**Annotated sample texts for German, Dutch and French translations**

**Google Translate manual checks – Sample of German articles**

Samples of texts in original languages with their corresponding translations. These samples of approximately 500 words each have been randomly chosen across time-periods and journals. Three types of anomalies have been identified, with possible impact on computational textual analyses: (i) anomalies that are present both in the original text and in the translation (in bold); (ii) anomalies that are introduced by the translation and that were not present in the original text (in bold italics), (iii) anomalies that were present in the original text and that have been corrected through machine-translation (underlined).

**[Encoder 2]**

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| **Article and original text** | **Topics and English translation** |
| **Driesch, Hans. “Entelechie und Seele.” Synthese 4, no. 6 (1939): 266-279.** | **Top 3 topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (45%)  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (16%)  H-History (0) work; time; man; history; new; year; make; life; century; write (6%) |
| **Original text** | **English translation** |
| Die Formbildungsentelechie. Die Analyse gewisser durch Experimente ***festgestellter*** Tatsachen im Ge biet der Biologie hat mich von der Richtigkeit der meist als ?Vitalismus" bezeichneten Lehre ?berzeugt. Jene Tatsachen waren in erster Linie solche auf dem Felde der Formge staltung (Morphogenesis), und zwar sowohl der Embryologie wie der Regeneration. Die Analyse schuf zun?chts den Begriff des harmonisch aequipotentiellen Systems, als kurzen Ausdruck f?r den Sachverhalt, dass embryonalen Anlagen beliebig viele Zellen an beliebigen Orten entnom men oder auch ihre Zellen beliebig verlagert werden k?nnen, ohne die Erzielung des normalen Formergebnisses, in verkleinertem Masstab, zu ***beeintr?chtigen***, und dass Entsprechendes auch f?r die Formwiederher stellung vieler niederer Organismen nach Verst?mmelungen (Regenera tion) gilt. Wo solche Systeme vorliegen, kann offenbar jedes Element gleichermassen jede **f?r** die Gesamtgestaltung der Form m?gliche Einzel heit leisten (Begriff der1 ?prospektiven Potenz" oder des m?glichen ***Schicksals***); was es in einem gegebenen Falle leistet (Begriff der ?pros pektiven Bedeutung" oder des wirklichen Schicksals), steht jeweils in Harmonie mit der Arbeit seiner Genossen. Daher der Name. Hinsicht lich aller Einzelheiten muss auf die ***Darlegungen*** meiner **?Gifford Lec tures**" \*) verwiesen sein. Die Zergliederung des Begriffs des harmonisch-aequipotentiellen Systems und seiner Abarten f?hrte sodann zu der Einsicht, dass dem durch ihn ausgedr?ckten Sachverhalt keine ?Maschine" im weitesten Sinne des Wor l) "The science and Philosophy of the Organism", 1. Auflage London 1908, 2. Auf lage 1929. Deutsch unter dem Titel **?**Philosophie des Organischen", 1 Aufl. 1909, 4 Aufl. 1928. Im Folgenden wird dieses Werk stets nach der 2. englischen (bezeichnet mit **?E**") und der 4. deutschen Auflage (**?D**") ***zitiert werden***. **tes** zu Grunde liegen kann, d.h. keine materielle, auf ein Endziel einge stellte, gegebene Struktur, in deren Rahmen, durch Wirkung der mate riellen Teile auf einander und durch die Resultanten solcher Wirkungen, das Endziel erreicht w?rde. Der Begriff der ?Maschine'', als der pr?for mierten Struktur, f?llt hierdurch, ***damit*** aber der Begriff des Mechanis mus ?berhaupt, denn nur als ?Maschinentheorie'' w?re dieser denkbar. Eine Maschine bleibt ihrer Leistungsf?higkeit nach nicht, was sie war, wenn man ihr beliebige Teile an beliebigen Orten nimmt oder ihre Teile beliebig verlagert; solches ist aber bei den harmonisch-aequipoten tiellen Systemen der Fall. Es ist f?r die Betrachtung gleichg?ltig, welche Form einer Materien theorie und Mechanik in Frage steht, ob die sogenannte ?klassische" oder eine aus dem Gebiete modernster Physik. Nur darauf kommt es an, dass harmonisch-aequipotentielle Formgestaltung nicht **summen-und resultantenhaft**, d.h. nicht durch Wechselwirkung zwischen materiellen Elementen erkl?rbar ist. Selbstverst?ndlich leugnen wir nicht, dass jeder Organismus, sei er Ei oder Erwachsener, aus Materie besteht, dass er ein ?materielles System" im Sinne der Physik ist. Was wir leugnen, ist aber, dass die Ver?nderungs gesetze im Rahmen des materiellen Systems ?Organismus" letzthin die selben seien wie im Rahmen der unbelebten Welt. Eben diese Einsicht nennen wir die Lehre von der Autonomie des Or ganischen oder kurz ?Vitalismus". Der Begriff des Vitalismus ist nicht identisch mit dem der ?Teleologie" oder ?Zielstrebigkeit". Er ist enger. Denn der blosse Begriff der Teleologie w?re auch mit einer Maschinentheorie vereinbar. Der Vitalismus prokla miert eine dynamische Teleologie im Unterschied von einer ?statischen"; er l?sst die organische Formbildung **hologen**, nicht ?