Ibn Sina: Qiyās ii.2

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فصل في عكس المطلاقات

ii.2 Conversion of absolutes

وإذ قد بيّن هذا فلنبيّن أنّ الكلّيّة الموجبة هل تنعكس؟ وكيف تنعكس؟ [2.2.1] Now that this has been proved, let us show whether the universally quantified affirmative converts. What form should it convert to?

أكلّيّة موجبة أم جزئيّة؟ وهل تبقي مطلقة؟ أم لا تبقي مطلقة؟ فنقول: إذا صدق To universally quantified affirmative, or to existentially quantified? And 88.5 does it or doesn't it stay absolute? We say: when

قولنا كلّ ج ب فليس يلزم أن يكون كلّ ب ج . مثاله كلّ إنسان حيوان، وليس it is given that

(1) Every C is a B.

it doesn't follow that

(2) Every B is a C.

An example is:

(3) Every human is an animal, but not every animal is human.

Also we have:

(4) Every human watches;but not everything that watches is human.

مستيقظ إنسان. فليس يحب إذن للكلّيّة الموجبة عكس كلّي موجب، فإنّه

So a universally quantified affirmative proposition need not convert to a universally quantified affirmative proposition, since

ربَّما كان المحمول أعمّ.

sometimes its predicate is more inclusive [than its subject].

وأمّا عكسها الحزئي فواجب، فإنّا إذا قلنا: كلُّ

[2.2.2] But conversion of this proposition to an existentially quantified proposition does have to hold. Thus when it is given that 88.9

(5) Every C is a B.

ج بلزم أنّ بعض بـ ج . وقد جرّت العادة في بيان هذا أن يقال: إنّه معطه مسماله

it follows that

(6) Some B is a C.

The customary proof of this is to say:

88.10

إن لم يكن بعض \overline{P} = فلا شيء من \overline{P} . وهذا ممتا ينعكس، فيكون ولا شيء If it's not the case that some *B* is a *C*, then

(7) No B is a C.

And this proposition converts to:

(8) No C is a B.

من $\overline{-}$, وقد قلنا: كلّ $\overline{-}$, وهذا خلف. فهذا هو البيان المعتاد But it was given that every *C* is a *B*, and this is an absurdity. This is the proof that is given

في هذا الباب.

in this chapter [of the First Teaching].

وعلينا أن ننظر في هذا البيان، هل هو حقيقي، أم ليس بحقيقي. وذلك أنَّه إن

[2.2.3] We should examine this proof to see whether it is sound or not. 88.14 One issue is that if

the contradictory negation of an affirmative existentially quantified absolute proposition is a negative universally quantified absolute proposition, 88.15 and it is correct

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الحقيقيّة منها لا تنعكس، فلا يكون هذا بيانا. على أنّ ذلك كما علمت يحتاج that some strict [absolute propositions of this form] don't convert, then this is not a proof. As you know, the point is that when

في أخذ نقيضه إلى أن تعيّن الحال والوقت. وههنا لم يشتغل بتعيين حال أو وقت you take the contradictory negation of a proposition, you have to specify the circumstances and the time. At this point [Aristotle] doesn't bother to specify any status or time

{NB .haal wa-waqt (twice).}

في كليهما، حتّى يكون السلب مقابلا، فيعيّن في الخلف. فلا هو مقابل ولا يجب in either [the proposition or its contradictory negation], so as to ensure that the negative statement is the [contradictory] opposite of the other, and that it is well-defined when the absurdity [is shown]. [Without the specifications] this universally quantified negative proposition is not the [contradictory] opposite [of the affirmative proposition] and need not even

أن تنعكس السالبة الكلّيّة فيه. فنقول الآن: إنّ هذا وإن كان هذا، وإن كان convert this way. We say: In spite of these two objections [(to the taking of an opposite

هكذا، فإنّ هذا البيان صحيح. وذلك لأنّ القائل إذا كذب في قوله: بعض $\overline{-}$ and to the conversion)], this proof is still correct. This is because if the 89.5 speaker speaks falsely when he says

(9) Some B is a C.

