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The merely conventional existence of the world

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> *It is the profession of philosophers to question platitudes others accept without thinking twice.*
> David Lewis: *Convention*, 1969.

A platitude questioned by many Buddhist thinkers in India and Tibet is the existence of the world. We might be tempted to insert some modifier here, such as `substantial', `self-existent' or `inherently existent', for, one might argue, these thinkers did not want to question the existence of the world *tout court*, but only that of a substantial, self-existent, or otherwise suitably qualified world. But perhaps these modifiers are not as important as is generally thought, for the understanding of the world questioned is very much the understanding of the world everybody has. It is the understanding that there is a world out there, and when we speak and think about this world we mostly get it right.[1] But the Madhyamaka thinkers under discussion here deny that there is a world out there, and claim that our opinions about it are to the greatest part fundamentally and dangerously wrong.[2] When we think that there is a world out there we do not just claim that solipsism is wrong (as a matter of fact the Mādhyamikas agree with this) but we take the world to consist of objects existing through their own power,[3] objectively, mind-independently,

[1] Michael Devitt's definition or realism (1997: 41) puts this succinctly by defining it as the claim that `most current common-sense and scientific physical existence statements are objectively and mind-independently (deflationary) true'.

[2] They thus do not agree with David Lewis that `when a good philosopher challenges a platitude, it usually turns out that the platitude was essentially right' (Lewis 1986: 1).

[3] **svairīsiddhi*, *rang dbang du grub pa*.

and established by their own nature.[4] Not only do the Madhyamaka thinkers deny the existence of any such objects, they also do not share the epistemic optimism which characterizes the common-sense view of the world. Tsong kha pa observes that[5]

> even though forms, sounds, and so forth appear to sensory consciousness as if they were established by their own nature they do not even possess this appearing nature conventionally. Therefore the teacher [Candrakīrti] regards them as mistaken even conventionally.

For the Madhyamaka thinkers there is no possibility of regarding our usual picture of the world as even gradually approximating a true theory. Candrakīrti makes it very clear that the ordinary worldly conception of the reality fails entirely in presenting an accurate picture of how the world is.[6]

If our ordinary view of the world is rejected in this way we will of course ask ourselves what it is to be replaced with. It is to be replaced with the view that the world and the objects in it are merely conventionally existent objects.[7] We are here concerned with the objectual dimension of he term `conventional truth'.[8] On this understanding it does not refer to a certain kind of truth-bearing intensional item (such as a statement) which is only true relative to certain presupposed set of conventions, but not otherwise, but rather picks out a kind of object which is regarded as a conventional truth, i.e. a conventionally existent object. Even though it does not appear to us in this way *all* objects belong to this kind; they are all merely conventional truths. What this means is that what we ordinarily regard as a world of mind-independent objects is in fact only a collection of conceptual artefacts. The Upāliparipṛcchā[9] claims that

> all these various beautiful flower blossoms prepared and this palace decked with gold[10] pleasing the mind are without any creator whatsoever. They have been posited by the power of conceptual construction (*kalpavaśa*, *rtog pa'i dbang*). By the power of conceptual construction the world is made through imputation (*rnam brtags*).

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[4] *svalakṣaṇasiddhi*, *rang gi mtshan nyid kyis grub pa*.

[5] *dbang po'i shes pa la gzugs sgra sogs rang gi mtshan nyid kyis grub par snang la snang ba ltar gyi rang gi mtshan nyid tha snyad du yang med pas na slob dpon 'di tha snyad du yang 'di dag 'khrul bar bzhed pa yin no* (Tsongkhapa 1985: 623: 13-15}.

[6] *de na kho na nyid kyi skabs su 'jig rten rnam pa thams cad du mtshad ma ma yin*, *Bhāṣya* on Madhyamakāvatāra 6:31, (Poussin 1912: 112: 20-113:1). For further discussion see chapters 1 (Garfield), 4, (Thakchoe), 5 (Garfield and Thakchoe) and ? (Siderits) in this volume.

[7] *saṃvṛtisat*, *kun rdzob tu yod pa.*

[8] *saṃvṛtisatya*, *kun rdzob bden pa.*

[9] 69-70a: citra manorama sajjita pu.spaa.h / svarn.avimaana jalanti manoj~naa.h / te.sv api kaaraku naast'iha 'ka'sci / te 'pi ca sthaapita kalpava'sena // rtog pa'i dbang gis 'jig rten rnam brtags te […] (Python 1973).

[10] Having just noted the thought-dependence of the hells the text here refers to the celestial realms. The point is to be understood as applying to all realms within cyclic existence, thus including the world we live in.

All conceptually created objects would completely disappear if the constructions which brought them into being were to stop. This is what Nāgārjuna has in mind when he says in the Yuktiṣaṣṭikā:[11]

> The perfect Buddha said that the world is caused by ignorance. Therefore, why should one not say that this world is conceptually constructed? When ignorance ceases what misknowledge fabricated also ceases. Why would it [i.e. the world] then not be cleared away?

In his commentary on these verses Candrakīrti explains that[12]

> because it does not exist substantially the world is posited as a mere conceptual construction, in the same manner in which the construction of a man in the dark comes about.
> Similarly, having taught that while the wrong view exists, the world exists, in order to teach that if that wrong view does not exist [the world] does not exist [the following is said:] […]
> When there is illumination one does not perceive the appearance of the man in the dark. Once one gains knowledge one abides in the non-establishment of a conceptually constructed substantial nature since such mistakes are certainly due to misknowledge.

Viewing the world as a collection of conventionally existent objects or conceptual constructions is an interesting philosophical idea, even though it is quite difficult to spell out what this is supposed to mean in detail. It is relatively straightforward to understand what is meant by saying that a *piece of language* owes its existence to conventions. This is especially true against the background of theories which regard the connection between a term and its referent as a matter of natural necessity, independent of human intention or invention, such as those defended by the Mīṃāṃsakas. Defending the conventional nature of language then just amounts to pointing out that the connection between a certain phoneme and a certain object does not stem from the nature of the two (as, for example, the connection between the molecular structure of a substance and its chemical properties) but is purely a result of a group of speakers deciding to associate a certain sound with a certain thing.