**merogen**" sein. | The Formation Entelechie. The analysis of certain facts ***established*** by experiments in the field of biology has convinced me of the correctness of what is usually called "vitalism". Those facts were primarily those in the field of design (morphogenesis), both embryology Like regeneration, the analysis first created the concept of the harmonically equipotential system, as a short expression for the fact that embryonic systems can remove any number of cells from any location or their cells can be moved as desired without that Achievement of the normal shape ***result***, on a reduced scale, and that the same also applies to the restoration of the shape of many lower organisms after mutilation (regeneration). Where such systems are present, each element can apparently equally every **f?** for the overall design of the form, make possible detail (concept of "prospective potency" or the possible ***S chicksals***); what it does in a given case (concept of "prospective meaning" or real fate) is always in harmony with the work of its comrades. Hence the name. Regarding all details, the ***statements*** of my**? Gifford Lec tures** "\* ) be referenced. The breakdown of the concept of the harmonic-equipotential system and its varieties then led to the insight that the state of affairs expressed by it does not constitute a "machine" in the broadest sense of the word "Science and Philosophy of the Organism", 1 . Edition London 1908, 2nd edition 1929. German under the title**?** Philosophy of Organic ", 1 edition 1909, 4 edition 1928. In the following this work is always after the 2nd English (designated with**? E**") and the 4th German edition (**? D** "). **It** can be based on this, ie no material structure, set to an end goal, within the framework of which the end goal would be achieved by the effect of the material parts on each other and by the results of such effects. The concept of the "machine", as the preformed structure, is thereby dropped, ***but*** the concept of the mechanism has to be conceived at all, because this would only be conceivable as a "machine theory". A machine does not remain what it was in terms of performance if you take any parts at any location or relocate your parts; however, this is the case with harmonious and equipotential systems. It is irrelevant for the consideration which form of a matter theory and mechanics is in question, whether the so-called "classical" or one from the field of most modern physics. The only thing that matters is that harmonic-equipotential form design does not **sum- and resultant**, that is, it cannot be explained by the interaction between material elements. Of course, we do not deny that every organism, be it an egg or an adult, consists of matter, that it is a "material system" in the sense of physics. What we deny, however, is that the change laws in the context of the material system "organism" are ultimately the same as in the context of the inanimate world. This is the insight we call the doctrine of the autonomy of the organic, or "vitalism" for short. . The concept of vitalism is not identical to that of "teleology" or "determination". It is narrower. Because the mere concept of teleology would also be compatible with a machine theory. Vitalism proclaims a dynamic teleology as distinct from a "static"; it lets the organic form formation be **holographic**, not "**merogenous**". |
| **Walter, Emil J. “Anwendung der Logistik und analytischen Sozial-psychologie in der Grundlagenforschung der Sozialwissenschaften (Eine wissenschaftlich-methodische Untersuchung einiger Grundbegriffe der Soziologie und Sozialpsychologie).” Synthese 7, no. 1/2 (1948): 115-126.** | **Top 3 topics**  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (31%)  H-History (0) work; time; man; history; new; year; make; life; century; write (22%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (18%) |
| **Original text** | **English translation** |
| Eine wissenschaftlich-methodische Untersuchung einiger Grund begriffe der Soziologie und Sozialpsychologie) von Emil J. Walter (Z?rich) Das Verh?ltnis von Individuum und Gesellschaft ist wohl das grundlegendste Problem der Soziologie und Sozialpsychologie. Ohne seine begriffliche Kl?rung ist kaum an einen systematischen Ausbau der Soziologie als der Wissenschaft von der Gesellschaft und dem gesellschaftlichen **resp.** ***sozialen Leben zu denken***\*). Als Folge des allgemein **?blichen** Denkens in Klassenbegriffen und der damit ver kn?pften Einf?hrung von ??berfl?ssigen Wesenheiten" im Sinne Hahns des Wiener Kreises in die Diskussion um die Grundlagenprobleme der soziologischen Wissenschaften und der Soziologie bewegte sich die Soziologie im 19. und auch noch zu Beginn des 20. Jahrhunderts in einem verh?ngnisvollen ?cercle vicieux", was immer wieder zur Aus einandersetzung mit ***Scheinproblemen*** als Folge der ?