Meth8 scripts for predicates of Popper substituting *a,b,c,d* with `p,q,r,s`	**Karl Popper, *Demarcation between science and metaphysics*, 1972 ed, pp 275/7.**	**Word descriptions of predicates**
`p&q ;`	1. Pos(a,b)	*a* occupies a position in region *b*
`(p&q)>r ;`	2. Put(a,b,c)	*a* can put thing *b* into position *c*
`p&q ;`	3. Utt(a,b)	*a* makes the utterance *b*
`p&q ;`	4. Ask(a,b)	*a* is asked the truth of *b*
`p&#q ;` `(%p&#q)>(p&#q) ;`	5. Opos(a) = (b)Pos(a,b) **[False]** = ((Ea)(b)Pos(a,b)>(b)Pos(a,b)) **[True]**	*a* is omnipresent
`(p&#q)>#r ;` `((%p&#q)>#r)>((p&#q)>#r) ;`	6. Oput(a) = (b)(c)Put(a,b,c) **[False]** =((Ea)(b)(c)Put(a,b,c)>(b)(c)Put(a,b,c)) **[True]**	*a* is omnipotent
`(p&q)>(p&q) ;`	7. Ask(a,b)>(Th(a,b)=Utt(a,b)); and also: Th(a,b)=(Ask(a,b)>Utt(a,b)) **[True]**	*a* thinks *b* (Bilateral reduction sentence)
`(p&%q)>(p&%q) ;`	8. Thp(a) = (Eb)Th(a,b) **[True]**	*a* is a thinking person

`(((p&%q)>(p&%q))&~(p&#q))+`
`(p&#q) ;`
`((p&%q)>(p&%q))&~(p&#q) ;`
	9. Sp(a)
	= (Thp(a)&((b)~Pos(a,b))VOpos(a)) **[True]**
	alternative = ((Thp(a)&((b)~Utt(a,b)) **[False]**
		a is a (personal) spirit

`(q&r)&((p&(q&r))>(p&(q&r))) ;` `(q&r)>((p&(q&r))>(p&(q&r))) ;`	10. Knpos(a,b,c) = (Pos(b,c)&Th(a,"Pos(b,c)") **[False]** = (Pos(b,c)>Th(a,"Pos(b,c)") **[True]**	*a* knows that *b* is in position *c* (almost true)

`(q&r)>s)&((p&((q&r)>s))`
`>(p&((q&r)>s))) ;`
`(q&r)>s)>((p&((q&r)>s))`
`>(p&((q&r)>s))) ;`
	11. Knput(a,b,c,d)
	= (Put(b,c,d)&Th(a,"Put(b,c,d)") **[False]**
	= (Put(b,c,d)>Th(a,"Put(b,c,d)") **[True]**
		a knows that *b* can put *c* into position *d*
		(almost true)

`((q&r)>(q&r))&((p&((q&r)>(q&r)))>` `(p&((q&r)>(q&r)))) ;`	12. Knth(a,b,c) **[True]** = (Th(b,c)&Th(a,"Th(b,c)"))	*a* knows that *b* thinks *c*

`((p&%q)>(p&%q))&((p@#r)>~(((p&`
`%q)>(p&%q))&((#r&((p&%q)>(p&`
`%q)))>(#r&((p&%q)>(p&%q)))))) ;`
`(((p&q)>(p&q))&(p@r))&(~((r&q)>(`
`r&q))))=~(((p&q)>(p&q))&((r&((p&q`
`)>(p&q)))>(r&((p&q)>(p&q)))));
	13. Unkn(a) typo **[False]**
	= ((Eb) (c) (Th(a,b)&([a≠c]>~Knth(c,a,b))))
	
	Without quantifiers: **[True]**
	= (Th(a,b)&(a≠c)&~Th(c,b))=~Knth(c,a,b))
		a is unfathomable: there exists a thought *b* and person *c* and *a* thinks *b* and *a* is not *c,* implying *c* does not know *a* thinks *b.*
		a thinks b and *a* is not *c* and *c* does not think *b* is equivalent to *c* does not know that *a* thinks *b.*

