ALBORAN IS AND IS NOT DRY:
KATALIN HAVAS ON LOGIC AND DIALECTIC

Lorenzo PEÑA

In her book *Logic and Dialectic: Essays in the Philosophy of Logic* (Budapest: Hungarian Academy of Sciences, 1989), Katalin Havas broaches a number of topics on the relationship between logic and the idea of true contradictions ingrained in the dialectical tradition which comprised at least some of the main Marxist thinkers. The book sheds light on some developments of the debate which grew within that tradition and ended with the defeat of the noncompatibilists — those who held that there was a conflict between the acceptance of dialectical contradictions and Aristotelian logic including the classical system of mathematical logic. Havas herself is a compatibilist, and all her book displays a variety of defenses of compatibilism. Many people deem the controversy outdated and of no interest for our present concerns, since Marxism is supposed to have ceased to be one of the appealing paradigms. Should it be so, we could hardly afford to forget that up until quite recently it has been one of the dominating trends of contemporary thought. So going into its relationship with logic is no idle or pointless exercise.

One of the ironies of the whole story is that the victory of the compatibilists was reached very late — well after the second world war — and that the main reason for it was the prestige and authority of classical mathematical logic. Those among Marxist philosophers who maintained an incompatibilist stand had cornered themselves into an indefensible situation by rejecting the whole of "formal" logic as flawed, as reflecting only the superficial and static side of reality, whereas deep and dynamic facets of the world could be mirrored only by an unformalizable dialectical logic. Such an approach was clearly obscurantist, and most everybody now can feel sympathetic to people as Katalin Havas, who have endeavoured to overcome an attitude which debarred Marxists from taking mathematical-logic work seriously and from engaging in it.

Yet, it seems to me that compatibilists — such as Katalin Havas — have thrown the baby with the bath water. It was unfortunate and perhaps odd that along the protracted controversy over the relation between dialectical

and "formal" logic, only seldom did anybody evoke the possibility of taking a "synthesising" approach, by dint of formalizing dialectical logic through some non classical formal system. Yet, there had been overtures from the professional logicians' side. Thus when St. Jaśkowski propounded the first system of paraconsistent logic (i.e. a system without the Cornubia rule: p, not-p $\vdash$ q), he listed a number of philosophical motivations for the system, one of them being the formalization of Marxist dialectics. No one took the clue. After all, who cared about such oddities as non-classical systems of mathematical logic? Thus, just when classical logic was really dislodging traditional schools which had until then managed to hold their ground in University teaching, incompatibilism began a rapid and steady waning which ended in an almost complete defeat shortly before the whole castle of established Marxism collapsed. At about the same time, non-classical systems of mathematical logic began to burgeon, and particularly fuzzy logic and fuzzy set-theories started a prodigious career leading to startling results.

If incompatibilists failed to exploit the existence of nonclassical logics — their claim being that dialectics was beyond the scope of formalizable thought — compatibilists were of course keen on viewing CL as "the" one and only true logic.

It is a merit of K. Havas's book that she — alone perhaps among compatibilists — considers the possibility of using nonclassical, and especially paraconsistent logics, to formalize dialectics. Her answer I find somehow unclear or hesitant, but her main line is undoubtedly that, whatever the utility of such logical systems, in the main dialectics does not need them, since it is wholly compatible with Aristotelian logic.

I am not going to canvass all arguments and considerations displayed by K. Havas for her thesis. And besides I am not particularly concerned about the original issue of the compatibility between Marxism and "formal" logic. The topic of this paper is only the relationship between degrees and contradictions. I feel pretty sure the dialectical tradition espoused a view of degrees of truth, and that was in fact one of the grounds — if not the ground — for countenancing true contradictions. Be it as it may does the existence of degrees imply that there are true contradictions?

K. Havas's answer is a definite "It depends". She discusses (pp. 88ff) an argument of mine to the effect that, since Alboran is to some extent dry, it is dry, and, since to some extent it is not dry, it is not dry; hence it both is and is not dry.

Havas's view is that you can say that, but then you are using the words in a different way from that of traditional and classical logic. If you use

'not' and 'and' as classical logic does, the fact that Alboran is in between complete dryness and entire humidity does not clash with the laws of CL.

