foundation for extrapolating these interpretations to other TA encounters and a basis only for classifying management tools.

At this point, we cannot consider possibilities that, for example, would weaken the link between the relational and the identity axes for the foreigners in Mexico. It would be misleading to use the historical context as a sufficient condition for the actors' interpretations. Comparing the historical context of Appui Technique or Autogeneración with that of another TA encounter allows us to classify tools but it cannot be used to identify fundamental management goals.

Instead, we keep the three dimensions, their pertinence well established, and see in the next section how these interpretations are reinforced mutually. Then, we return to individual actors to identify their attempts to change the encounter. Considering these attempts together with the interdependencies of the actors' capacities, we have a viable empirical basis to identify management goals.

6.1.3   Intersubjectivity and the management landscape

While much of the aforementioned was quite independent of the actors, there were specific aspects with crucial interdependencies between the local and the foreign perspectives. In fact, these interdependencies made the actors' efforts so frustrating, always leaving an impression that the cause was partially their own shortcoming.

The transformation of the foreigners into protagonists was a result of their struggle against the Other (section 3.1). For the foreigners in Mexico, the struggle was fortified by a competition among the US experts, whose professionalism was reinforced by the limits of the Other. The French in Appui Technique lived a process informed mostly by France's past in Africa. John explained in the Washington office of Hagler, Bailly, Inc. that in Mexico it was difficult to obtain services so simple as having a document typed. Simple needs became complicated obstacles in this world. On the other hand, Martin of GRET told anecdotes in Paris about the functioning of the Chadian workshops which implied that much more could have been achieved by the artisans, for whom a well-soldered machine was meaningful.

The situation in Chad was marked by the colonial past and its precarious present relationship to France. French domination would have made itself felt in Appui Technique even in the absence of Chadian actors. The NGOs, the IBRD and the French voluntary foreign service seemed to be omnipotent forces. The local actors were blocked in their deconstruction of the nasarra (necessary to their advancement), as Osama and Ngerbo tried to do, because such deconstruction would have required an interrogation of this figure's presumed role as a civilizing force. Still, the foreigners did not distinguish the symbolic weight of France from actual foreign aid and technology available. This deconstruction began long ago and is advancing because of the severity of the current crisis in Chad, although it has only now become truly engaged.

Until recently about half of the Chadian artisans were indifferent to the possibility of choosing or changing their relational attitude (position on the relational axis). In the context of Appui Technique, the foreigners again professed an alleged role of French influence. And yet, the need to believe in their myth placed them in a difficult position – the lived situation on the project showed them the illusory nature of this coherence. In response, they sought ways of distinguishing their action from the ones typically associated with a French developer, the *coopérant*.

The extent to which we can study the foreigner's role is limited in the absence of feedback, available only if the artisans assert themselves in their relationships with the foreigners. The deconstruction of the nasarra is the *sine qua non* of the artisan's reaction to the foreigners. Such a reaction would further allow the foreigners to act in turn towards an individual Chadian. The blockage, we have noted, is an interdependence between the coherence of the foreigner and his image of the local actor. The foreigners remained trapped in the crisis of their identity by boxing the local actors into an equally restrictive category. Such was the debilitating reciprocity of cultural distance (alterity) in the lived experience in Appui Technique.

This reciprocity was stable to the extent that the foreigners depended again upon their coherence to deliver them from the bind they were in, and in which they were called to act. However, during their private lunches, among themselves, the foreigners asserted that the corruption in France had been as important as the corruption in Chad, or that the current development efforts were absurd because they continued to put into practice old unproductive ideas. Objecting privately to the purported coherence in the action of development, the foreigners tolerated the obvious contradiction between their theoretical 'aid' to Chad and its ultimate inefficiency in their interaction with the local actors. In fact, they bore it better than they bore the gravity of the country's socioeconomic crisis. Whenever they were with the artisans, the foreigners fell back on the image of their omnipotence and silenced their fears.[29]

The foreigners thus reinforced their cultural distance (alterity). On the other side of the interface, the Chadians invoked the nasarra in their interaction with the foreigners, either to catalyse its deconstruction or simply to react to their behaviour. The latter response, typical of Mondai, for example, involved submitting to the foreigner's power, and accepting the ideal of the White man as the driving force behind Chad's advancement.[30] In the presence of the nasarra, the goal was to remain as passive as possible so as not to hinder, in any way, his goal of development. The deconstruction of this negative dialectic (for example in the way that Osama was able to do) was begun with the coherence of the foreigners being contested. Osama's first gesture as a participant in the project was to approach Jacques with a management mistake that Jacques had made. But Osama's success in noticing and denouncing the mistake (which pleased the other foreigners) ignited in him the expectation of an equal relationship with the foreigners – one they could

not grant him in the end. As a result, Osama was both appreciated and scorned by the foreigners. Osama's frustration led him to confront head-on the foreign domination, a reaction that later caused him to slip back into a passivity similar to that of Mondai and others. Neither the foreigners nor Osama were in a position to profit from constructive conflict, particularly as there were other artisans present who did not participate in the process. The cultural distance (alterity) of the local actors was stabilized in this way. We cannot comment on the pertinence of this stabilization in other types of projects which evolve in another institutional environment. However, the available results of other studies do show that the logic of communication at Appui Technique was of a novel type.