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[11] *ma rig rkyen gyis 'jig rten zhes / 'di ltar rdzogs pa'i sangs rgyas gsung // de'i phyir 'jig rten 'di dag kyang / rnam par rtog par cis mi 'thad // ma rig 'gags par gyur na ni / gang rnams 'gag par 'gyur ba rnams // de dag mi shes kun brtags par / ci yi phyir na gsal mi 'gyur //* Yuktiṣaṣṭikā 37-38, (Loizzo 2007: 329-331).

[12] *rang gi ngo bo grub pa med pas mun khung na mi'i tshul du yongs su rtog pa 'byung ba ltar 'jig rten yang rnam par rtog pa tsam du rnam par gzhag go / de ltar phyin ci log yod na 'jig rten yod par ci bstan nas / de ni phyin ci log med na med par bstan pa'i phyir* […] *snang ba byung na mun khung na mi'i tshul du snang ba mi dmigs pa bzhin du rig pa byung na / gang log pa de nges par mi shes pas yongs su brtags pa'i phyir ngo bo nyid du grub pa med par gnas so* (Loizzo 2007: 330-331). I have adopted the reading *mun khung na mi'i tshul du* instead of *mun khung na me'i tshul du* even though the latter is the *lectio difficilior*. While mistaking an inanimate object (such as a pillar) for a man in the dark is a familiar Indian example of a perceptual illusion I am not quite sure what could be meant by `imagined [apparitions] arising like flames in the darkness of a cave' (Loizzo 2007: 188).

But what can be meant by saying that an *object* owes its existence to conventions? In some cases, such as the objects traded on the stock market, this might not be too difficult; indeed it seems plausible that if the stock market disappeared so would the objects traded there. But how are we supposed to extend this idea to a general ontological theory claiming that *all* objects have a similar mere conventional or conceptually constructed existence? Surely the tea-cup in front of me, Mount Everest, and the stars in the Big Dipper are all there without my doing and do not require my participation in some system of conventions for their continued existence? How can we make sense of the idea that they would completely disappear if some system of conventions ceased to exist?

In this essay I would like to try describe a framework which allows us to make sense of the view that all objects are mere conventional existents. To do this I will first discuss a contemporary account of the conventional nature of linguistic signs and suggest an expansion in such a way that it accounts not just for conventionally existent *names*, but also for conventionally existent *objects*.

In the subsequent discussion I want to raise three important systematic points. The first is the notion of *truth*. We usually think that the truth of statements is constrained by the world, which is independent of our cognition of it. But if the objects in the world are the product of convention, and thereby depend on us, does that not mean that we are left with a merely subjective account of truth, in which thinking that something is a certain way makes it so?
The second point concerns the idea of the *basis of construction*.[13] If we regard some object as a conceptual construction we will have to specify what it is a construction from. But we then either end up in a regress, if this second thing is constructed from yet another one, or we reach a foundation at some point, coming across something which is not constructed. A regress is often problematic and th assumption of an ontological foundation is not acceptable for a Mādhyamika. So there a coherent way of maintaining a thorough-going constructivism without assuming that the basis of construction exists substantially?
The final notion is that of the *limitations of construction*. If there is no objective world constraining our constructions can we establish conventions in any way we want? How can we explain the fact that we cannot just construct the states of affairs we desire? The thirsty man in the desert realizes that a glass of water conceptually constructed by him does not quench his thirst.

Names as conventional

In this section I will discuss the game-theoretic account of the conventional nature of linguistic signs first developed by David Lewis.[14] In accounting for language as a convention-based link between word and world Lewis faced the Quinean[15] problem that

[13] *gdags gzhi*.
[14] Lewis 1986
[15] Quine 1936.

in order to formulate a linguistic convention one must already have a language in which to formulate it. Languages therefore cannot be based on conventions all the way down.

Let us first consider an informal example of how a convention could be established without presupposing the existence of a language. Suppose Peter and Paul are trying to park a lorry. Peter is behind the wheel and cannot see behind the lorry, Paul stands behind it but is not driving the lorry. They need to cooperate in order to get the lorry into the parking lot. For the sake of simplicity assume that there are only two actions Peter can do: go forward and reverse. Paul can only do two things to signal to Peter: stick up his hands, palms facing outwards, or make a waving motion. We also assume that there are only two situations relevant in this case, namely that there is space behind the lorry or that there is not. Our goal is to connect the actions of Peter and Paul with the states of the world in such a way that they can park the lorry. For example, the situation that there is space behind the lorry could be associated with Paul's waving motion and with Peter's reversing. The situation that there is no space could be associated with Paul sticking up his arms and Peter going forward. But how do we get there if they cannot use language to agree on which signal means which?

The answer is of course to try it out. Peter just associates Paul's holding up his hands with reversing, while Paul connects this with the situation in which there is no space behind the lorry. They crash it. At the next attempt, Peter realizes that he did not get it right, and associates Paul's other gesture, the waving motion, with reversing. Unfortunately Paul, having been disconcerted by the preceding lack of success has now switched tactics and connects the waving motion with the lack of space. They crash it again. If this process continues, however, and if there is a sufficiently large supply of fresh lorries at hand they will eventually manage to park the thing. They will then have come up with an association of the two states of the world (space or no space), Paul's actions (hands up or wave) and Peter's actions (go forward or reverse) which results in a successful conclusion of the parking endeavour. If they ever want to park a lorry again they will surely use the association again. Perhaps it even happens that other people observe the now very efficient lorry-parkers and do what they do too. A system of conventions has been born, but nobody ever had to say "doing a waving motion means that the driver should reverse". This association was brought about by the successful solution of the coordination problem, not by explicit stipulation.

This extremely rough-and-ready description of Lewis idea is sufficient to keep the reader in the picture, but leaves a lot of questions open. A particularly interesting one is whether there is only one feasible way of associating actions and messages. If there is more than one, how are we going to choose between the different ones? And what happens if different groups adopt different ways of associating them? Readers who are interested in this and also want to see some more details of Lewis' theory are invited to read the first part of the appendix, *Lewis' theory of conventions*. All others can continue with the next section.