***inhaltlichen Rede weise***", um einen Ausdruck Rudolf Carnaps zu ?bernehmen, f?hrte. Sowohl Comte als auch Spencer verglichen die Gesellschaft mit Or ganismen. Nach Comte ist die Familie die ?soziale Zelle", sind die sozialen Kr?fte gleich ?sozialen Geweben" und k?nnen Staat und Nation als ?soziale Organe" betrachtet werden. Spencer baute die Analogie, die sich schon bei Plato, Aristoteles und vielen Kirchenv?tern findet, systematisch aus: die Gesellschaft ist gekennzeichnet wie der biologische Organismus durch sichtbares Wachstum w?hrend einer bestimmten Zeit seiner Existenz, beide vergr?ssern sich dabei und ihre innere Struktur und Funktion wird komplizierter, jeder lebendige Organismus kann als eine ?Gesellschaft" betrachtet werden, bei beiden, der Gesell schaft und dem lebendigen Organismus, leben die Einheiten ***nach*** der \*) Emil J. Walter: ?Psych. Grundlagen der geschichtlichen und sozialen Entwicklung" Z?rich 1947. Emil J. Walter Zerst?rung des ganzen Aggregates wenigstens eine bestimmte Zeit weiter. Allerdings seien individueller und sozialer Organismus insofern voneinander unterschieden, als beim biologischen Organismus die ihn zusammensetzenden Einheiten in engstem Kontakt lebten, w?hrend bei einem sozialen Organismus dessen Einheiten mehr oder weniger zerstreut seien. Spencer lehnt in diesem Zusammenhange ausdr?cklich einen besonderen ?sozialen Geist" oder eine besondere ?soziale Seele" ausserhalb den einzelnen Individuen ab. Auch Durkheim behandelt soziale Tatsachen als gegebene, ***abgeschlossene*** Dinge, ohne indessen, wie dies Espinas und Jung getan haben, von einem ?berindividuellen, kollektiven Bewusstsein zu sprechen. Wenn Durkheim die Gesellschaft als eine Wirklichkeit eigener Art (une ***realit?*** sui generis) ?ber und unterschieden von den Individuen bezeichnet, ist eine gewisse Zwie sp?ltigkeit im Denken Durkheims unverkennbar: die Gesellschaft ist f?r Durkheim ein nat?rliches und ein transcendentales Ph?nomen zu gleich, ein nat?rliches Ph?nomen als eine bestimmte Anzahl von Individuen in r?umlicher N?he, ein transcendentales Ph?nomen als die Quelle aller transcendentalen Elemente, vor allem auch des Gottesbegriffes, in der menschlichen Erfahrung. Florian Znaniecki2) ***stellt*** die beiden gegens?tzlichen Auffassungen des Verh?ltnisses von Individuum und Gesellschaft einander als ?sozialer Realismus" und ?sozialer Nominalismus" ***gegen?ber***. W?hrend der ?soziale Realismus" behaupte, die Gesellschaft besitze eine ?objek tive Existenz", die nicht auf eine Kombination von Individuen zur?ck gef?hrt werden k?nne und dass das bewusste Individuum nicht bestehen k?nne ausserhalb der konkreten Existenz der Gesellschaft, stehen die Lehre des ?sozialen Nominalimus" resp. ?sozialen Atomis mus" auf dem Standpunkt, dass einzig das Individuum objective Realit?t besitze und dass die Gesellschaft lediglich eine begriffliche subjektive Konstruktion sei. In der Praxis der wissenschaftlichen Arbeit stelle sich dieser Gegensatz aber als wesenslich geringer heraus, als es im Rahmen der philosophischen Diskussion zun?chst den An schein habe. | A scientific-methodical study of some basic concepts of sociology and social psychology) by Emil J. Walter (Zurich). The relationship between individual and society is probably the most fundamental problem of sociology and social psychology. Without its conceptual clarification, it is hardly possible to systematically ***expand*** sociology as the science of society and society. ***think social life*** \*). As a result of the common thinking in terms of classes and the associated introduction of superfluous entities "in Hahn's sense of the Vienna Circle into the discussion of the fundamental problems of sociological science and sociology, sociology moved in 19th and also at the beginning of the 20th century in a disastrous "cercle vicieux", which repeatedly led to the confrontation with ***apparent problems*** as a result of the "***substantive speech***", in order to adopt an expression from Rudolf Carnap Both Comte and Spencer compared society with organisms. According to Comte, the family is the "social cell", the social forces are "social tissues" and the state and nation can be regarded as "social organs". Spencer systematically expanded the analogy that can already be found in Plato, Aristotle and many church fathers: society is characterized, like the biological organism, by visible growth during a certain period of its existence, both increasing in size and theirs internal structure and function becomes more complicated, every living organism can be regarded as a "society", with both, society and the living organism, the units live ***according to*** the \*) Emil J. Walter: "Psych. Foundations of historical and social Development "Zurich 1947. Emil J. Walter destruction of the whole unit at least for a certain time. However, the individual and the social organism are different from each other in that the units that make up the biological organism live in close contact with each other, while the units in a social organism are more or less dispersed. In this context, Spencer expressly rejects a special "social spirit" or a special "social soul" outside of the individual. Durkheim also treats social facts as given, ***self-contained*** things, without, however, as Espinas and Jung have done, speaking of a supra-individual, collective consciousness. When Durkheim describes society as a reality of its own kind (une ***realit?*** Sui generis) over and differentiated from the individuals, a certain ambiguity in Durkheim's thinking is unmistakable: for Durkheim, society is a natural and one transcendental phenomenon at the same time, a natural phenomenon as a certain number of individuals in spatial proximity, a transcendental phenomenon as the source of all transcendental elements, especially the concept of God, in human experience . Florian Znaniecki2) ***juxtaposes*** the two opposing views of the relationship between the individual and society as "social realism" and "social nominalism". While "social realism" claims that society has an "objective existence" that cannot be attributed to a combination of individuals and that the conscious individual cannot exist outside of the concrete Existence of society, the teaching of the "social nominalism" or "social atomism" is based on the viewpoint that only the individual has objective reality and that society is merely a conceptual subjective construction. In practice, however, this contrast turns out to be essentially less than it initially appears in the context of the philosophical discussion. |
| **Frey, G. “Symbolische und ikonische Modelle.” Synthese 12, no. 2/3 (1960): 213-221.** | **Top 3 topics**  F-Explanation (16) model; explanation; explain; account; explanatory; phenomenon; use; case; system; provide (28%)  Physics G-Particles (3) theory; energy; law; particle; electron; atom; physical; physic; chemical; system (16%)  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (15%) |
| **Original text** | **English translation** |
| Wir verwenden Modelle in verschiedenem Sinne und zu ganz ver schiedenen Zwecken, wie das L. Apostel darlegte. Ein Modell ist wohl immer aufzufassen als eine Abbildung. Die Frage ist nur, was ***abgebildet*** wird, und wie die ***Abbildungsfunktion*** aussieht. 'Modell' aus dem Lateinischen modus, modulus abgeleitet, hat seine urspr?ngliche Bedeutung in der Baukunst. Von Vitruv ?bernommen ist es schon im Mittelalter ein Ma? (Halber S?ulendurchmesser), in dem alle **Verh?ltnisse** eines Bauwerkes ausgedr?ckt werden. Und so entstehen in den europ?ischen Sprachen die Worte moule (afz.), ***mould*** (aengl.), model (ahd.), die alle schon die Bedeutung von Form haben, ***etwas*** nach dem 'rechten Ma?' ***Gemachten***. Im 16. Jahrhundert wird das italienische modello = Muster, Vorbild (Proplasma) neu ?bernommen als **mod?le** (fz.), model (egl.), Modell (d.). Hier hat es den in der bildenden Kunst gebr?uchlichen Sinn einer Musterform, nach der etwas gemacht wird. Insofern dieses meistens verkleinert ist, b?rgert sich die Vorstellung ein, Modell 'heisset ?berhaupt eine jedwede c?rperliche Abbildung eines Dinges ins kleine, oder ein nach **verj?ngtem Ma?-Stab verfertigte** und **einem gr??eren C?rper ?hnlich** gemachten kleineren **C?rper** ... ' (Zedlers Universallexicon, 1739). Die in Kunst und Kunsthandwerk verwendeten Modelle sind im allge meinen aus einem anderen Material verfertigt als das Original. So sind bereits im 16. Jahrhundert bei Goldschmieden italienische modelli **ge br?uchlich**, die aus Gips oder Blei hergestellt waren. Bereits in dieser urspr?nglichen Verwendung des Modellbegriffes zeigt sich also, dass es sich um eine partielle Abbildungsfunktion handelt, die nur die ?u?eren Formen geometrisch ?hnlich abbildet. Der Modell***begriff*** bezieht sich als ein ma?stabsgerechtes, ?hnliches, im allgemeinen verkleinertes ***Abbild*** ohne Zweifel auf eine bestimmte vor gegebene Objektgesamtheit, ein 'materielles System'. Wenn wir auch im weiteren die Beschr?nkung auf eine ma?stabsgerechte, geometrisch ?hnliche Abbildung aufgeben, so bleibt doch die Abbildung eines be stimmten, vorgegebenen Objektbereiches. Die Anwendung des Modellbegriffes in der Naturwissenschaft des 19. Jahrhunderts gibt diesem eine neue Bedeutung. ***Bereits*** im Altertum gibt es in der ***Gegen?berstellung*** von mathematischer und physischer Astronomie die Auffassung, da? die mathematischen Hypothesen nur zur Berechnung der Himmelsvorg?nge da sind, aber nichts ?ber deren physische Beschaffenheit aussagen. Auch die ptolem?ischen Vorstellungen des Almagest stellen in diesem Sinne nur ein Modell dar. Die nachkanti sche Philosophie und Naturwissenschaft kann sich der Konsequenz immer weniger entziehen, ***da?