> What remains is to explain the permanence of the culture of development's own 'cognitive map', and notably the way in which the critical function, inherent in a rational bureaucracy, not only spares but also reinforces the idea-values of development culture.
>
> The permanence of the cognitive map is not a feature of the logic of communication born of a 'project' of development. It is rather a characteristic of the mechanism of development itself.
>
> (Chauveau 1992: 28)

As in the rural development that Chauveau studied, the exchanges we are examining did not affect the reproduction of development practice. However, some of the actors we observed indicated that their exchanges could move beyond such a mechanism. The time and effort that the foreigners spent in justifying why they had to act as one in front of the Chadians and vice versa underlines that this interdependence was fragile. The resentment towards a dissident foreigner (Pascal) and a dissident artisan (Osama) was expressed verbally but had no consequences for them. Had these dissidents hesitated less, they might have overcome this interdependence.

Foreign domination was more imagined than realized in Mexico, hence the necessity to resurrect the five-century-old figure of Malinche. The positions of the Mexican experts were sufficiently diverse to render the value axis and the relational axis independent. Whatever the variety of behaviours, the foreigners appeared very little in the Mexican's interpretation of the project, and only in terms of their distrust of the Mexicans. This common element was linked to the menacing Mexican Other. Despite the ability of a few local experts to interact with the foreign knowledge in a productive way (María, for example), the fear of foreign domination continued to play a role in the local reception of the foreigners. The foreigners 'bullshitted' hesitantly when they saw no other means of dealing with the Mexican engineers and, as they anticipated resistance from their local colleagues, they could find no other solution. Inflexibility in the relational attitude was more of a problem among the Mexicans than among the foreigners because the foreigners were more likely to read their own incapacity to act as a personal failure. A top international expert should always be able to adapt to his environment.

Accordingly, the foreigners allowed themselves to reinforce their image of the Other on the basis of their daily experiences less than they allowed their Mexican colleagues to do so. The Mexicans, for their part, actually blamed the foreigners (the gringo) for the lack of communication that resulted from their own incapacity to react to the offer of technical knowledge.

The exchanges in Mexico were thus blocked by the cultural distance (alterity). This distance was a monument to foreign domination that was supported by the symbolic bedrock on each side of the interface. Nevertheless, the traces of cultural distance described here were the only evidence of real foreign influence in Mexico. The relationship of the foreign consulting company and the Mexican companies to the Mexican Energy Agency was of a purely commercial nature. Power resided solely with whoever was the client. Among the experts, power consisted in technical capacity and in the reputation of Hagler, Bailly, Inc., which exercised a certain cultural influence in Mexico. Contrary to the situation in Chad, the cultural distance in Mexico was not based on the rigidity of the relational axis towards the value axis (the relational attitude of the actors determined by the value of the Other) but on its relationship to the identity axis (the recognition of the identity of the other at hand).

The gringo did not enjoy the same status among all the Mexicans. Vincente, Geraldo, Aníbal and Humberto recognized the Other as those Mexicans who had never had the opportunity to travel or benefit from modern professional training. The foreigners were less alienated by the more informed Mexicans, who saw differences among the foreigners. For the younger local experts (Ramón, Carlos, Lorenzo, Juan, María and Eva), the image of the gringo was fixed and posed a problem. From my perspective as the foreign interviewer, the Other seemed to vary among the Mexicans, whereas in Chad the Other appeared to be a single shared construction. My personality had an effect on the formation of the Other in Mexico. John's efforts to 'not sound so foreign' were also directly received, as Carlos had explained when he spoke of John's criticism that '*makes you stupid*'.[31]

Although the Mexicans were able to distinguish between individual and personal character in the group of foreigners, this awareness could not overcome the blinding force of the Other. Even María, who succeeded best in working closely with the foreigners, did not dare to ask all the questions she wanted to ask to validate her work. She felt a hesitation that came to characterize all of her professional relationships with the foreigners. The foreigners also could not question the Mexican engineers in ways which helped them to understand the Mexicans' motivations and capacities. Thus, the possible identities of the present other were limited by the Other on each side of the interface, although the identities were never entirely destroyed.[32]

The construction of cultural distance (alterity) depended upon the structures that shaped the actors' perspective. The introduction of the three axes illuminated the logic behind the responses to the other in the cases of both the Mexican experts and the Chadian artisans. This tool helped us to

make sense of their exchanges. However, it was rather the absence of exchange among the local actors themselves that shaped their relationship with the foreigners, and thus conditioned the inertia of the group as a whole. We must therefore consider these dimensions in terms of the colonial past of the local context. It seems impossible to use the complex image of the gringo, as he appeared to the Mexicans, as a way of deriving the meaning of the exchanges among them. The dimensions provide the key to understanding how the communication among the Mexican engineers might have been successful, who between John and Jim best facilitated the work of the Mexicans, and who knew best how to get what they needed from them.