Objects as conventional

In the coordination problems described by Lewis the different participants will eventually settle on some signaling system or other. In such a system a conventional linkage between a state of the world, a message, and an action is established without the need for any prior linguistic agreement. Which *de facto* linkage is established is immaterial, in the same way in which it does not matter whether we refer to a particular colour by the word `red' or by the word `rouge' – both speakers of French and English can successfully speak about the colour red.
Some readers may have observed that the situations Lewis deals with are described in wholly realist terms. Both participants in the coordination problem are placed in a ready-made world in which some situation (e.g. that there is space behind the lorry) either obtains or fails to obtain. It is now interesting to investigate what happens if we drop the realist assumption that the states of the world are something given to the sender, who just has to look which one obtains, and select a message accordingly. An anti-realist would want to assert that these states are in some way dependent on the mind of the sender or constructed by him. We can model this added complication in a fairly straightforward manner. Assume the states the sender reports consist of a set of natural numbers picked by him. The intuitive idea here is that the numbers corresponds to the sender's basic perceptual input, or, to use the Carnapian phrase, to his `elementary experiences'. By putting some of them together into a set he creates a complex of these elements to form a specific state of the world.

The game now proceeds as follows. The sender picks a set of numbers and selects a message he sends to the receiver. Upon receipt of the message the receiver picks his own set of numbers. In some cases both players will receive a reward, in others neither will receive one. A sender strategy therefore correlates sets of natural numbers with messages, a receiver strategy correlates messages with sets of natural numbers. The strategies to pick (and therefore the correlations to select) are those which are equilibria, that is strategies which are mutually best replies. Given the strategy of one the player the other would not receive a greater reward by selecting a different strategy.

In a way similar to the games discussed above the sequence of successful interactions will lead to conventional linkages between two sets (`states of the world constructed by an observer') and a message (`a linguistic sign'). It is interesting to note that in this case the emerging correlations do not only produce a conventional word-world linkage but also create conventionally established states of the world, by singling out all those sets of numbers of the many possible ones which are linked to other sets via a message. Both the conventions of the languages the players use to refer to the world *as well as the elements of the world themselves* appear to emerge at the same time.

Let us illustrate this idea with a simple model. Assume we have a group of people, each of which sits in a single room. Their only means of communication is via a telephone line. Each of the people also has a unique set of lego blocks in front of them. One starts putting the lego blocks together into a structure. When he has finished he rings one of the other participants and utters a phrase. The recipient then builds a lego structure himself. In most cases nothing happens after that, and they dismantle the structures again. In some cases, however, after the recipient of the phone message has finished building his lego structure both he and the person who called him receive a doughnut from the

psychologist who runs the experiment. Given that doughnuts rank high on the preference scales of all the participants they want to maximize the chances of receiving more doughnuts. A good way of doing so is for the sender to use the same phrase when he builds that structure again, and for the receiver to build the same structure he built when he first heard the phrase. In this way a collection of lego structures and their linkages to phrases which function as their names come into existence at the same time. Each depends on the other: the names require the structures (for without them they would be mere phrases transmitted via the phone), but the structures also require the names, because only the property of being linked to a name distinguishes an inert assembly of lego blocks from a structure worth re-creating because doing so might yield further doughnuts.

Someone might object that this picture does not look very promising from an anti-realist perspective. Given that the `constructions' sender and receiver carry out are selecting specific sets of numbers, the members of the set, that is the basis on which the construction proceeds, is not constructed as well. People build structures from lego blocks, but they do not make the blocks. It follows that a construction-independent world exists and therefore our model fails to capture the anti-realist assumption that there is no such thing.
There is a simple way of changing our model in order to accommodate this worry. We set up the system in such a way that what is used in constructions are no longer natural numbers but ordered pairs consisting of the player carrying out the construction and a natural number. Thus the elements player *a* uses in constructions are the pairs <*a*,1>, <*a*,2>, <*a*,3>, …, those of *b* <*b*,1>, <*b*,2>, <*b*,3>, … and so on. This has the consequence that no element used in constructions can be shared between players (since every pair is `individualized' by its first member) and, since each pair depends for its existence on the player using it in constructions (since the set could not exist without all its members existing), it is impossible to conceive of the elements used in constructions as some kind of `objective background' existing independently from the players involved in the game. In the context of the example described above we would therefore assume that the lego blocks are not accessible to other players. This does not commit us to asserting that they are nor material; it could simply be the case that whenever we tried to remove a block from a room it suddenly vanished, and that if somebody looked into someone else's room he could not see the lego blocks in there. Arguing in this way that the bases of construction only ever have an objective but no subjective existence is one way of replying to the challenge that appeal to constructions implies realism about the basis of construction.

Another possible reply, suggested by Nelson Goodman's theory of `world-making' and its current defenders, claims that construction goes all the way down.[16] In the same way in which there is no uniform foundation from which all physical making starts (the basis from which the baker starts is what the miller has made, while the miller starts from what the farmer has made), making the world similarly starts from what we find, and not from an unmade basis: `worldmaking is always *re*making'.[17] The difficulty I see with this reply is that the making of worlds could never have been started. While it is clear that the

[16] Goodman 1983, Schwartz 2000: 156.
[17] Schwartz 2000: 158.

notion of construction constructivists are interested in, including the notion of worldmaking, is not to be understood as the putting together of distinct physical objects it does take place in time. Construction is, after all, what humans do, and everything humans do is a temporally stretched-out process. But in this case the basis of a construction will be temporally prior to the construct, and if this basis is a construct too, because all making is remaking, there will be another basis prior to it. If matters continue in this way we have to face the problem that while constructions may stretch back in time infinitely, human beings do not. Yet there are presumably no constructions without human beings. We will therefore not pursue this reply here any further. We may point out, however, that the Goodmanian problem would not have been a difficulty for the Indian Buddhist thinkers who generally assumed the existence of beginningless ignorance (*anādy-avidyā*) as the basis of cyclic existence. If the ignorance is beginningless, so is the existence of beings who have the property of being ignorant. The difficulty of how the entire convention-based process of cyclic existence could ever have started therefore does not arise.

Readers who would like to see how the modified account of conventional linkages just described can be set out in a table of strategies should look at the second section of the appendix, *Conventions: an anti-realist formulation*. All others may continue directly with a discussion of the philosophical implications of this account.