How is that? Havas's main idea is that incompatibilists mistake our thinking of reality for reality itself. Reality is a web, an intermingling of facets, which lies in a dynamic entanglement, where opposite properties are intertwined. Yet, we cannot think reality as it is. We can think only by representation. The world as such is not present to our cognitive capacity. Now, representing the world entails dividing it, breaking it up into pieces, each of which definitely has a property and lacks its opposite. Logic rules over our thought. And logic demands a separation of opposite properties. We cannot think in any other way.

Does that mean that reality as such is contradictory while our thought is bound to be noncontradictory? No. It makes no sense — so K. Havas claims — to say that reality as such is contradictory — or non-contradictory. I take it we can speak and think only about reality as it is given to us through concepts. And concepts are bound to be discrete, separate from one another, and thus allowing no overlapping of opposites.

Now, what exactly is the nature of such constraints? It is not clear to me whether K. Havas takes them to be anthropologic or analytic — or "apophantic" in some Husserlian sense. In other words, it is unclear to me whether she believes that our thought is bound to be contradictionless in virtue of some particular frame of the human mind, or in virtue of some *a priori* requirement for something to be a representation, or a concept.

The foregoing considerations do not prevent K. Havas from allowing a role for nonclassical logics wherein negations may behave differently from classical negation. Does the use of such a logic mean that after all our concepts do not have to comply with such constraints as determine CL in general and classical negation in particular? No, for the meaning of negation in those logics is different, and hence it cannot be truthfully said that they fail to comply with CL constraints. Such constraints apply only wherever the meaning of the connectives is the same as in CL.

All of this does not entail that logic is completely independent from the way the world is. (This is why it is unclear to me whether the constraints are meant to be purely *a priori*, analytical.) In order for CL and in general concept-formation to be usefully applicable to the world, some requirements are called for, namely (p. 89): there must be some stability, some things sharing a number of properties, while other things lack those properties; things do not lose their properties every moment in every respect, and nothing loses a property the very same moment it acquires the property.

Havas does not say whether worlds where such constraints fail are possible. I surmise she would reply that they are classically impossible — which of course only triggers a regress of similar puzzles. Since the world satisfies those minimal requirements, CL can usefully be applied to it. Since it also has facets of motion, instability, entanglement of opposite properties, non-classical — and especially paraconsistent — logics can also be applied, but with different meanings being ascribed to the connectives.

Havas tackles an argument I had put forward to show that graduality entails the existence of true contradictions — to which I have already referred hereinabove. Havas thinks that the inconsistency is (merely) apparent. She claims that it may be true that Alboran is not dry without its being the case that Alboran is not-dry. Graduality of dryness entails that an entity, like the island of Alboran, may both fail to be dry and fail to be not-dry; it does not entail that it may both be dry and not-dry.

Are we then bound to divide the world into three multiplicities, that of dry things, that of not-dry things, and that of things which are neither? Not necessarily. It depends on what cognition processes are involved. For a number of processes and concerns, it suffices to establish dichotomies like dry/not-dry, day/night, etc. For some purposes, we establish trichotomies, like day/twilight/night, dry/moist/wet, and so on. She goes on (p. 95):

> In the case of Alboran, due to the arisen apparent inconsistency, we have to widen our universe of discourse and in this widened universe, w_2, we have to make other divisions, comparing with what was done in that narrower universe w_1.
>
> In w_2 we have to abandon the equivalences 'not-dry = wet' and 'not-wet = dry'. Consequently, the meaning of (3) ['Alboran is not-dry'] is changed (...) [it] will not have the same meaning as 'Alboran is wet', but it will be equivalent to: (7) Alboran is wet or it is not completely wet and not completely dry.

It is clear what K. Havas is after: literally taken, 'Alboran is not-dry' is false, completely false. We had divided the world into dry and not-dry things. We find out that some things are neither [completely] dry nor [completely] not-dry; one of them is that island. Then we are compelled to introduce a new bunch of entities in between the two extremes. Yet even with the new conceptual framework it will remain [completely] false that Alboran is dry, and also that it is not-dry. It will be fully true that it is not dry and also wholly true that it is not not-dry. So, when we say (3), what

we are really meaning is not literally (3), which is [utterly] false, but some plausible truth, like (7). In other words, by saying that Alboran is not-dry, we mean that it is not dry — and hence either not-dry or both not [completely] dry and not [completely] not-dry.