The differences in the behaviours along the three axes show that the Other was not the sole motivation for the actors in Mexico. These differences underline the impossibility of doing as a group what most had begun to accomplish individually. The same remark can be made regarding the usefulness of the axes in the interpretation of the artisans' behaviour in Chad and the importance of the figure of the nasarra. The remaining foreigners, John and Pascal, whose attitudes were consistent and strong, emerge as exceptional individuals. But the exchanges that took place between the foreigners themselves were less determined by the developer–developee encounter than were those between the local experts. The French (Jacques and Martin) worked closely together and their exchanges about Appui Technique were rich, but they shared little about their imaginary interlocutor, the poor needy African. Similarly, the US engineers did not mention their perception of the 'obstinate Mexican' to each other. On the other hand, colonialism came up in discussions among Martin, Jacques and Pascal. The French presence in Chad frequently served as the main topic of conversation over lunch.[33] Their protagonism required cultural distance, and they supported each other in the cultural distance while their concern for the developee was limited.

In summary, the behaviour of the local actors was more complex than the behaviour of the foreigners. Reducing the local perspective to the construction of the gringo or the nasarra is simply unsatisfying. In order to grasp how cultural distance (alterity) was stabilized on both sides of the interface, it is necessary to show the degrees of freedom on Todorov's three axes. Ultimately, for this study, the constructions of cultural distance provide less insight than the endo- and exo-social processes, which determined the fate of the know-how in question. In short, the communication analysed here was more structured around the exchange content than around the cultural distance. For management options, however, we have a basis for qualifying tools that change the events. Accepting the latent processes as given,[34] management concerns the reciprocity of cultural distance. The dimensions of the encounter allow the qualification of any management tool and its consistency. This is the basis upon which to extrapolate from the cases.

6.2 Conceptualizing management goals

Appui Technique and Autogeneración were not typical aid and assistance projects. They were extreme cases. Cultural distance between the experts (foreign and local) was not an issue in Autogeneración,[35] whereas, in Appui Technique, the actors were as far as they could be from mutual understanding.[36] Most TA projects fall somewhere between these extremes.[37] Therefore, an extrapolation from the implementation yields results that are pertinent for the implementation of less extraordinary ones.

We follow two assertive experts, Osama (Chad) and Ramón (Mexico), in their use of my presence as an observer. We have likened the observer role in the encounter to a little hole in a pressure cooker (section 3.2). The result is consistent with the dimensions of the encounter and with the crucial interdependencies we have just established. Therefore, we assume that appropriate management goals can be derived from the exchanges in a particular encounter. We propose that the experts can be empowered to pursue further their mutual interests.

If communication becomes an ideological issue when it is facilitated by the observer on a project, how can we talk about the conditions of this facilitation? There are several possible outcomes regarding the two particular examples. If the facilitating role of the observer aids the actors in the construction of identity, then we observe an increase in the symbolic exchanges. The production of identity allowed the Mexican experts to become comfortable with the foreigners' knowledge without the threat of domination by it (the reconquista). The likely outcome of this experience is the normalization of the knowledge in their imaginary, i.e. the removal of a foreignness that was defined in terms of the foreigner's identity as an expert. In Chad, the artisans and experts had to break free of the big brother and the *roublard*, or at least dissociate the technical knowledge and, thus, its otherness from them.

What can be said of the symbolic acts? The presence of the observer also influenced the logic of communication. Like a living symbol of interrogation, my involvement altered the significance of certain events and the meaning of certain statements. My presence enhanced the permeability of the interface. Habermas uses the word 'porous' to describe that permeability. What can be said of this porousness? It is part of the background (cultural preconceptions) of the actors' exchanges. This background to the communication drama consists of interpretations of the actors' interaction and the ascription of symbols to occurrences. The interface necessarily lies between two sets of symbolic orientations that can be at odds with each other. Inside these sets, the components exist in a *sui generis* relationship without causality.

There is an immediate usage of the symbolic in which the subject submits to domination by this one, but there is also a lucid thoughtful usage. Even if the latter usage can never be guaranteed a priori (we cannot construct a

language nor even an algorithm in which error is mechanically impossible), it happens and it indicates the way to, and the possibility of, another relationship in which the symbolic is no longer autonomous and can be rendered appropriate to the content.[38] Even if there is no causal force behind the symbolic orientations within each set, there is still hope of finding the cause of the difference between radically divergent orientations, such as that occurring around the interface. The interface's character is arbitrary except for the personalities of the actors that individually help to shape it. For the foreigner, the nature of the sympathetic African and the consultant (Appui Technique) or the nature of national pride and world sense (Autogeneración) has nothing to do with cause or logic. The porousness of the interface is the result of the confrontation of the subjectivities of the actors. If the lucid usage is possible, it heightens the appropriateness of the symbolic to the content. But can an actor render his/her symbolic orientations more appropriate to his/her experience? The conscious usage is preferable because, as was witnessed in the two case studies, the inappropriateness of their images was so obvious and oppressive to the actors that they continually second-guessed themselves. But lucidity is threatened by the fog of arbitrariness that characterizes the interface and prevents the actors from seeing how to tailor the symbolic to the content. Their capacity to tailor the symbolic is the prime target; whether their tailoring moves in the right direction is a question we neglect.