Representation and objects represented

The modified approach lets us formulate an answer to the representation problem frequently discussed in anti-realist treatments of semantics. This is the problem that in the same way in which the realist has to account for the linkage between language and a mind-independent reality the anti-realist will have to be able to tell some story how the link between linguistic items and the mind-dependent entities they refer to comes about. According to the picture sketched here both relata of the reference relation, the linguistic as well as the objectual side are produced as part of the same process, based on the successful interaction between two players of a signalling game. There is no danger that the mind-dependent entities might somehow become detached from the linguistic ones, since they are brought about together. This is particularly attractive as we do not have to make use of the correspondence-theoretic notion of linguistic and mind-dependent items sharing the same structure.

The world described in this system is quite minimalist. It consists of different collections of elementary experiences which cannot be shared but are unique to the collections to which belong. These collections function as the subjects or persons in the system. Information can be exchanged between these subjects, in particular they can send messages to each other. The subjects can form complexes of elementary experiences and associate the complexes with messages. In order to get the game-theoretic model described above going, certain cases in which two subjects construct two distinct complexes of elementary experiences result in a payoff for these two subjects. In this way messages which mediated between such complexes can become associated with them by

a correlation. An `object' in this system is then just a collection of the different complexes of elementary experiences constructed by the different subjects which have become associated with a single message. The fact that certain constructions can form the basis of a successful interaction by being linked to a single message establishes the division between the internal and the external or, to put it more precisely, between intersubjective objects and the merely subjective. A construction acquires intersubjective status by being able to enter into successful exchanges. If a construction does not achieve this, i.e. if a player associates it with a message but never reaps a payoff it remains within the realm of the merely subjective. Even though we can draw a line between the subjective and the objective (or intersubjective) world there is, nevertheless, no objective world in the sense of an objective background which is mind-independent and exists equally for all subjects.

The realist might raise the worry that according to his understanding there is a very obvious answer to the question why the correlation of a certain state of the world (such as the presence of a tiger) and a certain action (climbing up a tree) result in a positive utility. There are facts about the culinary habits of tigers, their limited climbing abilities and the unpleasantness of being eaten alive which explain why matching this state with this action has a positive payoff. But there seems to be no way for the anti-realist to explain why two subjects' constructing two distinct complexes of elementary experiences results in a positive utility. It is not as if there was any body of regularities associated with these subjective complexes which could explain the payoff. It rather has to be assumed as a brute fact. We cannot explain why we get the doughnuts. It certainly cannot be because two people in different rooms constructed lego structures which are is some way similar. Remember that because other people looking into the rooms cannot see the lego blocks the psychologist dispensing the doughnuts could not tell when such similar structures have been made. He could therefore not dispense doughnuts because the lego structures produced by different players are similar. Still, we might argue, there is a place for similarity in this system since two structures made at different times by the same person must be similar to each other to procure a doughnut. But to explain this we do not need to postulate an abstract similarity relation connecting them. We can spell out this similarity in terms of traces in the player's memory left behind by the first structure which are referred to again when building the second structure. No objective or unconstructed relation is required, and the success of certain interaction remains a brute fact.

This, however, only has much force as an objection if the realist alternative is independent of such brute facts. Of course this is not the case, which leaves the anti-realist the possibility of replying with a *tu quoque*. As the existence of such positive utilities keeps the world going in the system just described the realist's world is maintained by a collection of mind-independent objects which affect our senses in various way. Why do these objects exist rather than fail to exist? There seems to be very little we can say apart from pointing out that it is a necessary assumption in any realist system which cannot be explained within the system. But this appears to be very much the same as saying that the existence of these mind-independent objects is a brute fact for the realist.

The realist might respond by arguing that the brute facts he is forced to accept explain the truth of his own view while the anti-realist's brute fact explain only the assertability of the anti-realist's view. After all the brute fact of the existence of mind-independent

objects explains the truth of realism – the basis of realism is just the assertion of the existence of objects of this kind. But while the brute fact that certain interactions are successful explains why the anti-realist is justified in making the claims about merely conventionally existent objects he makes it does not establish the falsity of the realist's view, i.e. it does not establish the kind of mind-independent objects the realist presupposes do not exist.
However, it does not seem that we have made significant progress here. While mere assertability surely appears inferior from the realist's perspective, who can offer truth instead the very existence of this alternative is doubted by the anti-realist. He does not agree that there is anything more substantial than assertability to be had. As such the fact that an account explains its own assertability is really all we can hope for.

Subjective and conventional truth

In the system described above messages are a crucial constituent of the world since they link together different agent-relative constructions and thereby create objects. But how do we account for the truth of such messages? We obviously cannot appeal to familiar correspondence-theoretic notions, since the correspondence between word and world in terms of some underlying similarity is only informative if the former is not constitutive of the latter.
In the present framework we have to distinguish two senses of truth. A message sent by a participant in a coordination problem is *subjectively true* if and only if the strategy `if you have constructed such-and-such a complex send the message' is part of a selected correlation and if the participant has indeed constructed such-and-such a complex. In other words the subjective truth of a message consists of its linkage to a certain construction and the fact that it is sent after such a construction has been carried out.

This conception of truth is called `subjective' because the difference between appearance and reality does not arise. Since the constructions the agents carry out are not understood as representing it could not be the case that a construction has been carried out but whatever it represents is not present. Drawing the distinction between something appearing elliptical to us and it being elliptical presupposes drawing the distinction between the apparent elliptical thing, the internal construction which is the representation, and the thing it represents, which may be elliptical as well, or perhaps circular and seen from an oblique angle. But given that our system conceives of the intersubjective objects in terms of constructions linked to a single message this distinction is not available to us.

Nevertheless, this does not mean that we cannot distinguish at all between the merely apparent and the conventionally real. We can regard a message as *illusory* if it is subjectively true but does not lead to a successful interaction for both players.[18] In this case a participant in a coordination problem will carry out a certain construction which is

[18] This is different from a subjectively false message, which is a message a player sends without having constructed the correlated state of affairs.

linked to a message by a correlation. Another participant receives the message, carries out the construction linked to it but not payoff ensues. How could this happen? Imagine a situation in which I tell you that a disc is elliptical, while it only *looks* elliptical to me. You regard the disc as elliptical too, even though it is in fact round. We will therefore have difficulties coordinating our behaviour involving the disc. In the anti-realist setup we are discussing here we could of course not say that our coordination fails because the disc is *really* elliptical, since there is no disc apart from various complexes linked to a common message. All we can say is that there are some cases where there is no successful interaction, even though everything looks as if there should be: message and construct have been correlated by past successes, and both participants carry out the right constructions. In these irregular cases we speak of illusory messages, since they present the appearance that a successful interaction should ensue, even though it does not do so in fact. Most cases will not be like this, however, and a subjectively true message will be matched by a construction which generates a successful interaction. In these cases we call the message *conventionally true*.