Distinguishing internal from external negation is one of the traditional solutions to paradoxes of sundry sorts. Havas is fond of Aristotelian logic and — or so it seems to me — of Aristotelian philosophy in general. Her distinction here is in agreement with such leanings. Such a solution has real merit. After all there are nontrivial grounds for thinking that being unkind is not necessarily the same as not being kind. My PC is neither. So, cannot such a distinction also solve the paradox of graduality — namely that, since what is to some extent the case is the case, every situation of an entity having a property only up to a point is one where some contradiction is true?

I think the solution is riddled with difficulties, and so I doubt that it can really solve the problem. Here are my objections.

1st Objection. The distinction between being not-so and not being so calls for a theory of properties, duly axiomatized and modelized. No such theory is provided by K. Havas's book. Nor need it be, of course. The views just described can be taken as sketching a program, rather than as expressing a developed account. Pending the filling out of a detailed theory of properties along those lines, the distinction can be considered only a rough hint at a sort of solution. Even so, it is in principle implausible. In so far as possible, we ought to equate having thus or so property ϕ with having the property of thus-or-so-ϕ — with 'not' being a case of the generic 'thus-or-so' which is a place holder for any alethic modifier, whether negation or alethic qualification ('to some extent', 'highly', etc.). I am not saying that under no circumstances can you differentiate one from the other. What I say is that a strong reason for the difference is needed — and in so far as possible a proof that the solution is workable and indeed solves the problem. Unless and until anything like that is provided, we had rather stand by the equations under debate. And even should we depart from them, we would be well-advised if our departure was as small as possible, which means that as many inferences as possible must be kept among the ones which were countenanced by the equations. Else, the mere use of the words seems arbitrary. The less 'not' in 'not-dry' is related to 'not' in 'not dry', the more arbitrary the use of the word is.

2d Objection. Suppose 'Alboran is not dry' does not entail 'Alboran is not-dry'. If *modus tollens* does not apply here, our conditional or entailment

connective is bound to be nonclassical. Havas clearly has classical conditionals in mind. So *modus tollens* (and *contraposition*) apply. Hence 'Alboran is not not-dry' does not entail 'Alboran is dry' (I am assuming involutivity). Thus we block the inference from 'Alboran is neither dry nor not-dry' to 'Alboran is and is not dry'. Well and good. Still, since it is true that Alboran neither is dry nor is not-dry, it is false that it is dry and it is false that it is not-dry. (External negation is clearly intended by Havas in a strong classical way — and hence «not-p» can hardly be distinguished from its being false that p.) It is hence false that it is dry or not-dry. Now, whether the emerging theory of properties is strong or weak, surely we do not want it to take «A is ϕ or not-ϕ» as false (downright false — no degrees of falsity applying within such a classical framework). Perhaps we would buy taking such formulae as truth-value-less, or as having a value which is neither true nor false, or anything like that but hardly as being [completely] false. Yet, Havas's account clearly equates being true with being entirely true. So, if the distinction between internal and external negation is going to be credible, workable and useful for the purpose at hand, it had rather be implemented so as to avoid that *prima facie* instances of excluded middle turn out to be utterly false. Which of course leads us beyond CL.

3d Objection. What in the first place gives rise to the "neutro-diction" that Alboran is neither dry nor not dry is that when you ask a knowledgeable geographer whether Alboran is dry, he will probably say that neither it is nor it isn't. How can such an answer, 'Neither it is nor it isn't', be paraphrased so as to mean 'It is not dry and it is not not-dry'? The segment 'it isn't' was clearly an abbreviation of 'it is not'. For Havas's account to start to seem plausible, it is necessary that in that case 'it is not' be short for 'it is not-', so as to render 'Neither it is nor it isn't' short for 'Neither it is dry nor is it not-dry'. However it seems pretty odd — to say the least — that such a paraphrase should be possible 'Neither it is nor it isn't' sounds clearly as a joint-negation of the same thing, not as a joint-negation of two different property-ascriptions. There are various reasons for that. One is that an internal 'not' probably cannot be contracted; the contraction 'isn't' clearly seems to be a unit, which results from applying 'not' to 'is' — hence to the whole atomic sentence; it does not arise from uniting 'is' with the prefix 'not-' of the predicate 'not-dry' (or «not-whatever»). Another reason is that the elision of the predicates in a conjunction cannot be done if they are different: 'Peter is clever and [Peter] is strong' cannot be paraphrased or abbreviated as 'Peter is and is', whatever the context.

