

Time

A.303/10

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| Project No: | 00525/3024 | Colour Film No: OUF.157 |
| Duration: | 24' 30" | First Transmission: 5th September, 1973 |
| Production by: | Richard Callanan | |

Linked to correspondence text for units 26 and 27,
"Time". Open University Press 1973. Price

Susan Wilson chairs the discussion between Professor Bernard Williams of the University of Cambridge and D.W. Sciama, Fellow of All Souls College, Oxford.

Bernard Williams feels that too great a distinction has been made in recent philosophy between the concerns of the philosopher and those of the physicist. There are many ways, he says, in which each discipline supplements the other and in this discussion with the astrophysicist Dennis Sciama he explores how problems related to the nature of Time can be jointly faced.

Dennis Sciama argues that many of the seeming paradoxes concerning time, which result from ^{some} solutions to Einstein's equations of relativity, are not necessarily illogical. The abandonment of the ideas of simultaneity and irreversibility still leave the physicist with a useful concept of time. Whether this altered concept is acceptable to philosophers is the main point of the discussion.

This programme is directly related to, though not dependent on, a radio talk (A.303/14) by D.W. Sciama entitled "Surprises in Scientific Time".

Title: Time

CU A303/10

Tape No. 6HT/70915

Project No. 00525/3026

O.U. film no. 157 colour

Date Recorded.

1st TX. 5.9.1973

Form VTR

Duration 24'11"

Class nos. 115, 530.11

Summary: The relation between philosophy and physics is explored and the nature of time discussed by the philosopher Williams and the physicist Sciama. Examples from Einstein's general and special theories of relativity are used.

RwW

| Seq. | Time. | Footage. | Sequence List. | Sound Cue |
|------|-------|----------|---|--|
| 1 | 1.47 | 28 | Susan Wilson introduces the programme and its subject. She begins the discussion by posing the question of whether there is, and of what sort it is, the relation between physics and philosophy. | ..they're completely different. |
| 2 | 5.21 | 81 | Williams replies describing his understanding of the relationship between physics and philosophy. He makes the point that modern discoveries often contradict logical and common sense notions of time for instance. Sciama quotes the clock paradox in relativity theory. | Well I certainly.... ...for you to say |
| 3 | 8.12 | 122 | Williams enquires whether there are not some logical principles of the concept 'time' upon which philosophy can insist. Sciama in his reply uses examples from the theory of relativity. Williams asks Sciama what the present physical view is of the notion of time going in one direction. | I don't think..... ...in one direction? |
| 4 | 12.55 | 184 | Sciama replies using an example that time in our experience is irreversible but that it is not intrinsic or inherent in the notion of time that there be this irreversibility. The point is discussed, Williams attempting to reach a point on which or from which a definition of time might be reacted. | Well, if you mean... ...before the other. |

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PROGRAMME SEQUENCE LIST

Continuation

| Seq. | Time | Footage | Sequence List | Sound Cue |
|------|-------|---------|---|---|
| 5 | 18.46 | 255 | The discussion continues with Sciama taking up Williams' point of the concept of before and after. He uses examples from Einstein's theory of general relativity. He introduces the idea of time in a loop rather than a straight line. Williams argues that such a concept is logically impossible. | Well I think you've ...it's logically impossible |
| 6 | 23.44 | 312 | Susan Wilson confirms that Sciama accepts the law of non-contradiction but yet can accept the notion of time in a loop. He explains it by stressing concentration on a stretch of the loop during which before and after exist as workable concepts but globally over the whole circuit of the loop. Williams replies to the effect that this phenomenon (existing only in model form) should not perhaps be called time. Sciama is of the opinion that sufficient similarities between it and the ordinary conception of time exist for the same term to be used. Susan Wilson brings the discussion to a close. | Can I ask you ...you very much. |
| | 24.11 | 317 | Credits | |