

logy upon biology has raised the question of the relation of the facts of transmission in the two provinces respectively to each other. It is now seen, however, that the transmission of social material is by psychological processes, such as IMITATION (q. v.), &c., and that this differs essentially from that of biological heredity (cf. GALTON'S LAW, of ancestral inheritance, and REGRESSION).

*Literature:* WEISMANN, *German-Plasm, and Studies in Heredity*; recent expositions of EVOLUTION (q. v.). The literature of ORGANIC SELECTION, e.g., LL. MORGAN, *Habit and Instinct*; BALDWIN, *Development and Evolution* (1902); in both of which the relation of the two forms of transmission to each other is discussed. (J.M.B., E.B.P., C.L.L.M.)

**Transmission** (in neurology): see CONDUCTION under NERVE STIMULATION AND CONDUCTION.

**Transmission** (in theology and philology). Handing down by oral TRADITION (q. v.) as contrasted with written records. (J.M.B.)

**Transposition** (in logic) [Lat. *trans + ponere*, to place]: Ger. *Hinüberschaffen*; Fr. *transposition*; Ital. *trasposizione*. Transposition consists in transferring a term from the subject to the predicate, or the reverse, with no change in the character of the connection; as, *No artists who are bankers are clever, No artists are clever bankers, No bankers are clever artists, None are at once artists and bankers and clever*; or as *All but a is b, All but b is a*. Any proposition may be 'transformed' into other exactly equivalent forms: e.g. the transformation may consist in the change from one sort of connection to another (change of copula, in the extended meaning of that term), as—to take a compound proposition as an example—*It never rains but it pours = always either it pours or it does not rain*, but this is not transposition.

Certain copulas permit transposition simply, with no variation in the quality of the term transposed (as in the instances just given); but with the non-symmetrical copulas (see PROPOSITION) there must be a change from positive to negative or the reverse (and, if the proposition is complex, from the conjunctive to the alternative combination and the reverse), if the change can be made at all: He who is an astronomer and un-devout is mad = Any astronomer is mad or devout = All are mad or devout or not astronomers. When both the whole subject and the whole predicate is transposed the change is commonly called contraposition if the copula is non-

symmetrical (*All a is b = All non-b is non-a; None but a is b = None but non-b is non-a*), but simple conversion if it is symmetrical (*No a is b = No b is a, Some a is b = Some b is a*). The usual discussion in the logics of the doctrine of the equivalence of propositions is greatly simplified by taking this more general view of the subject (see PROPOSITION).

(C.L.F., C.S.P.)  
**Trans-subjective** (the): Ger. (*das*) *Transsubjektive* (Volkelt); Fr. (*le*) *transsubjectif*; Ital. (*il*) *transsubbiettivo*. The objective considered as having reality independent of its apprehension by a subject.

It is used, however, in connection with knowledge, which is said to have a trans-subjective reference, or to demand a 'realm of the trans-subjective.' As used by Volkelt (*Erfahrung u. Denken*, 42), all is trans-subjective 'was aussserhalb meines eigenen Bewusstseins Vorgänge geben mag' (quoted by Eisler). (J.M.B.)

**Transubstantiation** [Lat. *transubstantiatio*, from *transubstantiare*, to change into another]: Ger. *Transubstantiation*; Fr. *transubstantiation*; Ital. *transustanziazione*. In Catholic theology, the change of the elements in the Sacrament of the Eucharist, through the act of consecration, into the real body and blood of Christ.

It is to be distinguished from consubstantiation, the doctrine of the coexistence of Christ's body and blood with the elements which remain unchanged; from the doctrine of impanation or subpanation, that the body and blood are in or under the elements; also from all theories of the spiritual presence merely, i. e. as not involving the actual conversion of the elements. The doctrine, first broached by some of the Greek Fathers, was a question of debate during the middle ages, although held by the principal schoolmen. It was formally confirmed by the Lateran Council, 1225, the Council of Trent, 1551, and has since that time been the authoritative belief of the Roman Catholic Church.

*Literature:* WISEMAN, *Lects. on the Holy Eucharist*. (A.T.O.)

**Traumatism** [Gr. *τραύμα*, a wound]: Ger. *Traumatismus*; Fr. *traumatisme*; Ital. *traumatismo*. A diseased condition produced by a wound, or by external violence. (C.F.H.)

**Traumatrope**: see ILLUSIONS OF MOTION AND MOVEMENT (1).

**Treason**: see HIGH TREASON.

**Tree of Porphyry**: Ger. *Baum des Por-*

P 00955