It is therefore apparent that even though the above system does not ground truth in a mind-independent reality in which some facts obtain or fail to obtain this does not mean that all we can talk about is truth-for-me, that is how things appear to me. The notion of the conventionally true still remains in existence. As Tsong kha pa points out[19]

> When it is said that compounded phenomena are "merely conventional" from their perspective, the word "mere" excludes truth, but in no way excludes conventional truth.

Conventional truth spelt out in terms of the successful interaction in resolving coordination problems remains available us. It is this truth which allows us to move around in the world, change it and be changed by it without requiring anything as substantial as an intrinsically existent world out there. Tsong kha pa's disciple mKha grub rje notes that emptiness[20]

> is not contradictory to the position that things function, but indeed that it is by virtue of the fact that things function that they are without intrinsic nature, and it is by virtue of the fact that they lack intrinsic nature that it is possible for things to function.

We can agree with Candrakīrti, who, citing a passage from the Ratnakūṭa, argues that we should admit what the world exists to admit, and to deny the existence of what the world does not admit to exist.[21] There is no difficulty in accepting conventionally existent objects as conventionally existent objects. Difficulties only arise if we take these objects to be something which they are not.

[19] [Ocean 482. Add Tibetan]
[20] *sTong thun chen mo*, Cabezón 1992, 97.
[21] PP ad MMK 18.8.

It apparent that language plays a central rôle in the creation of the world. Indeed, if we conceive as existent as those things which are the subject to conventionally true statements we can agree with the somewhat provocative claim made some time ago by Terry Winograd that 'nothing exists except through language'.[22] In his criticism of the then prevalent approach to artificial intelligence he notes that 'the basic function of language is not the transmission of information or the description of an independent universe', but 'the creation of a consensual domain of behaviour between linguistically interacting systems'.[23] In the model discussed above language fulfils the double purpose of transmitting information about the world between speakers while at the same time creating the contents of the world the speakers speak about.

The basis of construction

One of the primitive notions used in the account of conventionally existent objects presented are the individuals' elementary experiences out of which such objects are constructed. They constitute the basis of construction (*gdags gzhi*). These experiences are existentially dependent on the mind in which they occur (they could not exist unperceived), but they do not depend on any other awareness in turn (the awareness of some object which turns out the be a construction from some elementary experiences depends on these, yet the elementary experiences do not in turn depend on other elementary experiences). They crucially differ from sense-data to the extent that they do not have the properties that perceptually appear to us. In other words from the fact that there is something which appears elliptical to us we cannot infer that there is something which is elliptical, namely the sense-datum of which we are aware.[24] In this way we can allow for the existence of indeterminate elementary experiences, e.g. when experiencing something as striped without experiencing it as having a specific number of stripes. If there really was the striped sense-datum we would have to assume that it have one number of stripes rather than another.
I also want to assume that elementary experiences – like the Gestalt-theoretically inspired Carnapian notion – are not broken up into experiential atoms, such as the colour of a rose, its shape, its scent, and so on, which are later put together to form the experience of the rose. Rather the identification of parts within the elementary experiences is already the result of a constructive process based on the similarity between these experiences.

There is no reason to question the reality of the elementary experiences. What is questioned, however, is the objective reality of the object created from the elementary experiences by means of convention (*btags chos*). This objective reality is not a property of the object but something mistakenly superimposed on it (*'khrul snang*). Śāntideva puts this well in saying that[25]

[22] Winograd 1986: 11, 68.
[23] Winograd 1986: 50.
[24] Chisholm 1977 suggests that we should rather claim that in this case we are being appeared to elliptically.
[25] BCA 9:26 *yathā dṛṣṭaṃ śrutaṃ jñātaṃ naiveha pratiṣidhyate / satyataḥ kalpanā tvatra duḥkhaheturnivāryate*.

> How something is seen, heard, or cognized is not what is contested here, but it is refuted here that the projection is real, as that is the cause of suffering.

We obviously do not make any assumptions about where the elementary experiences come from, in particular we remain neutral on whether they are caused by anything external. Our system does nevertheless not collapse into solipsism since the existence of other minds is a necessary pre-condition for the game-theoretic account of convention which associates constructions with a message or label (*rtags*). We have to assume that there are minds which cannot share information directly but only by exchanging messages.

I have already argued above that the basis of construction constituted by the elementary experiences does not constitute an objective background from which the world is constructed because the existence of particular sets of such experiences depends on the particular minds in which they occur and is therefore not objective. Since a person's elementary experiences are only accessible to that person there is no perspective from which the set of all elementary experiences could be surveyed.

A further argument why the basis of construction should not be regarded as a collection of substances which would provide a foundation for a chain of existential dependence relations can be based on the notion of successful interaction. If we assume that the successful interaction between different players (that is the fact that they receive a positive payoff) is a necessary condition for the continued existence of these very players, and given that the constructed objects constitute an essential means facilitating such successful interaction then it follows that if there were no constructions there would be no successful interaction, and hence no players. Since the elementary experiences depend existentially on the player who depends existentially on the constructed objects the elementary experiences themselves existentially depend on the constructed objects. We can therefore argue that the constructed objects and the elementary experiences mutually depend one each other.

Still, one might object that even though the elementary experiences do not constitute an objective background the account described above still presupposes the existence of whatever determines whether or not some set of interactions yields a successful outcome. To this extent there is something `which is there anyway', something that exists independent of human interests and concerns. Such a realist assumption is, however, incompatible with Candrakīrti's claim that it is utterly incoherent to envisage the existence of something beyond our conceptual abilities, whether this is an inexpressible noumenon or a mysterious something which makes sure that some of our interactions are successful while others are not.
But perhaps we do not have to think that whatever it is that determines the payoff of an interaction is to be understood in realist terms. In a game of chess there is something which determines whether a certain position will lead to checkmate in four moves – this something are the rules of chess. Are the rules there anyway? No, even though they are

an essential part of chess they should not be understood as something out there which determines whether a particular move will lead to victory or defeat. The rules are an integral part of the game and created together with it. Similarly we should not think that there is something out there which rewards or punishes our interactions, and that this something would be there no matter what. It is rather that based on interactions we construct the merely conventionally existing objects which inhabit the world, and together with them we establish which kinds of actions on these objects will be successful and which will not be.