فيجب أن يكون إنّما كذب لأنّه لا يجد بعض ما هو $\overline{-}$ هو $\overline{-}$ في وقت من the falsehood implies at least that there is nothing that is [at some time] a *B* and is also at some time a *C*.

الأوقات؛ فإنّه إذا وجد بعض ب ج وقتا ما، فقال: بعض ب ج ، أيّ وقت ماييد معالم (٥) لمنهو ما معالم لم مع () و مستند ومسود موجوع معالم R و معتد مس

If there was a B that was at some time a C, and then he said (9), then what he said would be true, regardless of the time and circumstances.

{His claim is that (9) has a minimum reading, viz. that something that at some time is a *B* is at some time a *C*. This minimum reading allegedly will always follow from any reading of 'Every *B* is a *C*'. }

كان وأيّ حال كان، فإنّه يكون صادقا. وإن كان صادقا مع ذلك أنّ كلّ \overline{P} . كان وأيّ حال كان، فإنّه يكون مادقا. And if it is true together with this that every B

ليس وقتا ما \overline{F} ، فليس إذن هذه الكلّيّة السالبة المطلقة مناقضة لتلك الجزئيّة is not at any time a C, then in that case this universally quantified negative absolute is not the contradictory of the existentially quantified

الموجبة. ولكنّ الّتي إذا كذبت القائلة بعض $\overline{-}$ ، صدقت هي ولا تكذب، affirmative proposition (9). But if one falsely says (9), then the thing that 89.10 one could say truly and not falsely

إلّا أن لا يكون بعض من الأبعاض موصوفا في شيء من الأوقات بالمحمول. is precisely that

(10) None [of the things that are at some time *B*s] are *C*s at any time.

فإذن مناقض هذه الموجبة الجزئيّة الطلقة ، هو هذه السالبة الّتي ظهر من حالها so the contradictory negation of the affirmative existentially quantified absolute proposition (9) is this negative proposition (10), and it was already clear from the form of (10) that

قبل أُنَّها تنعكس مثل نفسها، مانعة للإيجاب الجزئي كيف كان، فضلا عن it converts to a proposition in the same form, which is incompatible with (9) however it is taken, and *a fortiori* incompatible with

الكلّي. فهذا البيان إذن حقّ.

89.14

the universally quantified proposition (5). So therefore this proof is sound.

فإن أخذ المطلق على المعنى الأخصّ، لم يكن [2.2.4] But if the absolute proposition (9) is taken in the/a narrower

[2.2.4] But if the absolute proposition (9) is taken in the/a narrower meaning, (10) is not

هذا نقيضه؛ بل جاز أن يكون كذبا، لا لأنّ الإيجاب كاذب، بل لأنّ الحمل its contradictory; (10) could be false, not because (9) is false, but because 89.15 the predication [in (9)]

is permanently true. In that case (10) would be false, but the proposition taken to be its contradictory negation in the standard treatment doesn't have to be true

فيكون خلفا.

so as to get an absurdity.

فيظهر من هذا أنّ الغرض في التعليم الأوّل، ليس ما ذهب إليه So it's clear from this that the First Teaching had no intention of proceeding 89.18

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من إحتار هذا الإعتبار في المطلق. فإن كان المطلق مأخوذا على المعنى الأخصّ، according to this choice of interpretation of an absolute proposition. But if the absolute is taken in the narrower sense, {Here 'the narrower sense' as if just one. }

فبيّن إنعكاسه بالإفتراض الّذي سنشير أليه بعد. then its convertibility is clear in the light of the ecthesis that we will indicate later.

