, by using the universal prototypical components of the conceptual schemas. However, the highly language and culture specific aspects of the conceptual schemas, tied, as they are, to sociocultural actions and delineated by the tacit knowledge of the cultural scripts, are much more problematic. As I mentioned above, the knowledge of scripts

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is not propositional knowledge, so we cannot exactly append a description of the relevant scripts for a translation from, say Yimas into English, and call it part of the translation. Rather, we are dealing here with a very different kind of understanding than that required in the matching of propositional network representations. It involves taking what Clifford Geertz has called the native's point of view. It requires an indwelling with the understanding of the speakers, a tacit taking on of the forms and values of the cultural scripts. So, can any attempt to translate a passage from one language, with all its rich baggage of conceptual schemas and scripts, into another language result in anything other than a pale lifeless reproduction, which is a very far cry indeed from the understanding of the speakers of the translated language? When speakers of two languages share a great many of the same cultural scripts as between European languages, translation may be closer, although still not exact. But when there is very little in common, as between New Guinea languages and European ones, the gap is so wide that all we can hope for is a very poor approximation. One could suggest that we append annotations to the propositional translation trying to spell out the relevant scripts. But this does great violence to the intentions of the speakers of the original, for whom such knowledge is tacit and, further, such a procedure can be seriously questioned philosophically, for it confuses knowing how with knowing what. Rather, all we can be confident about is the claim that between two languages of very different lived experience, all that is translatable is propositional information based on universalist understanding. What lies outside of universalist understanding, we must, to paraphrase Wittgenstein, remain silent about.

Bibliographical Note

Bartlett, F.,   *Remembering*, Cambridge, 1932.

Chomsky, N.,   *Rules and Representations*, Oxford, 1980.

Fodor, J.,   *The Language of Thought*, New York, 1975.

Geertz, C.,   'From the Natives' Point of View: on the Nature of Anthropological Understanding', *Local Knowledge*, New York, 1983.

Green, G., *Semantics and Syntactic Regularity*, Bloomington, 1974.

Kant, I., *Critique of Pure Reason*, New York, 1958.

Leibniz, G. W., *New Essays on Human Understanding*, Cambridge, 1981.

Maturana, H. and Varela, F., *The Tree of Knowledge: the Biological Roots of Human Understanding*, Boston, 1987.

Polyani, M., *Personal Knowledge: Towards a Post-Critical Philosophy*, Chicago, 1958.

Rosch, E., 'Principles of Categorization', *Cognition and Categorization*, ed. E. Rosch and B. Lloyd, Hillsdale N.J., 1978.

Sachs, J., 'Recognition Memory for Syntactic and Semantic Aspects of Connected Discourse', *Perception and Psychophysics*, II (1967), 439-42.

Schank, R. and Abelson, R., *Scripts, Plans, Goals and Understanding*, Hillsdale N.J., 1977.

Wierzbicka, A., *Lingua Mentalis*, Sydney, 1980.

Wittgenstein, L., *Philosophical Investigations*, Oxford, 1953.