Is this approach circular? It certainly is, given that the very thing on which we base the coming about of conventional objects – the fact that certain interactions are successful – is in turn a result of the properties these objects have. But is it also *viciously* circular? It does not seem to be so clear that this is the case, as long as we do not use the same objects as being produced by and producing the success of interactions. And it is not apparent we have to do this. Remember the example of Peter and Paul parking the lorry. Whether their interactions were successful was determined by objects in the world: by the lorry and its size, and by the space behind the lorry and its size. But there is no necessity to assume that it is their successful interaction which creates the lorry and the space behind it. Assuming that these are merely conventionally existing objects they could have been created by other, earlier successful interactions. By reasoning in this way we can push back the explanation of the success of some interaction onto the objects, and then push back the explanation of the existence of the objects to some earlier successful interaction.

Needless to say, we are never going to reach solid ground in this way. It is difficult to see how there could be successful interaction without objects which explain the success, and we do not want to assume the existence of objects which did not come about based on successful interactions in the way described. As indicated above this would be no problem for a Buddhist thinker who avails himself of the notion of beginningless ignorance. Furthermore it would be inadvisable for a Madhyamaka to make a demand for `something stolid underneath', as Goodman put it, as a first starting-point of the constructive process. Such a foundation would invariably be something `which is there anyway', existing independent of human interests and concerns, since it exists by definition prior to any constructive process.

Limitations of construction

Even though the model described above does not provide us with a mind-independent world of objects, but only with a collection of conventional constructions it is evident that this does not entail unlimited license. We cannot just define objects into existence, or make sentences true by fiat. That the truth of our sentences and the contents of our minds are not constrained by a world of objectively existent phenomena does not mean that they are not constrained at all. The constraints come from the fact that objects which make up the world are not just our constructions, but constructions which are linked up with the constructions of others according to certain strategies. Moreover, a certain message is not made true by the fact that we carry out a construction correlated with such a message in

our own mind, but this construction has to serve in addition as the basis of a successful interaction.
We live in a world of merely conventionally existent objects, but their conventional nature does not entail that we can unilaterally opt out or modify the world independent of the necessities the existence of the object entails. The reason why we cannot fill an empty cup with water just by imagining it to be filled is the same as why we cannot win a game of chess by picking up our opponent's king from the board and declare ourselves the winner. As long as we play chess we can only win or lose by sticking to the rules. Similarly while we are bound by the conventions of cyclic existence we can only change the world around us by paying heed to the necessities the objects in the world bring about: to fill the cup we have to go to the tap. This is the reason why Candrakīrti claims that the Mādhyamika does not argue with the world.[26] The Mādhyamikas do not deny that there is a tree outside of my window, that 7+5=12 or that water is H2O. What they deny is the claim that there is anything to these true statements that we do not make ourselves, based on an ongoing and intricate process of conceptual construction. Their existence as merely conventionally existent objects is the only existence objects could have. Candrakīrti observes that [27]

> Even though [objects] do not exist [in a substantial sense], because they are taken for granted throughout the context of everyday experience they are said to exist, strictly with reference to worldly convention.

That we cannot just construe things *ad libitum* is also stressed by Tsong kha pa in a passage from the dBu ma dgongs pa rab gsal[28] which comments on Candrakīrti's Madhyamakāvatāra VI.7. There he notes that

> from the point of view of the way in which the pot and so forth are established by conceptual constructions (*rtog pa*), that may be considered to be sufficient [to regard it] as similar to a snake imputed onto a rope. However, the pair pot etc. and snake-rope are complete different when it comes to existence and non-existence, the power or the lack of power to perform a function and so forth.
> This is because the two are dissimilar in all respects with regard to the necessity or lack of necessity of their conventional ascertainment (*tha snyad nges par bya ba*), with regard to whether this conventional designation (*tha snyad byed pa*) is harmful or not, and so on. It is reasonable to assume that each thing established by a conceptual construction has its ability to perform a function.
> Amongst those who have commented on the words and the meanings [of the Madhyamaka texts], Buddhapālita, Śāntideva, and the Master [Candrakīrti], for

[26] PP ad MMK 18.8.

[27] *yod pa ma yin yang 'jig rten kho na la grags par gyur pas yod do zhes 'jig rten gyi ngo bo kho nar brjod pa yin te.* Poussin 1907: 179.

[28] *bum pa la sogs pa rnams rtog pas bzhag lugs kyi cha de tsam zhig. thag pa la sbrul du btags pa dang 'dra ba yin kyang. .bum sogs rnams dang thag pa'i sbrul gnyis yod med dang bya ba byed par nus mi nus sogs ni gtan mi 'dra ste. de gnyis kyi tha snyad nges par bya ba dgos mi dgos dang. . tha snyad byed pa la gnod pa yod med sogs rnam pa thams cad du mi mtshungs pa'i phyir ro. rtog pas bzhag pa de la rang rang gi bya byed 'thad pa ni. . tshig dang don gyi 'grel mdzad rnams kyi nang nas. sangs rgyas bskyangs dang zhi ba lha dang slob dpon 'di gsum gyi 'phags pa la yab sras gnyis kyi 'grel lugs thun mong ma yin pa'o. .dbu ma'i lta ba mthar thug pa'i dka' sa yang 'di nyid do.* (ACIP 76b-77a.)

> all three the commentarial tradition of the two, the noble Father and Son [Nāgārjuna and Āryadeva], is extraordinary. That [what has just been explained] is the most subtle point of the highest Madhyamaka.