ونقول الآن: إنّ مناقض قولنا: [2.2.5] And now we say: the contradictory negation of

90.3

ليس كلّ المطلق، هو كلّ الّذي الحمل فيه دائم. وأمّا مناقض السالب الكلّي المطلق 'Not every' (read absolutely) is 'Every', but with the relevant predication made permanent. The contradictory of a universally quantified bread

made permanent. The contradictory of a universally quantified broadabsolute proposition,

{First sentence bizarrely brief, but it seems to imply that just one sense is being discussed. }

والموجب الكلّي المطلق العامّ للجميع، هو الجزئي الّذي يدلّ على الدوام. وقد

taking together both the affirmative and the negative propositions, is an existentially quantified proposition which signifies permanence [of the predicate].

عرفت الفرق بين الدائم والضروري، فيجب أن يراعي هذا في جميع ما نورده. You have already met the difference between permanent and necessary.

One has to take care of [all] this in all the cases that we are talking about. 90.5

فهذه أصول يحب أن تكون منك على ذكر، فإنَّ الناس لم يشتغلوا بها.

These are fundamental points that you will have to remember for yourself, because people don't bother with them.

{NB Ibn Sīnā claims independence from the tradition. }

ونقول: إنّ هذا العكس ممكن أن يبيّن بالتعيين والإفتراض. وذلك بأن يقال: [2.2.6] We say: It's possible to prove this conversion both by instantia-90.7 tion and by ecthesis. The former runs as follows.

{'This conversion' is at 88.9f. }

إذا كان كلّ ج ب فليفرض واحد من الموصوفات ب ج وليكن د ، فيكون

If every *C* is a *B*, then let one of the things fitting the description *C* be specified; let it be *d*. Then

{NB Ecthesis using an individual.}

$$\overline{c}$$
 هو \overline{r} وهو \overline{r} . فالموصوف ب \overline{r} اللذي هو \overline{c} موصوف بأنّه \overline{r} . وكذلك

d is a *C* and it is a *B*. Then the thing fitting the description *B*, namely *d*, fits the description *C*. And likewise

{NB An example of $p \land q$ being taken as trivially equivalent to $q \land p$. Also the step from $\phi(d)$ to $\exists x \phi(x)$ is obviously intended but not mentioned. }

it's possible to prove [the conversion] by absurdity, using a syllogism which 90.10 the excellent later [philosopher] made, thus. If it is not the case that {The proof of the conversion here is a doublet of 81.1–4 above. }

some *B* is a *C*, then no *B* is a *C*; this is a negative absolute proposition with the meaning 'for as long as its essence continues to fit the description {NB The demonstration is only claimed for one kind of negative absolute.} {Also the formulation is ambiguous about the scope of 'for as long as'; if the reading of 'Some *B* is a *C*' is the same as above, then what he should intend here is: Nothing that is at some time a *B* is at any time a *C*. But what he says is at odds with this. In any case is the syllogism still perfect when we take into account this condition? }

بأنَّها ب ، وكان كلّ ج ب ينتج بقياس كامل طبيعي أن: لا شيء من ج د .

B'. But we had 'Every *C* is a *B'*, which entails by a perfect and natural syllogism that no *C* is a *C*.

{NB Syllogism with two terms equal, described as 'natural'. }

{Street's choice of 'No C is a C' is probably the best reading. The one with D is impossible. }

هذا خلف.

This is absurd.

{No absurdity yet; 'No C is a C' just entails there are no Cs. This does

contradict 'Every C is a B because of the existential assumption, but both the excellent philosopher and Ibn Sīnā should have mentioned this. }

وأمّا أنّ هذا العكس ما حاله، فنقول: حاله أيضا الإطلاق العامّ، فلا يلزم إذا [2.2.7] What form does this converse take? We answer that it is broad 90.14 absolute. When

(11)Every writer is a watcher, i.e. at some time.

it doesn't have to follow that

90.15

Some watcher is a writer for as long as his essence is satisfied (or (12)even for as long as he watches).

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91 كاتب، ما دام ذاته موجودا، أو ما دام مستيقظا. وفي بعض المواضع يجب كما نقول: In some topics such a converse has to be true, for example

(13) Every human is an animal, i.e. as long as it continues to exist, and permanently.

and

(14) Some animal is a human, i.e. so long as its essence continues to be satisfied.