It is impossible to package the technical object for export and send it with instructions for use, whether it be as complex as a computer-generated model or as simple as the design for an oxcart. It is accompanied by context-specific know-how which must be introduced properly – or, at least, by an expert who is theoretically capable of doing so. Furthermore, the object can never be so specialized that its use is determined. It can only ever be tailored for an individual extrinsic mode of employment. One must always modify computer systems and interpret their results in the hopes of refining their capabilities, and experts must determine the most efficient use of the turbine for the generation of electricity. The confusion is not diminished by a reduction in the presence of the foreigner, who supplies at least a basic know-how that he/she has acquired in advance.

The acceptance of the foreign presence depends upon his/her foreignness. Is his/her presence alone sufficient to temper the strangeness of the object and to reinforce local identity? The answer to this is, in fact, 'No'. Dramaturgical and communicational acts buoy up the necessary symbolic work that produces these results. Reinforcing clear and conscious action and working towards appropriateness are the first steps in realizing acceptance.

Concerning myself, the processes of symbolic adaptation and acceptance were effective. My participation in Autogeneración was judged to be a great success. The management in Mexico and in Washington, DC, agreed that I had saved the project – the technical results that I compiled constituted half of the total work. All the other experts had much more experience in the

field than I and had worked on the project for just as long. Nevertheless, I alone continually interrogated the nature of the relationship between the foreigners and the Mexican engineers. The others needed my work to raise these issues for them.

One possible solution to the problem of acceptance is for experts in TA projects to carry out ethnographic work.[39] But such work is at odds with their technical training. How can we change the bond between foreigners and local actors in order to promote communicational and dramaturgical acts and discourage strategic acts?

The particular circumstances of these projects favoured success because the teams were composed of an equal number of foreigners and local actors. Judging them all according to the same performance criteria and accepting the results of the actors' work as a group effort were ways of pressuring the experts to consider the appropriateness of their orientation towards the other. This pressure was greater still when we put professionally compatible foreigners and local actors in working teams of two. But there was only limited hope of overcoming the experts' obstacles to communication on the level of global organization. After much experience and reflection in many countries, some development agencies have integrated these criteria into their project planning (Fry and Thurber 1989: 7).

But organizational solutions for the problematic acceptance of the developer are limited by the nature of the obstacles facing developers in the field. The local actors find themselves caught in a structure that blocks the expression of the symbolic domination. This structure is tainted at its core and by the general public's demand for aid in the Third World to end world suffering.[40] But the developers who are in the field, who come with the money and attempt to forge partnerships all the while knowing that the monetary support of the development effort is paternalistic, struggle most. No organizational change can hide the contradiction that developers and developees live in the field. Management goals for implementation have to be derived from each developer–developee encounter. The following demonstration is the first task and constitutes an unprecedented approach to TA implementation.

The opposition between the exo- and endo-social processes (section 5.2) provides the initial task for management. In an exo-social context, the technical object is to be preserved, so that the potential of the know-how survives the encounter, whereas the endo-social process makes the know-how more visible in the exchange and, consequently, less vulnerable. In an endo-social context, the task is thus to facilitate the adaptation of know-how to the context. The know-how should be more actively negotiated between the experts.

This difference is manifest in the actors' behaviour. Allowing the object to exist independent of the construction of cultural distance helped Osama to operate like Mohammad and helped Jacques to relate to the artisans as Pascal did. Such a change in behaviour was not suitable for Autogeneración because

the separation between identity and know-how resulted in Miguel's appreciation of inexperienced young engineers (like me), based solely on their foreignness. Both Ramón and Miguel were finally able to move beyond their disagreement with the 'colonist' over the computer-generated models of the thermodynamics of turbines. Before specifying the initial task in Autogeneración, we assess how the Chadian artisans could be helped to pursue the initial task in Appui Technique.

In order to understand how the technical object can survive the construction of cultural distance (alterity) in an exo-social context such as Appui Technique, we must clarify two options:

1   Whether cultural distance can be generated differently.
2   Whether the construction of distance must necessarily be reduced for the know-how to survive.