*** die Hypothesen, die theoretischen Ent w?rfe der Naturwissenschaften nicht eine an-sich-seiende Wirklichkeit wiedergeben. Sie sind nur Modelle. Die Auffassungen der einzelnen Vertreter unterscheiden sich nur darin, ob angenommen wird, da**?** es eine solche an-sich-seiende Wirklichkeit ?berhaupt gibt und wenn dies der Fall ist, ob sie nicht vielleicht unerkennbar sei. In diesem Sinne spricht etwa M. Planck von dem Modell, welches wir das 'physikalische Weltbild' nennen. Dieses ist f?r ihn eine 'modell **m??ige** Idealisierung'. Wesentlich ist f?r ihn dabei, da? alle Zahlwerte von Ma?gr??en als unmittelbare Mes sungen mit einer Unbestimmtheit behaftet sind, im Modell dagegen handelt es sich um ideale **Gr??en**, die ganz bestimmte Zahlwerte haben. Das Modell ist also etwas, mit dem wir anstelle einer nicht fa?baren Wirklichkeit operieren. Insofern das Modell auch in diesem modernen Sinn noch ***Abbildungsfunktion*** hat, bezieht es sich auf die Beobachtungen und Messungen. | We use models in different senses and for very different purposes, as the L. Apostle explained. A model is always to be understood as an illustration. The only question is what is ***mapped*** and what the ***mapping function*** looks like. 'Model' derived from the Latin modus, modulus, has its original meaning in architecture. Taken from Vitruvius, it was a measure already in the Middle Ages. (Half column diameter), in which all **conditions** of a building are expressed. And so the words moule (afz.), ***Mold*** (aengl.), Model (ahd.) Are created in the European languages, all of which already have the meaning of form, ***somewhat*** according to the 'right measure?' ***Made***. In the 16th century, the Italian modello = pattern, model (Proplasma) was taken over as **mod? Le** (fz.), Model (egl.), Modell (d.). Here it has the common sense in visual arts of a pattern shape according to which something is made. Insofar as this is mostly downsized, the notion that model 'means any physical representation of a thing in small terms, or one that is **made to a tighter scale** and **a larger body, is anchored Similar** made smaller **bodies** ... '(Zedlers Universallexicon, 1739). The models used in arts and crafts are generally made of a different material than the original. As early as the 16th century, goldsmiths used Italian modelli made of plaster or lead. Already in this original use of the concept of model, it can be seen that it is a partial ***mapping*** function that only geometrically depicts the external shapes. The model ***term***, as a scale-like, similar, generally scaled-down ***image***, undoubtedly refers to a certain, pre-given set of objects, a 'material system'. If we continue to give up the limitation to a true-to-scale, geometrically similar image, the image of a certain, predetermined object area remains. The application of the concept of model in the science of the 19th century gives it a new meaning. ***Even*** in antiquity, the ***comparison*** of mathematical and physical astronomy has held the view that the mathematical hypotheses are only for the calculation of the celestial processes, but do not say anything about their physical nature. The Ptolemaic ideas of Almagest also represent only one model in this sense. Post-Kantian philosophy and natural science can escape the consequence less and less ***because*** the hypotheses, the theoretical designs of the natural sciences do not reflect a reality in itself. They are just models. The views of the individual representatives differ only in whether it is assumed that**?** there is such a reality in itself, and if it is, whether it is perhaps not recognizable. In this sense, M. Planck speaks of the model that we call the 'physical world view'. For him, this is a 'model idealization'. It is essential for him that all numerical values of dimensions as immediate measurements are subject to an uncertainty, whereas the model is ideal ***quantities*** that have very specific numerical values. So the model is something we operate with instead of an inconceivable reality. Insofar as the model still has a ***mapping function*** in this modern sense, it refers to the observations and measurements. |
| **Reichenbach, Hans. “Kausalität und Wahrscheinlichkeit.” Erkenntnis 1, no. (1930): 158-188.** | **Top 3 topics**  C-Probability (9) probability; measure; value; give; chance; case; function; distribution; degree; frequency (22%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (18%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (15%) |
| **Original text** | **English translation** |