{NB But here is it clear that 'broad absolute' includes different sentence forms? }

ولقائل أن يقول، إنَّا إذا قلنا: كلَّ كاتب

[2.2.8] Someone might well say:

91.3

Given that (15) Every writer watches.

it follows that some watcher is a writer for as long as his essence continues to be satisfied.

The argument is that in the sentence

91.5

(16)

The writer while he is a writer is one of the watchers.

the writer himself while he is a writer is a writer so long as his essence continues to be satisfied, and he is himself

one of the subjects for the predicate 'watching'. So something that fits the description 'watcher' is a writer for as long as

ذاته موجودا. فقد إنعكس ههنا أيضا ضروريًّا.

his essence continues to be satisfied. Hence in this case the proposition does convert to a necessary one.

[2.2.9] We say in answer to this: In the first place, we are just explaining, 91.9 and this is not a debate that we are personally

{So this is somebody else's suggestion. The min haythu suggests al- $F\bar{a}r\bar{a}b\bar{i}$, although this seems to be a different use of min haythu from below. }

هاذ، فنقول: لا يمنع وجود بعض المستيقظ كاتبا ما دام ذاته موجودا، أن

involved in. So we say: The fact that some watching person is a writer for 91.10 so long as his essence continues to be satisfied doesn't prevent

there being other watching people who are not like that. With existentially quantified propositions, the truth of a denial doesn't prevent the truth of [the corresponding] affirmation,

{The corresponding affirmation is got by swapping the quality without changing the quantifier. }

and in just the same way the truth of 'Some B is a C with necessity' doesn't prevent the truth of the proposition 'Some B is a C but without necessity'. Thus some bodies

أبيض بالضرورة، وبعضها أبيض لا بالضرورة. فإن كان بعض ما هو موضوع are white necessarily, and some are white but not necessarily. So if something of which 'watching' is true

المستيقظ كاتبا بالضرورة إذا أخذنا الشرط المذكور، فبعضه الّذي ليس بذلك is a writer with necessity when we adopt the condition 'while he is a writer', [it can still be true that] without the condition the same holds

91.15

but not with necessity.

وإن قابلنا هذا الكلام بالحقّ، لزمنا أن لا نسلم أنّ [2.2.10] Also if we compare this argument with the truth of the matter,

we are under no obligation to concede that

الكاتب من حيث هو كاتب يوصف بالمستيقظ. فإنّ ذات الكاتب بشرط أن the writer, while he is a writer, fits the description 'watching'. The essence of the writer under the condition that

يؤخذ كاتبا فقط لا يوصف بالمستيقظ. فإنّ الشرط هو أن يكون كاتبا فقط he is taken as just a writer doesn't fit the description 'watching'. The condition is just that he is a writer

{NB At this point he shifts to a different reading of min haytu, viz. from 'C is a B while it is a C' to 'C is a B as part of what it is for it to be a C'. }

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بلا زيادة. والكاتب فقط كيف يكون هو مستيقظا، فيكون كاتبا فقط ليس كاتبا without any addition. If a person is just a writer, how could he also be a watcher? He would be just a writer who is not just a writer.

Rather, when 'writer' is taken absolutely, regardless of how it fits the description 'writer', it's possible that

يكون، كيف كان هو الموصوف بالمستيقظ وصفا لا بالضرورة. وأمّا الأشياء من he does fit the description 'watcher', regardless of how, but it will not be with necessity. When things are taken

حيث حدودها، وبشرط تجريد العوارض عنها، لا تكون موضوعة لما ليس as just what is in their definitions, and a condition is made to abstract from any accidental properties they may have, then they count only as subjects for

{NB Here a *min haytu* is described as a condition which strips off the accidents. }

{More precisely, we have a subject of the form 'X min haytu Y; the properties that can truly be ascribed to X min haytu Y are those that X has which are the form allowed by Y. Note for example that 'A and B' can be true of X min haytu Y without either A or B being true of it. }

their definitions and what is in their definitions.