During the course of Appui Technique, it often seemed that the technical objects, such as the quality of the manual work, were equally accessible to, and appreciated by, the Chadian artisans and experts alike. Both groups often used technical reasoning to advance discussions. Rahman (the artisan who rejected a relationship of cultural distance from the experts) was fascinated by Pascal's 'secret' knowledge of trigonometry. The introduction of totally new knowledge was read by the artisans as a sign of foreign understanding hiding below the surface of discussions and that could complicate things. Secrets make transactions difficult. But Rahman and Mohammad integrated all that they knew into their work without hesitation.

Rahman saw the many ways in which France differed from Chad and, therefore, felt no need to reproduce this distance in his professional relationships. He was able to work very closely with the foreigners. He was forced to reflect critically on the knowledge he was given knowing that his performance ('informed by the White man') would be judged harshly. In this sense, he had good reason to want to persuade the experts to consider long-term commitment to the artisans. Martin was often surprised by Rahman's candour. It is clear from this example that Rahman could construct cultural distance in relation to the foreigners and independent of the technical objects. Other artisans seemed simply to wonder how any foreign technical objects could be adaptable or accessible to them. The following exchange, which took place during a break while working on the oxcart prototypes, illustrates their belief that they could not achieve the same standard of workmanship as the French:

Ngerbo: It's not like in France, it doesn't go this far. [Looking bitterly at a finished piece.]
Rahman: But what about in Niger, huh? You have to stay close by, you can't go too far.
Ngerbo: But isn't that already Cameroon?

Dambai: In the Sudan, you know … they are hard-working.

It seems that Rahman was initially more optimistic about the acquisition of technical knowledge than the other artisans. In any case, cultural distance from the foreigners could have been separated from the technical knowledge if this was not already the case. Although French standards were beyond reach, the Chadian artisans could reach the same standard of quality as in other countries with hard-working artisans. Once this separation was achieved, the artisans found it easier to reply. Their discussions often intensified more rapidly when the work was advancing well. We can thus maintain that it was possible in the context of an exo-social process to construct cultural distance in a different way. To protect know-how, the actors in TA projects must consider ways to put it aside, to reduce its importance in the relationship between the two sides of the interface.

To look more closely at this alternative mode of construction, it is useful to consider the case of Osama, the artisan who constructed cultural distance most vehemently. He was the only artisan who had travelled in Europe, and he returned home full of admiration for what he had seen. In his interview, he cited the Le Métro and other advancements in transportation as projects that set the standards for the future. And yet, Osama lived in his own private world, ignoring the foreign knowledge in the workshop. As we have seen, his vision of cultural distance was determined from the outside, not generated from within the project experience.

Osama could not express his criticism to the experts directly, so he expressed it through his judgement of the technical objects. He would often dramatize the treatment of the other artisans by the 'colonist' in front of the foreign experts, claiming that the colonist engaged in a kind of psychological domination, exaggerating his faults – his way of damaging and of breaking drill bits.[41] Domination was partially a self-imposed condition, as artisans like Osama did not respond to the foreigners' attempts to dialogue about the technical objects.

During his interview, the technical objects lost some of their cultural distance. Osama was able to think more objectively about them because the interview allowed him to question his image of the Other. The next day, he seemed critical of local knowledge in a way that he had never been before. At the beginning of his interview, Osama wanted to learn how to use a tape recorder; specifically to know how to stop it so that he could control the recording of his interview.[42] Several moments of real connection between us prompted Osama's admission that he saw me '*as a student on the project, like the artisans also'.* He seemed genuinely shocked by the relative similarity of our judgements of the collaboration. '*Yes, yes, you don't know anything about that … now I am not afraid to go to Europe … Its like you trying to learn Arabic'.* On the other hand, when I mentioned GRET, the financial end of the project (the IBRD) or the official responsibilities of Martin and Tahem, Osama fell silent and refused to discuss the issues.[43] Martin and I were a different sort of nasarra

for Osama because we did not drive cars. This perspective led him to denounce the project as a deceptive show of assistance and the Chadians as fools *'who allowed the nasarras to play these games'*.[44] He favoured talking much more about the technical issues involved in the project. The foreigners became more and more human to him as time went on and he began to wonder about their personal areas of expertise and their individual commitment to the project (when and why they would leave, etc.). He also pointed out the artisans' strengths, showed how the organization of labour in the production of prototypes was sound and how they could help each other productively. In this way, the technical objects had a much lower symbolic charge as time went on. *'Personally, I don't know any other way to do it. This is the best way, that's it'*. He went so far as to admit that Appui Technique responded to a local need and could help the artisans advance technically and economically in a way that no other project had before. His way of negotiating the project experience would certainly have improved foreigner–local relations in time had it not been for Osama's poor performance as a representative of the group of artisans as a whole.

Osama began to feel an affinity for me of his own accord, without any initiative on my part. He was simply interested in my perspective on the project. In fact, he was most affected by my personal situation – for example, I spoke only a few words of Arabic and drove a moped to work instead of a car.[45] My presence in the communication field seemed to facilitate his use of the interview for his symbolic work. His reflection soon became a stronger influence on his thought than the power differential between the civilizing colonial and the native.[46] Symbolic work had different motivations for the other actors and was often informed by a lived experience of collaboration rather than contradiction, or the nature of an actor's trade.