All of that only shows that the natural answer 'Neither Alboran is dry nor

is it not dry', or the like, conveys the literal sense that Alboran is not dry and that is not not dry — hence that it both is and is not dry, in virtue of involutivity. But the natural answer might be wrong? Yes, it might. What alone has been shown by my third objection is that Havas's introduction of the dash is not a *prima facie* plausible ploy — is not a natural way of wording the 'naive' answer.

4th Objection. Havas claims that when people say (3), upon realizing that Alboran is in between the extremes of being altogether dry and entirely lacking dryness, what they mean is something like (7). Let us suppose that 'is wet' just abbreviates 'is not-dry' (otherwise the remark would be immaterial for the present debate). Hence when people say that Alboran neither is dry nor is not dry, what — according to Havas — they mean is that either Alboran is not-dry or it is neither completely not-dry nor completely dry. But, what is the role of 'completely' here? Does Havas accept that being dry is the same as being completely dry? Such is the feeling one gets, since through the conceptual revision Havas views as conducing to the trichotomic classification things fall into three bunches: dry, not-dry and neither. No place here for a special range of things dry but not completely dry. *Dry and not-dry* are clearly taken to be the extremes, with what is neither being in between. So the wording of (7) is clearly meant to be a paraphrase of:

(9)   Alboran is not-dry or else it neither is dry nor is not-dry.

Now, (9) may be taken to be a paraphrase of 'Alboran is not dry' but — unless the distinction Havas is after collapses — hardly of 'Alboran is not-dry'. For surely both disjuncts in (9) entail 'Alboran is not dry', which in turn entails (9). Now, the natural answer to our question about whether Alboran is dry is not (10) but (10'):

(10)   Alboran is neither dry nor not-dry
(10')   Alboran is neither dry nor not dry

We can envisage paraphrasing the first conjunct of either (10) or (10') as (9). Now, the conjunction of (9) with 'Alboran is dry' remains a contradiction. And so, by involution, (10') is a contradiction.

Anyway, what is the reason for inserting the dash into the second conjunct of the second disjunct of (9)? As a part of paraphrasing the naive answer, the insertion of the dash is dubious — a theoretical gambit which may work, but which we can hardly foist on the naive geographer. So, the natural

paraphrase of the first conjunct of the natural response has to be not (9) but (9'):

    (9')   Alboran is not dry or neither it is dry nor it is not dry or, in other

words, and less contortedly, (11):

    (11)   Alboran is not dry, or else it neither is dry nor fails to be dry.

In virtue of usually accepted logical rules (11) (and hence (9')) boils down to (12)

    (12)   Alboran is not dry

Which brings us back to the contradiction, that Alboran neither is nor fails to be dry — hence is both dry and not dry.

Thus Havas's ploy in support of maintaining CL fails.

Moreover, if my construal of her ideas is not mistaken, what she thinks is that in reality dryness and not-dryness are in fact enmeshed or melted, whereas in our representation they are bound to be secluded. In some sense, contradictions are true in reality but we cannot say so, since all our assertions concern reality as represented. Yet she has managed to speak about reality itself — as against reality *qua* represented — to somehow or other convey some information as to what reality is like and how the opposites are interweaved until our mind proceeds to making cuts.

Has not Katalin Havas managed to say the ineffable, the existence of true contradictions in things beyond or below the level of language and thought? Why then is not a paraconsistent logic appropriate for such sayings as her own? Are her own assertions taken to comply with CL? Or is it only at the object-language level — or something like that — that CL is bound to rule?

                           Spanish Institute for Advanced Studies (Madrid)