92.5

ثمّ ستعلّم أنّ قولنا: من حيث هو كاتب، ليس جزءا Also you are going to learn that the phrase

92.5

(17) while he is a writer

is not a part

of the subject at all in sentences like

(18) The writer while he is a writer watches.

مستيقظ، بل جزء من المحمول. وسنبيّن لك حينئذ أنّ الشكّ منحلّ من وجه آخر. Rather it is a part of the predicate. And we will use this to prove to you that the doubt can be resolved in a second way.

ونرجع فنقول: إنّ العكس في المطلقتين جميعا لا يجب إلّا مطلقا عامّا. وذلك We return to what we said before: A converse of an absolute proposition of either kind doesn't have to be anything but broad absolute. The reason is

لأنّك إن أخذت المطلقة خاصّة، وجدتها قد تنعكس خاصّة، وقد تنعكس that if you take a narrow-absolute proposition, you find that it could convert either to a narrow-absolute proposition or {NB Here it seems he confuses rules for conversion with facts about matter. }

(19) Every writer watches.

which converts to

(20) Some watcher is a writer (which is not with necessity).

(21) Every human breathes (which is not with necessity).

converts to

بعض ما يتنفّس إنسان بالضرورة.

(22) Something that breathes is a human (which is with necessity).

وإذ عرفت حال الكلّي الموجب المطلق،

[2.2.10] Now that you know the facts about universally quantified affirmative absolute propositions,

فكذلك فإعلم حال الجزئي الموجب، وأنَّه ينعكس مثل نفسه جزئيًّا موجبًا. والبيان

you should likewise be aware of the facts about existentially quantified affirmative propositions, namely that they convert to the same form as themselves, existentially quantified affirmative. The proof

ذلك البيان. وينبغي أن لا يطول بسببه. is the same proof, which is a good reason not to spend more time on it.

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وقد أوردت أمثلة نوقض بها ما قلناه من إنعكاس الكلّي بالموجب جزئيًّا

[2.2.11] I have already mentioned examples in which we contradict what 93.1 we said about the conversion of a universally quantified affirmative proposition to an existentially quantified proposition. {Does he mean the discussion at 90.15ff?

فلا يحتاج أن نعدّها كلّها، بل يجب أن يتذكّر ما قلناه في الجواب عن حدود There is no need for us to count all of them, but rather one should mention what we said in the answer about the terms

أوردت، لتبيّن بها أنّ السالبة الكلّيّة لا تنعكس. وكذا الأمر أن تنظر إلى جملة that I mentioned as intended to show that a negative universally quantified proposition need not convert. The nub of the matter is that you have to consider the whole

{What did he mention? The answer or the terms? I would have expected *'awradtuhu* in the first case and *'awradtuhā* in the second. Also is it the terms, or is it definitions (which he did mention a propos of whether a condition could limit to definitional properties)? }

subject and the whole predicate, so that when you swap around you leave each of these exactly as it was before, and you don't remove or alter any of its parts. I mean that

الجزء اللذي إذا نقصته عنه وهو بحاله الاوّل قبل العكس فأردت أن تحفظ if you remove part of a term, then even if you keep the original properties 93.5 that the proposition had before the conversion, intending to keep

الإيجاب والسلب مع نقصانه لم تجد الحكم ثابتا. فإنّك إذا حفظت المحمول كما it as an affirmation or a negation at the same time as you remove part of it, the outcome is not secure. If you keep the predicate just as it was,

كان والموضوع كما كان وعكست لم تغلط ولم تغالط. and the subject just as it was, but you swap them around, you won't have made a mistake and you won't have deceived anybody.