Osama's reaction in the interview confirms the initial task: only the introduction of other knowledge capable of replacing the knowledge of the foreigners as an expression of cultural distance can augment the permeability of the interface in an exo-social space such as Appui Technique. It further reveals that this other knowledge must be present during the construction of the interface and must be linked to a foreigner; in the case of Osama, to me.[47] This statement summarizes what we can learn about the adaptability of the interface based on the analysis of the researcher's position in the field. We can add a word concerning what we know about the effect of the technical objects (the knowledge itself), as well. In Appui Technique, all technical knowledge could be emptied of its substance and become a source of resistance in technical discussions. This resistance could be neither eliminated nor reduced by the actors despite all the moral claims of contributing to economic growth to which they had recourse. It was thus impossible to affect the relations between the French and the Chadians by altering the technical content of the knowledge in Appui Technique. This operation is exactly the opposite of trying to adapt the relationships to the encounter. Similarly, in Chad the encounter was greatly influenced by the relationships among the

Chadians. Other artisans followed the lead of Rahman, Osama and Mohammad, but for their efforts to have truly disabled the interface they would have had to act as a united front.

If other objects must be introduced as markers of cultural distance in order to liberate the technical knowledge from its cultural fetters, these objects must be part of the encounter and shared among the local actors. Furthermore, the technical object must be replaced as a symbol of cultural distance without losing the development objectives of a TA project. Such a shift of cultural distance was achieved by Mohammad and Rahman with ease and by Osama through intense efforts.[48] The management goal in Appui Technique was to enable all actors to realize such a shift of cultural distance. Osama's endeavour allowed him to see the preconditions of this goal. Despite the necessity of these preconditions, we cannot know whether these are sufficient for such a shift in other developer–developee encounters.

We now turn to Autogeneración, the endo-social case. In Mexico, the local actors did not endeavour to mark the difference of the foreigner, and never tried to exploit technical objects to affirm Mexican identity. Their symbolic work was restricted to the encounter itself, where they sought confirmation of the local culture in the recognition of their knowledge. Ramón's interview will again serve as a gauge as he was most earnest in his attempts to collaborate with the US engineers. It was he who quipped in response to my request for an interview, '*I hate the gringos, but I love their money*'. During the course of the interview, he explained that the technical content reflected the incapacity of the Mexican authorities to accept the fact that Mexican engineers are as capable as foreign ones of achieving modernization. The whole situation was a farce, he explained, that some acted better than others.

Ramón: It is sometimes hard for me not to see them as larger. I have always had respect for people who know what they are talking about, but I try to surpass them. All of us respect John and you for what you know but that doesn't mean that you are better than us. That's the difference. On the other hand, Juan and Miguel think you are better in everything – they are crazy. One day I'll say to John, 'You're wrong, you made a mistake, it's incorrect!' Because here people don't see that. They think, how could you say that to a gringo? Damn, that annoys me. [Interview.]

The next day, when the experts met in the office, Ramón began to denounce the foreigners' pretentiousness ('Superman', see). He had not used his interview to reflect on his relationship with the imaginary during his intercourse with the US engineers. Rather, by expounding upon his professional identity for 4 hours in front of a foreigner, he effectively reaffirmed it. In order to break free of his submission to the foreigner, he set his sights on the Other and prepared to surpass him in skill and innovation. In fact, Ramón contributed to the preparation of an engineering manual and

personally presented the results to the Energy Agency, but John thought he could have assumed even more responsibility.

The interview gave Ramón an opportunity to denounce the gringo, and after it he made more use of 'foreign' technical knowledge in his work. During conversation with an observer, he was able to push his confrontation with the gringo further, primarily because the other experts had publicly used me in this capacity and also because I explicitly agreed to entertain the farce of 'serving the Energy Agency' produced by Autogeneración. No other foreign expert helped Ramón to negotiate the Other. As the project went on, Ramón worked more closely with John (who learnt his trade in the USA) and then with Jack (who learnt his trade in France). Both of them concluded from their interaction with him, which might be characterized as difficult, that he was not at all motivated in his collaboration with the foreigners. Ramón did attempt to work with the foreigners as equals, but apparently lacked the subtlety to adapt to the habits of individual engineers – even two engineers with very different ways of working.[49]

We have shown that the gringo represented a real threat to the Mexican experts. Ramón confronted this threat head-on. In order to accomplish this feat of resistance, he had to create opportunities to affirm his identity through, and in terms of, the technical content; the content that gave meaning to the project, its pertinence and the various aspects of its practical development. José even managed to affirm his identity through this process: '*We learned who we are*', he declared in different interviews with me. His vast experience with the material and as a technocrat gave him a sense of his own work that Ramón failed to develop, concerned as he was with the gringo rather than with his engineering prowess. The very act of recognizing the valid contribution of a local expert set a precedent for the appreciation of the Mexican team as a whole.