| Hans Beichenbach Berlin Kausalit?t und Wahrscheinlichkeit i. Die gegenw?rtige erkenntnistheoretische Situation der Physik, welche in der Quantenmechanik zu Zweifeln an der unumschr?nkten G?ltigkeit des Kausalprinzips gef?hrt hat, ist der Anla? ***geworden***, **daman** sich auch in weiteren Kreisen f?r das Kausalproblem st?rker als je interessiert, **daman** von einer Krise ***der*** Kausalit?t gesprochen hat. Wenn man in der Tat heute einen solchen besonderen **Anla?** hat, wenn man es zugleich als eine erfreuliche Auswirkung der gegenw?rtigen Physik bezeichnen darf, **da?** ihre Grundlagen**?** probleme ?ber den Kreis der Fachgenossen hinaus **?ffentliches** **Inter? esse** erregen und neue Impulse in eine Wissenschaft allgemeineren Charakters, in die Erkenntnistheorie, hinaustragen, so darf man doch nicht vergessen, da? die erkenntnistheoretische Problemlage der Quantenmechanik keineswegs eine isolierte Situation darstellt, ***da?*** sie vielmehr durchaus eingebettet ist in eine historische Entwicklung, die schon mehr als ioo Jahre zur?ckreicht und deren konsequente Weiterf?hrung und vielleicht Vollendung wir gegenw?rtig erleben. Denn der Einzug des Wahrscheinlichkeitsbegriffs in die Physik liegt schon um solche Zeitr?ume zur?ck. Wenn dieser Begriff auch anfangs nur in sozusagen unscheinbarer Gestalt in der Physik auftrat, so hat er doch mehr und mehr an Bedeutung gewonnen und damit **schlie?? lich** eine Stellung erreicht, die dem Kausalbegriff an Bedeutung nicht mehr nachsteht. Es scheint uns vielmehr, daes allein die ***Verkennung*** dieses historischen Zusammenhanges ist, welche die gegenw?rtige Situation als eine Krise empfinden l??t, w?hrend sie in Wahrheit nur die konsequente Entwicklung einer **begriff? lichen** Notwendigkeit ***darstellt***, deren Tragweite man **ungl?ck? licherweise** noch nicht durchschaut hat. Es ist das Unheil des Wahrscheinlichkeitsbegriffs, da? ihm seit seiner wissenschaftlichen Geburt ein Makel anhaftet, der Makel des Unvollkommenen und Spielerischen zugleich. Des **Un?vollkommenen**: denn man hat die Wahrscheinlichkeitsgesetze immer nur als etwas Behelfsm??iges ansehen wollen, das neben dem gro?en Bruder, der Kausalit?t, nur eine Ausflucht menschlicher Unwissenheit ***darstellt*** und sich mit ihm an Sicherheit und **erkennt? nistheoretischer** Tiefe nicht messen kann. Und des Spielerischen: die Schuld daran trug vor allem das erste mathematische Aufbl?hen des Wahrscheinlichkeitsbegriffs, das an die Theorie der Gl?cks? spiele gebunden war und den Wahrscheinlichkeitsbegriff als eine geistvolle mathematische Aushilfe f?r Probleme erscheinen lie?, die der Physik inhaltlich zu uninteressant waren, um eine tiefere **phy?** **sikalische** ***Durchdenkung*** zu verdienen. Heute ***besitzt*** ja die **An?** wendung des Wahrscheinlichkeitsbegriffs in der Theorie der Gl?cks? spiele nur noch dieBedeutung einer durchsichtigen Veranschaulichung des mathematischen Algorithmus der Wahrscheinlichkeitsrechnung, ohne **da**? ***doch*** der Begriff sich von dem ihm seit damals anhaftenden Odium des Spielerischen schon ganz befreit h?tte. Und doch **mu?** die nachfolgende Entwicklung angesehen werden als ein Eindringen des Wahrscheinlichkeitsbegriffs in immer wichtigere und tiefere Sph?ren der Physik, der Naturerkenntnis **?berhaupt**. Schon der Ausbau der Fehlertheorie zeigte, da? die anl??lich der Gl?cksspiele getriebenen mathematischen Studien eine fruchtbare Anwendung auf ernste natur? wissenschaftliche Probleme erm?glichten; hier erschien der ***Wahr? scheinlichkeitsbegriff*** zum erstenmal in der Physik selbst, wenn auch **zun?chst** nur als eine Korrektur der Me?genauigkeit von an sich kausalen Gesetzen. Mit der statistischen W?rmetheorie drang der Wahrscheinlichkeitsbegriff endlich in die Tiefen physikalischer Gesetzm??igkeit ein; man fand sich vor die Tatsache gestellt, da? neben der kausalen oder dynamischen Gesetzm??igkeit eine **wahr?** scheinlichkeitstheoretische oder statistische Gesetzm??igkeit1) auf? trat, die dann vor allem in der Boltzmannsehen ***Aufkl?rung*** des Entropiegesetzes eine ganz ?berraschende Fruchtbarkeit f?r die **Ver st?ndlichmachung** physikalischer **Tats?chlichkeiten** gewann. Von da ab datiert eine Einwanderung des Wahrscheinlichkeitsbegriffs | Hans Beichenbach Berlin causality and probability i. The current epistemological situation of physics, which has led to doubts in quantum mechanics about the unrestricted validity of the causal principle, is the reason ***has become*** more interested in the causal problem than ever in other circles, and has spoken of a crisis ***in*** causality. If you have such a special **occasion** today***?*** if, at the same time, one can call it a pleasing impact of current physics, their basics**?