If everything is a conceptual construction it is of course correct to say that all constructions are on a par, to the extent to which they are all constructions. But this does not mean that they are all on a par in all respects. Why is it that the construction of a pot from certain elementary is experiences OK, but the construction of a snake from a rope is not? The reason is that a real thing, like a pot in front of us, and an unreal one, like a snake which is only a misapprehended rope, differ in a variety of ways *from within the framework of worldly conventions*. For starters only one of the two exists, since there is no snake in front of us. Secondly, the conceptually constructed pot can do what it claims to do, namely hold conceptually constructed water. But the conceptually constructed snake cannot kill an equally constructed mouse, nor do any of the other things usually associated with snakes. Finally, given that we aim at smooth interactions with people around us we will be pushed in all sorts of ways to conceptualize a particular collection of elementary experiences as a pot, whereas the same is not true of a snake-rope. It is more advantageous if we do not construe the rope as the snake and abstain, for example, from issuing unfounded snake-warnings.
We therefore realize that it is the world itself which makes some of our constructions more successful and others unsuccessful. It is not a world that is to be construed in realist terms, however. That something can fulfill its functional rôle is a fact about its relation to other objects as well as about its relation to the mind which is, according to the Madhyamaka understanding, the constructor of all causal relations there are. But given that the other objects as well as the relations are all conceptually constructed too we can never can come up with a notion of successful construction which is backed up by a world `which is there anyway' and would satisfy the realist's craving. That there is no such world does not mean, however, that in the world there is we can make up things any way we want to.

Conclusion

The reader will have noticed by now that in comparison to many of the other chapters in this book the present discussion was somewhat more removed from the Madhyamaka texts. So what have we been doing? I think the methodological background of this chapter can be clarified to some extent by comparing different approaches to ancient philosophical texts with different ways of studying ancient mechanics. If we investigate the automata described in the writings of ancient authors such as Hero of Alexandria or Al-Jazari, or the *yantrāni* mentioned in Vātsyāyana's *Kāmasūtra* we can do this in two different ways. First of all we can produce a faithful account of how these devices are described in the original texts and in those of other ancient authors. Apart from this descriptive approach we can also adopt a systematic one, asking ourselves how these automata were supposed to work, and whether they would in fact work in this way. If we realize that there are some problems we could even suggest a way of improving the device in a way which would not go beyond the resources of ancient technology.

A philosophical argument can be understood as an automaton too, not as a physical but a conceptual automaton which has the purpose of producing a certain conclusion from certain premissess. Conceptual automata can be studied in a descriptive and in a systematic fashion too: we can try to give a faithful account of what the argument says, and we can inquiry whether the argument works.[29] If there is some aspect of the argument which is problematic, or if there is something which the ancient authors say it can do, but do not describe in great detail we can attempt to fill in this blank by coming up with an argument ourselves which might do the trick.

It is evident that the study of Madhyamaka presented in this chapter is primarily systematic, with a focus on a very specific issue (namely the status of conventional truths understood as conventionally existent objects). The aim is not to come up with a rational reconstruction of an argument in a particular passage or text (building a working model of an ancient device), but to address a problem which we do not find discussed in great detail in Madhyamaka texts (building a new piece of machinery to enhance an ancient device). The problem is of course the question of what is meant in detail by the claim that all objects are conceptual constructions, and that the world as a whole is the product of conceptual imputation. Such a claim raises questions about what drives the constructive process, what the constructs are constructed from, and what (if any) limitations are imposed on the constructive process, and where they come from. In the above discussion I have described a framework which at least provides partial answers to these questions. Even though no Madhyamaka source talks about game-theoretic semantics I hope that the above construal is something which the Madhyamaka writers might have found congenial, had it been presented to them. At the very least I trust that it is not in contradictions with any of the claims about conventionally existent object which we do find in their writings.

Appendix

1. Lewis' theory of convention

Lewis develops his theory by considering the case of a simple signaling game. In this game there are two players, a sender (Paul) and a receiver (Peter). In the simplest case the sender observes which of two states of the world, ▲ (no space behind the lorry) or ▼(space behind the lorry) obtains. He has a choice of two signals, △ (hands up) or ▽ (wave) which he can convey to the receiver. Having received the message the receiver can chose between two actions, ➚ (go forward) and ➘ (reverse). If the receiver chooses ➚ in case ▲ obtains, and ➘ in case ▼obtains, both players receive a payoff (they manage to park the lorry), otherwise the payoff for both players is zero (they crash it).

There are four possible pure strategies for each player:

[29] As in the case of physical automata every systematic study worth its salt presupposes a solid descriptive foundation.

S-strategy	Sender	R-strategy	Receiver
S1	if ▲ send △, if ▼ send ▽	R1	if △ do 🡅, if ▽ do 🡇
S2	if ▲ send ▽, if ▼ send △	R2	if △ do 🡇, if ▽ do 🡅
S3	always send △	R3	always do 🡅
S4	always send ▽	R4	always do 🡇

This kind of game is played repeatedly, and that the rôles of receiver and sender may be switched. Each player therefore has to choose one sender and one receiver strategy. This makes sixteen strategies altogether, which can be arranged in a table as follows:

	▲	▼	△	▽
S1	△	▽	🡅	🡇
S2	▽	△	🡇	🡅
S3	△	▽	🡇	🡅
S4	▽	△	🡅	🡇
S5	△	▽	🡅	🡅
S6	▽	△	🡅	🡅
S7	△	▽	🡇	🡇
S8	▽	△	🡇	🡇
S9	△	△	🡅	🡇
S10	△	△	🡇	🡅
S11	△	△	🡅	🡅
S12	△	△	🡇	🡇
S13	▽	▽	🡅	🡇
S14	▽	▽	🡇	🡅
S15	▽	▽	🡅	🡅
S16	▽	▽	🡇	🡇

Both strategies **S1** and **S2** are equilibria, i.e. strategies in which it would not be beneficial for the player to switch to another strategy, given the way the other player is going to act. Lewis refers to equilibria in games like the above as *signaling system*.[30] Note however, that they are not the only ones. Another equilibrium is **S11**[31] in which the sender always sends △ and the receiver always does 🡅. In this way they receive a payoff in half the cases, assuming that ▲and ▼are equally likely. Neither could do better by an unilateral choice of an alternative strategy.