((p&q)>(p&q))&(q=q) ;	14. Kn(a,b) = Th(a,b)&T(b), **[True]** where T(b) means b is true	*a* knows the fact *b*
((p&#q)>(p&#q))>(q=q);	15. Verax(a) =((b)Th(a,b)>T(b)) **[True]**	*a* is truthful
(#q=#q)>(((p&q)>(p&q))&(q=q)) ;	16. Okn(a) = (b)T(b)>Kn(a,b) **[True]**	*a* is omniscient
((p&#q)&((p&#q)>#r)=(((#q=#q)>(((p&q)>(p&q))&(q=q))))&(((p&#q)>(p&#q))>(q=q))) ;	17. (Opos(a) & Oput(a)) = (Okn(a) & Verax(a)) **[True]**	*a* as omnipresent and omnipotent is equivalent to *a* as omniscient and a as truthful
((((%p&#q)>(p&#q))&(((%p&#q)>#r)>((p&#q)>#r)))>((#q=#q)>(((p&q)>(p&q))&(q=q))))&((((((p&#q)>(p&#q))>(q=q))&(((p&%q)>(p&%q))&~(p&#q))+(p&#q)))&((((((p&q)>(p&q))&(p@r))&(~((r&q)>(r&q))))=~(((p&q)>(p&q))&((r&((p&q)>(p&q)))>(r&((p&q)>(p&q))))))) ;	18. Ex(Gx) = (((Opos(a) & Oput(a)) > Okn(a)) & ((Verax(a) & Unkn(a)) & Sp(a))) **[True]**	There exists a personal spirit named God whose omnipresence and omnipotence implies omniscience, and who is truthful and unfathomable.
Remarks: Some of Popper's definitions are rewritten for logical validity in the Meth8 model checker as 5, 6, 9, 10, 11, 13. For 9 Sp (personal spirit) the alternative published was false. For 10 Knpos and 11 Knput, the & connective is an apparent misprint for imply. For 13 Unkn with noted typo, the expression is rewritten without quantifiers because the argument could not be reconstructed. This is important because one of God's outstanding characteristics we know is his ineffability. The most complicated script for Meth8 is 18 Ex(Gx) which took 113 logical steps. A recent advance is the proof that the combined omnipresence (Opos) and omnipotence (Oput) implies omniscience (Okn).	19. Once the existentialist makes the utterance of "I ought to ..." that invokes the moral imperative, namely conscience. The progressed leap then follows from: false to true; lie to truth; wrong to right; bad to good; and amoral (to include immoral) to a moral God.	
	20. The God proved is that of Orthodox Christianity because other forms of monotheism deny themselves by their own admissions. For example: the instant avatar of Baha'i eventually becomes deceased and now does not exist; revelation in Judaism ceased after the last canonical prophet Malachi; and the diety of Muhammadanism is impersonal as a set of rules with contradiction in numerics and confusion of nominatives.	

Truth tables of definitions follow as fragments for two of the four rows:

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((((%p&#q)>(p&#q))&(((%p&#q)>#r)>((p&#q)>#r)))>((#q=#q)>(((p&q)>(p&q))&(q=q))))&(((((p&#q)>(p&#q))>(q=q))&((((p&
%q)>(p&%q))&~(p&#q))+
(p&#q)))&((((p&q)>(p&q))&(p@r))&(~((r&q)>(r&q))))=~(((p&q)>(p&q))&((r&((p&q)>(p&q)))>(r&((p&q)>(p&q)))))) ; 18.
;              18. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((p&#q)&((p&#q)>#r)=(((#q=#q)>(((p&q)>(p&q))&(q=q))))&(((p&#q)>(p&#q))>(q=q))) ; 17. (Opos & Oput)=(Okn & Verax)
;              17. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
(#q=#q)>(((p&q)>(p&q))&(q=q)) ; 16.
;              16. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((p&#q)>(p&#q))>(q=q); 15.
;              15. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((p&q)>(p&q))&(q=q) ; 14.
;              14. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((((p&q)>(p&q))&(p@r))&(~((r&q)>(r&q))))=~(((p&q)>(p&q))&((r&((p&q)>(p&q)))>(r&((p&q)>(p&q))))); 13. no quantifier
;              13. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((p&%q)>(p&%q))&((p@#r)>~(((p&%q)>(p&%q))&((#r&((p&%q)>(p&%q)))>(#r&((p&%q)>(p&%q)))))) ;  13.
;              13. Quasi T:  TFTF CNCN  EUEU UEUE  EUEU EUEU  EUEU PIPI  EUEU IPIP
((q&r)>(q&r))&((p&((q&r)>(q&r)))>(p&((q&r)>(q&r)))) ; 12.
;              12. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((q&r)>s)>((p&((q&r)>s))>(p&((q&r)>s))) ;   11.
;              11. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((q&r)>s)&((p&((q&r)>s))>(p&((q&r)>s))) ;   11.
;              11. Almost T:  TTTT TTFF  EEEE EEUU  EEEE EEUU  EEEE EEUU EEEE EEUU
(q&r)>((p&(q&r))>(p&(q&r))) ; 10.
;              10. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
(q&r)&((p&(q&r))>(p&(q&r))); 10.
;              10.         : FFFF FFTT  UUUU UUEE  UUUU UUEE  UUUU UUEE  UUUU UUEE
(((p&%q)>(p&%q))&~(p&#q))+(p&#q) ; 9.
;               9. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((p&%q)>(p&%q))&~(p&#q) ; 9. alternative or addition to definiens:
;               9. Almost T: TTTC TTTC  EEEU EEEU  EEEE EEEE  EEEP EEEP  EEEI EEEI
(p&%q)>(p&%q) ; 8. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
(p&q)>(p&q) ;   7. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
((%p&#q)>#r)>((p&#q)>#r) ; 6.
;               6. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
(%p&#q)>(p&#q) ; 5.
;               5. True all: TTTT TTTT  EEEE EEEE  EEEE EEEE  EEEE EEEE  EEEE EEEE
p&q  ;          4. (p&q ) =  FFFT FFFT  UUUE UUUE  UUUE UUUE  UUUE UUUE  UUUE UUUE
p&q ;           3. (p&q)  =  FFFT FFFT  UUUE UUUE  UUUE UUUE  UUUE UUUE  UUUE UUUE
(p&q)>r ;       2. Almost T: TTTF TTTT  EEEU EEEE  EEEU EEEE  EEEU EEEE  EEEU EEEE
p&q ;           1. (p&q)  =  FFFT FFFT  UUUE UUUE  UUUE UUUE  UUUE UUUE  UUUE UUUE
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