** problems beyond the circle of peers excite ***food*** and carry new impulses into a science of a more general character, into epistemology, so one should not forget that? the epistemological problem of quantum mechanics is by no means an isolated situation, ***since?*** it is rather embedded in a historical development that goes back more than 100 years and we are currently experiencing the consequent continuation and perhaps its completion. Because the introduction of the concept of probability into physics dates back to such time periods. Even if this term only appeared in the physics in an inconspicuous form at first, it has gained more and more meaning and thus ***closes.*** achieved a position that is no longer inferior to the concept of causality. Rather, it seems to us that it is only the ***misjudgment*** of this historical context that makes the current situation feel like a crisis, while in reality it only ***understood*** the consistent development of **a? represents** the necessity, the scope of which is **unfortunate?** has not yet seen through. It is the calamity of the concept of probability that? he has had a flaw since his scientific birth, the flaw of the imperfect and playful at the same time. The **un? perfect**: because one has always wanted to view the laws of probability as something makeshift, which, along with the big brother, causality, ***is*** only an evasion of human ignorance and ***recognizes*** security ***and recognition with it***? depth of ***nest*** theory cannot be measured. And of the playful: the blame for it was primarily the first mathematical blossoming of the concept of probability, which is based on the theory of luck? games and was bound to make the concept of probability appear to be an ingenious mathematical aid for problems that physics were too uninteresting in terms of content to take a deeper **phy?** deserve to be ***thoughtful***. Today has the **An?** application of the concept of probability in the theory of luck? ***play*** only the meaning of a transparent illustration of the mathematical algorithm of the probability calculation, without **there**? ***but*** the term would have freed itself of the playful odium that had clung to it since then. And yet? the subsequent development ***can*** be seen as an intrusion of the concept of probability into ever more important and deeper spheres of physics, of natural knowledge **at all**. The expansion of error theory showed that? the mathematical studies driven by gambling a fruitful application to serious nature? enable scientific problems; here the ***truth*** appeared? Concept of probability for the first time in physics itself, even if **only** as a correction of the measurement accuracy of laws that are causal per se. With statistical heat theory, the concept of probability finally penetrated into the depths of physical law; one was faced with the fact that? in addition to the causal or dynamic regularity, a **true?** probability theory or statistical regularity1)? stepped, which then, especially in the Boltzmann ***Enlightenment*** of the Entropy Act, gained a very surprising fertility for the **understanding** of physical **facts**. From then on immigration of the concept of probability dates back to this point. |
| **Hertz, Paul. “Regelmäßigkeit, Kausalität und Zeitrichtung.” Erkenntnis 6, no. (1936): 412-421.** | **Top 3 topics**  F-Causation (19) causal; cause; event; effect; causation; condition; case; variable; time; occur (29%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (19%)  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (8%) |
| **Original text** | **English translation** |
| Zweck dieier **Ausf?hrungen** **ift**, darauf hinzuweifen, da? **einer? feits** der **Kaufalbegriff** **meift** nicht auf Verkn?pfungen **fo** einfacher Art angewandt wird, wie es **feine** D?finition **erwarten l??t**, **iondern** auf F?lle, in denen befondere Umft?nde vorliegen. **Diefe** geben Anla?, zu ?peziellen Formen **kaufaler** Verbundenheit, und **iie** find es, die man vorzugsweife im Sinn hat, wenn man von kaufaler Beziehung redet. Anderfeits foil bemerkt werden, dadas **Kaufal** prinzip eine wichtige Verallgemeinerung **geftattet**. Verallgemeinern k?nnen wir das **Kaufalprinzip**, indem wir als Eigenfchaft der Welt eine Regelm??igkeit in dem **Bedingungsver? h?ltnis** auch nicht-zeitlicher Beziehungen **feftftellen**. **Das dieier** **Feftftellung** entfprechende Regelm??igkeitsprinzip verlangt, da? Beziehungen ? auch nicht-zeitliche ?, die **fich fehr** oft bedingen, dies in allen **F?llen** tun. Es enth?lt den Grund f?r die M?glichkeit der Geometrie (im alten Sinne des Wortes) und w?rde fich, foweit es fich auf Geometrie bezieht, aus dem transzendentalen Idealismus Kants ergeben, wenn **diefer** es auch nicht in der eben angegebe? nen **Weife** formuliert hat. Freilich fcheint es, als ob fich jede einzelne Behauptung ?ber eine beftimmte Regelm??igkeit aus dem **Kau? falprinzip** unter