The local experts in Autogeneración had to create media (or vehicles) that would distinguish their results as specifically Mexican. That such a medium would have to be visible and of an non-ambivalent nature was clear in the statements made by Juan in his interviews. He explained that the results reflected neither the abilities of the US engineers nor the competence of the Mexican engineers. And yet given the collaborative nature of the project, no one would ever have suggested separating the technical analyses by nationality into those prepared by the foreigners and those prepared by the Mexicans. A separation of the experts' labour would have signified a rejection of the universality of analysis. Thus, any medium of distinction would also have to avoid the qualitative differentiation of foreign and Mexican tasks.

Doing this would necessarily distribute the engineering tasks between foreigners and Mexicans, allowing for foreign and Mexican influences, which would enable the Mexicans to measure themselves against the foreigners (important to Miguel and Ramón). However, this medium would also have to be able to accommodate technical know-how in order to proceed in anticipation of the differences which would arise throughout the process of

identification (important to María and José). Given the Energy Agency's preference for foreign knowledge, it would be imperative that the medium remain within the purview of the experts, protected from possible appropriation by the outside. The experts needed context specificity at their discretion – to be able to state that this know-how is correct under these circumstances and that with other circumstances different know-how applies. This would have enabled Mexican experts such as Ramón and Miguel to affirm their professionalism as José was able to. The management goal in Autogeneración was to enable all experts to create context specificity of know-how.

In both case studies, the management goals contained nothing that had not already occurred in these projects. These goals focused management on the implementation obstacles of the technological objectives. The medium that would enable the Mexicans to demonstrate their abilities and the shift that would allow the Chadians to mark their cultural distance (alterity) against the foreigners have, in common, their dependence upon the cohesion of the local actors. The relationships among the Chadians were nourished by external factors (exo-social), whereas the relationships among the Mexicans grew out of internal conditions (endo-social). However, in both cases, the reinforcement of these relations allowed the local actors to resist and, hence, reduce the cultural force of the foreigners. For their part, the foreigners could only orient their approach to the extent that the local actors were willing to respond specifically to each of their individual capacities.[50] In order for the foreigners to move beyond their construction of the pride of the Mexican and of the Chadian 'roublard', he/she would have to see his/her contribution to the project validated by a local expert. In short, the relationship between the knowledges and the relationships among the experts are coextensive and are equally affected by changes in the encounter.

Signifiers of difference between the local actors and me permitted Osama to dissociate the technical knowledge from the symbol of the nasarra. Foreign knowledge (the technical object) could only be liberated from its origin when its roots could be displaced and replanted in other soil, i.e. the label of the object took precedence over its content in Chad.

The difference between the lived experiences of Ramón and that of José in Mexico turned rather on the independence of the label and the content of the object. José accumulated identity by making use of the technical content, whereas Ramón dissipated local identity. Although it may appear reductive to characterize the lived experience of these actors in this way, the reduction highlights a difference in perspective that can help us to understand the consequences of an encounter.

We can thus discern two types of identity construction at work in TA projects. In the Chadian case, the actors weakened the link between the origin and the content of the knowledge because its politically charged origin blocked access to the knowledge in itself. In the Mexican case, they strengthened the link of the origin and the content because the content was meaningless without

that link. The basic distinction between these types is not between strengthening or reducing that link. Reducing and reinforcing the link between the origin and the content of the object are gestures that mask a deeper cultural conflict: the foreignness of the origin and the local reading of the content.

Friedman identifies cultural processes within larger global systems that shed light on identity constructions. TA events are ideal for studying cultural processes because their interfaces are sensitive to transformations that constitute and regulate identity. In order to demonstrate the complementarity of the foreign label (Chad) and the local meaning of the content (Mexico), we introduced the tenets of global anthropology through Friedman's work: the contents where the formation of identity takes place constitute a potential global space that circumscribes identity, a panorama which includes the interaction between local identity formation and the dynamics of positions in the global space (Friedman 1992a). Friedman shows the political importance of the nature of identity formation and its negotiation in the social imaginary.

In the case studies, the figures of the gringo and the nasarra were autochthonous, born of a sociopolitical history. The foreign experts did not resemble these figures, but the local actors positioned themselves against the former in terms of a global imaginary that was nonetheless constructed locally. Within this identity construction, the circulation of knowledge took place. Thus, this circulation remains marked by its local origin. The complementarity of the two types of symbolic work lies in their shared function of positioning the local actors within the locally constituted global space.