The task is now to come up with a with a criterion which allows us to select one amongst the various equilibria. It is evident that **S11** is not a very attractive option since it does not lead consistently to the maximum payoff for either player. But even if we restrict

[30] Lewis 1986: 132-133.
[31] Zollman 2005: 72 refers to these as `babbling equilibria'.

ourselves to the equilibria which do so (**S1** and **S2** in our example) we still have a choice. Lewis introduces the notion of *salience* in order to resolve the tie in this and similar cases. A salient equilibrium is one `that stands out from the rest by its uniqueness in some conspicuous respect'.[32] The underlying idea is that some features of a pair of strategies are sufficiently striking to both players to cause them to adopt this pair independently of each other. In our example we can plausibly argue that **S1** is the salient equilibrium, as the symbols ▲ and △ are considerably more similar to △ and ➤ than they are to ▽ and ➘.

Nevertheless it does not appear to be very attractive to rely on the notion of salience in the general case. States of the world and the messages they are connected with might not be in any way alike, and there may be no other property which singles out one particular assignment as conspicuous. An alternative approach has been described by Skyrms,[33] based on Maynard Smith's definition of an *evolutionary stable strategy*.[34] Let N, M_1… M_n, be alternative strategies and p(X,Y) the payoff of X played against Y. N is an evolutionary stable strategy if either

$p(N,N) > p(M_i,N)$

or

$p(N,N) = p(M_i,N)$ and $p(N, M_i) > p(M_i, M_i)$

The intuitive idea behind these conditions is that either natives (N) playing amongst themselves do better than mutants (M_i) playing against natives, or, if both do equally well, the natives do better playing against the mutants than the mutants do. Given certain boundary conditions a population playing an evolutionary stable strategy cannot be invaded by a group of mutants playing an alternative. It is possible to demonstrate that the concepts of an evolutionary stable strategy and of a signaling system (i.e. an equilibrium in a signalling game) are equivalent.[35] Not only are all signaling systems evolutionary stable, they are also the only evolutionary stable ones: they cannot be invaded by a population of nonsignalers and will invade any other population.[36]

We still face the problem of how to distinguish between equilibria like **S1** and **S2**, though. Skyrms proposes to settle this by means of evolutionary dynamics. If we imagine a population such that exactly half plays **S1** and half plays **S2** each member will get an average payoff of 0.5, assuming that there is the probability of meeting a player of either, and given that there is a payoff of 1 if one meets a player of the same strategy, and a payoff of 0 if one meets one of the alternative. As soon as the ratio of **S1** to **S2** is not one half, however, players of the majority strategy have an advantage. Since they meet players of their own strategy more often than not their average payoff is more than 0.5, so that they will eventually take over the population. The same will happen even in the case

[32] Lewis 1986: 35.
[33] Skyrms 1996: 88-94.
[34] Maynard Smith 1982.
[35] Skyrms 1990: 96.
[36] Zollman 1973: 2005.

of an equal distribution members playing **S1** and **S2** if there is random noise in the system. Assuming that this does not affect interactions following both strategies equally the average payoff of the less affected strategy will increase, thereby conferring an evolutionary advantage on it. It is therefore a *de facto* certainty that a population playing two alternative signaling systems will eventually converge on one.

This, however, does not mean that the same will happen if we consider a population such that some members play each of the strategies **S1** to **S16**. This is due to the existence of *polymorphic traps*. A polymorphic trap is an evolutionary stable situation in which one portion of the population plays one strategy while another plays a different strategy.[37] It may be the case that a large proportion of the population ends up playing one strategy, while others pursue various alternatives. In this case we would end up with a variety of co-existing signaling systems without being able to resolve the tie between different equilibria. Skyrms tested this by means of a computer simulation of the above example. It turned out that in this case there were no polymorphic traps and that the population always converged on **S1** or **S2** with about equal probability.[38] If this result generalizes we will have found a way of dealing with the tie between different equivalent signaling systems in terms of evolutionary dynamics. Which system is selected in the end does not depend on the conspicuousness of any strategy, but is purely a matter of chance.

Skyrms' model is built on the somewhat unrealistic assumption that any two members of a population have the same chance of interacting. Zollman[39] has developed a spatial version in which members of the population are represented by squares on a grid; their interaction is limited to their eight directly adjacent neighbours. Running a similar simulation on this model it turns out that even though almost all populations evolved to a state in which there are only signaling systems they do not generally converge on one such system, as in Skyrms' model. Rather, different areas of the spatially arranged population will adopt different strategies, and such arrangements will be stable (as opposed to Skyrms' precarious 50/50 split).[40] In fact this result should be regarded as an advantage for the model. After all populations of human speakers inhabiting separate geographical regions have developed distinct signaling systems (i.e. languages) which generally prove to be stable (i.e. it is usually not the case that when these groups interact one of the two languages quickly replaces the other).

2. Conventions: an anti-realist formulation

Let us denote constructions from some pairs of numbers selected by a player *a* (that is, a state of the world constructed by *a*) by s_{a_1}, s_{a_2}, … Consider a game in which each player can construct two states and can send one of two messages, M_i or M_j. There are four possible pure strategies for each player:

S-strategy	Sender *a*	R-strategy	Receiver *b*

[37] For an example of polymorphic traps in a simple bargaining game see Skyrms 1996: 11-16.
[38] Skyrms 1996: 92.
[39] 2005.
[40] Zollman 2005: 73-74.

S1	if sa_1, M_i, if sa_2, M_j	R1	if M_i, sb_1, if M_j, sb_2
S2	if sa_1, M_j, if sa_2, M_i	R2	if M_i, sb_2, if M_j, sb_1
S3	always send M_i	R3	always construct sb_1
S4	always send M_j	R4	always construct sb_2

Since the rôles can be switched each player has to choose one sender and one receiver strategy; again there are sixteen such compound strategies:

	sx_1	sx_2	M_i	M_j
S1	M_i	M_j	sx_1	sx_2
S2	M_j	M_i	sx_2	sx_1
…	…	…	…	…
S16	M_i	M_i	sx_2	sx_2

It is immediately evident that there need not be any structural similarity between the constructed states of the worlds linked by a message like sa_1 and sb_1, as there is in the case of the objectively existent constituents of the world ▲ and ⮝. All that is required is that what the sender has in mind when he says `M' and what arises in the mind of the receiver when he hears `M' can form the basis of a successful interaction, i.e. achieve a positive utility for both players. It is no problem that it may happen that what looks red to me looks green to someone else as long as we both attach the same linguistic sign to the respective mental state.

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