وأمّا السالبة الجزئيّة [2.2.12] As for negative existentially quantified propositions,

93.7

93.10

فإِنّها لا تنعكس، فليس إذا لم يكن كلّ حيوان إنسانا، أو كلّ إنسان كاتبا، وجب they don't convert. Thus when not every animal is human, or not every human is a writer, it doesn't have to be the case that

أن لا يكون كل إنسان حيوانا، أو كل كاتب إنسانا. that not every human is an animal, or that not every writer is a human.

وههنا نوع من العكس آخر يجب أن نتأمّله، وهو الّذي يسمّى عكس

[2.2.13] There another species of conversion that we have to examine, namely the one called contradictory conversion.

النقيض، وهو أن يؤخذ ما يناقض الحمول فيجعل موضوعا، وما يناقض In this one takes the contradictory negation of the predicate and puts it as subject, while the contradictory negation of

الموضوع فيجعل محمولا. فنقول: إذا قلنا كلّ ج ب ، لزم منه أنّ كلّ ما ليس the subject is put as predicate. So we say: when

(23) Every C is a B.

it follows from this that

(24) Everything that is not a B is not a C.

{NB Clearly here the subject doesn't include the quantifier.}

For otherwise something that is not a B is not not a C, so it is a C. So

(25) Something that is not a B is a C.

{NB laysa laysa cancels. }

بهو ج ، ينعكس فبعض ما هو ج هو ما ليس ب ، وقلنا كل ج ب . وإذا which converts to give

(26) Something that is a *C* is something that is not a *B*.

But we said that every *C* is a *B*. Also

(27) Everything that is not a B is not a C.

it is true that every *C* is a *B*. For otherwise it is true that not every *C* is a *B*.

. فيكون بعض ما هو $\overline{-}$ مسلوبا عنه $\overline{-}$ ، فذلك البعض $\overline{-}$ وليس ب Then some *C* has *B* denied of it. But then by (27) this some *C* is not a *C*.

[2.2.13] But when we say:

93.16

وقلنا: كلّ

(28) No *C* is a *B*.

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لا يلزم لا شيء ممتا ليس $\overline{-}$ ليس $\overline{-}$. فإنّك إذا قلت: لا شيء من الناس حجارة it doesn't follow that nothing that is not a *B* is not a *C*. Thus when you say

(29) No human is a stone.

it doesn't follow either that nothing that is not a stone is not a human, or that nothing that is not a stone

هو إنسان؛ بل لزم بعض ما ليس حجارة هو إنسان، وإلَّا فلا شيء ممَّتا ليس

is a human. But it does follow that something that is not a stone is a human. For otherwise nothing that is not

{NB Surely it doesn't follow without the further assumption that there are humans. This illustrates the dangers of trying to prove general laws by particular examples. }

بحجارة هو إنسان، فلا شيء من الناس ليس بحجارة. وكنّا قلنا لا شيء من a stone is a human, so that no human is not a stone, while (29) said that

nobody

94.5

(30) Some C is a B.

it follows that something that is not a *B* is not a *C*. In fact

يوجد موجودات أو معدومات خارجة عن \overline{F} و $\overline{\psi}$ معا، فيكون بعض ما ليس there are existing or nonexistent things that lie outside both C and B, so it will be that something that is not

{NB Here he quantifies also over nonexistent things. Also contrary to what Ibn $S\bar{n}\bar{a}$ says, this seems not to be a deduction from (94.5) at all, but a use of default assumptions about universals in general. }

a *B* is not a *C*. Also it follows from the sentence

(31) Not every C is a B.

that not everything that is not a *B* is not a *C*.

وإلّا فكلّ ما ليس $\overline{-}$ ليس $\overline{-}$ ، فكلّ ما هو $\overline{-}$ فهو $\overline{-}$. وههنا فحوص أخرى، For otherwise everything that is not a *B* is not a *C*, so everything that is a

C is a *B*. But there are things here that we need to take another squint at,

والأولى أن نجعل مواضعها كتاب اللواحق. and the best place for us to do that is the book of appendices.

Transcription checked 25 June 10. Readings checked 26 Dec 12.