A second indication of the complementarity concerns the efforts of Osama and Ramón and the structures of communication. Ramón defined the Other in negative terms on the value axis (as did many of the Mexicans) as well as the relational axis, which led to his confrontation with the foreigners. Ramón skilfully used the modes of dramaturgical communication (much more often than the other Mexicans) and considered acceptance of the strategic mode to be a personal failure. Osama showed less respect for the nasarra than the other Chadian artisans, nonetheless he rejected more vehemently the possibility of sharing their knowledge. Among the artisans, he saw the fewest risks in the dramaturgical modes. He strongly resented the resignation to the strategic mode, but saw in every contact with the French an invitation to return to that mode.[51] Based on this evidence, we can conclude that the complementary nature of the two types of symbolic work corresponds to the structures of communication. Osama and Ramón both had recourse to dramaturgical acts when the opportunity presented itself, but their failures were different. Osama's failure was directed towards himself and Ramón's was projected outward.

If we can study the historical positioning that actors construct to interpret their relations, it is because this positioning is neither assured nor obvious. It reflects the individual efforts of an actor within the limits of historical

conditions. With each new encounter the positioning is unique, but the very act of positioning oneself creates the possibility of constructing knowledge from this perspective. The differences in the structures of communication show that, independent of historical context, the efforts on the part of the foreign and the local actors to establish a reciprocal rapport are a function of the different types of exchanges between the groups of actors. The transformation of cultural distance into the protagonism of the French and the Chadians' defensive resistance to the Other in N'Djaména, and the interplay between the ethic of the encounter and the modernizing force of the project in Mexico City, can be read interdependently in this way.

6.2.1 Conditions for applied research

By tracing the development of the work of the actors, the analysis of ethnographic data brings about the positioning of the foreigners and the local actors, one that generates the possibility of restitution by producing diverse and rich reactions to the results. We began with an interrogation of the nature of TA projects. The question soon evolved into a suspicion of the validity of the ethnological perspective. The presence of structural contradictions – expressed here in concrete terms as the difference between Osama and Ramón – led us to much deeper issues. Because foreign experts share an interest in the more 'exotic' objects of ethnology,[52] my experience with them led us to ponder the conditions of knowledge about the Other.

Since its inception, anthropology has accepted the link between the possibility of knowledge and colonial power. Both the ethnologist and the developer seek in their own ways to constitute knowledge around the development aid.[53] But this doubling is not symmetrical and these developers do not have the same capacities or positions in the field. By demonstrating the reciprocity of cultural distance in Appui Technique, we indicated that structural blockage was not the defining principle of this project. The analysis of the actors' exchanges permitted us to ethnologize further. The day-to-day experience in TA is more flexible than researchers believe it to be and more rigid than the TA professionals will admit. The result is that the practicalities forgotten by the experts always resurface and the theoretical models that the researchers construct are always inadequate.

The conditions in the field enable researchers to work. The analytic frame that permits the reconstruction of cultural distance raises new questions because it forces the experts to negotiate their knowledge. Such a negotiation can become a new epistemological niche for anthropology. The topical relevance of this fieldwork consists in the contemporaneousness of the actors involved, in the historical circumstances in which they confront the past and, finally, in the possibility of constructing identity without relying on the differences across the interface, i.e. without reinforcing cultural distance. Today, such fieldwork is possible and necessary and need not imply questions about the legitimacy and the authority of the ethnologist. Projects that involve

the direct confrontation of warring types of knowledge offer research the opportunity to find new angles for analysis. This book contributes in precisely this way to the advancement of ethnological research.

6.3 Implementing technical assistance

One management goal is to shift the construction of cultural distance away from the technical content towards other elements of the encounter which are linked to the foreigners and shared among the local actors. The other goal is to enable the experts to create context specificity of know-how and mark their contribution as Mexican. The broader objective is to reveal the interdependencies of cultural distance, in the first case, by separating the value axis from the relational axis, and, in the second case, by improving the recognition of the other at hand (the identity axis). We excluded the content of TA. Thus, we suggest that the planning incorporated in TA events based on the TA content is not problematic, it is technically and economically sound (which it actually is not).

What is left is operational management, the day-to-day decision-making. None of the following management tools have intrinsic (sufficient) properties which would affect a developer–developee encounter. But, in a specific encounter, they contribute to achieving these goals. Most of these tools are not currently used as such. While we will not assess them separately here, each one should be adapted to specific TA events and completed with corresponding measures.

Tools to shift cultural distance away from the technical objects:
- Differentiation of non-essential aspects related to foreign and local participants and of personal concerns such as working hours, clothing, transport and food.
- Establishment of dictionary for all technical terms, acknowledgement of equivalence at all occasions, addition of vocabulary suggestions from all participants.
- Separate meetings of local and foreign experts with elaboration of a common agenda for both, while accepting only combined reports as official project documents.
- Extensive data gathering, data administration and elaboration, and making the results widely available.
- Horizontal structure of tasks, where foreign output is also local input and vice versa.
- Integrated documentation of expert performance and other reporting arrangements.
- Housekeeping and inventories maintained by local experts.
- Budgeting and milestones in implementation defined as simply as possible, ideally with standardized parameters maintained from the beginning to the end of the project.