Hinzuziehung empirifcher, **kaufaler** Gefetze ab \*) Die in diefem Vortrage behandelten Fragen find fo verwickelt, da? ihre gr?ndliche Behandlung in einem **Kongre?vortrage** und **erft** recht in einem kurzen Bericht unm?glich **ift**. Wenn ich ***mich hier daher*** manchmal auf **an? deutende** oder ftichwortartige Bemerkungen **befchr?nken** mu?, fo bedaure ich das um fo mehr, als ich einigen von anderer ***Seite vertretenen*** Meinungen zu widerfprechen habe; ich kann nur hoffen, daes mir gelingen wird, in einer in **Ausficht** genommenen **umfaffenderen** Darfteilung meine Gedanken ?ber die betreffenden Fragen mit gen?gender Deutlichkeit zum Ausdruck zu bringen. **leiten l??t**. Trotzdem ift aber das Regelm??igkeitsprinzip **als fol ches** vom **Kaufalprinzip** unabh?ngig 2). Anderfeits find die **kaufalen** Beziehungen, die in den **?berlegun? gen** des t?glichen Lebens eine gro?e Rolle ipielen, von **wefentlidi** weniger allgemeinen Charakter als es den allgemeinen, elementaren Naturgefetzen entfpricht. Ein Zeichen daf?r ift folgendes: die Ge ietze der Mechanik kennen keinen Unterfchied der Zeitrichtung. Trotzdem fcheint es durch rein mechaniiche Vorg?nge bedingte Abh?ngigkeiten zu geben, denen gem?? nur die Wirkung die **Ur? fache** bedingt oder mit Wahrfcheinlichkeit ***bedingt***, nicht aber die **Urfache** die Wirkung; und auch das Umgekehrte kommt vor. Indes **l??t fich** zeigen, da? **folche** Afymmetrien auf befonderen **Um? ft?n*den*** beruhen: 1. (fubjektiv) darauf, **dain** befonderer Weife von der Freiheit Gebrauch gemacht wird, nach **Gutd?nken** zu definieren, welche Bereiche von M?glichkeiten (**Phafen**) als in **kaufaler** Beziehung **ftehende** Ereigniffe **in Betracht kommen folien**; 2. (objektiv) **darauf**, **da?** F?lle betrachtet werden, in denen tat f?chlich befondere Umft?nde vorliegen, **alfo** zu einer beftimmten Zeit beftimmte **Maffenanordnungen**, ***wobei*** vielleicht auch noch die Gefchwindigkeiten gegeben **find** (ontologifche Bedingungen). Im zweiten Fall werden nat?rlich die betreffenden Beziehungen nur ***unter*** **Vorausfetzung** jener befonderen Bedingungen gelten, die daher auch mit in den Vorderfatz der Implikation genommen **wer? den** k?nnen. Eine Ausnahme machen aber die Tatf?chlichkeiten, von deren **Beftehen** wir ein f?r allemal ?berzeugt find, n?mlich **folche**, die den Entropievorrat der Welt und die Gefchwindigkeits verteilung ihrer Molek?le in einem fehr weit zur?ckliegenden Zeit**? punkt** ***betreffen*** (Grundlagen der Thermodynamik und Irreverfibi lit?t und ?hnliche Tatf?chlichkeiten (Erk. Bd. 1, S. 217 ff., im fol? genden als Pr. zitiert). | The purpose of these **remarks** **ift** is to draw attention to the fact that **one? According** to the **purchase term**, it is not applied to links of a simple type, as **fine** definition **would expect**, **ionize** to cases in which special circumstances exist. **They** give rise to special forms of **commercial** connection, and **I** find it that one preferably has in mind when talking about a commercial relationship. On the other hand, it should be noted that the **Kaufal** principle **supports** an important generalization. We can generalize the **purchase principle** by, as the property of the world, a regularity in the **conditional behavior**. **relationship** also non-temporal relationships. The regularity principle corresponding **to this issue** requires that? Relationships ? even non-temporal ones, which often require **me** **to** do **so** in all cases. It contains the reason for the possibility of geometry (in the old sense of the word) and, insofar as it relates to geometry, would result from Kant's transcendental idealism, even if not in the same way specified? has formulated a **will**. Of course, it seems as if every single claim about a certain regularity comes out **of my mouth**. Falling principle with the help of empirical, **commercial** laws from \*) The questions dealt with in this lecture are so complicated that? **lecture** their thorough treatment in a **congress** and ***find it*** impossible in a short report **ift**. So if I ***go on*** here sometimes? I must **regret** **explanatory** or keyword-like remarks, so I regret this even more than I have to contradict some opinions expressed by other ***parties***; I can only hope that I will be able to express my thoughts on the relevant issues with sufficient clarity in a more **comprehensive** presentation. **direct**. Nevertheless, the principle of regularity **as a result of** the **purchase principle** is independent 2). On the other hand, there are the **commercial** relationships that **are being** **considered**. Plays a major role in everyday life, of less general character than it corresponds to the general, elementary laws of nature. A sign of this is the following: the laws of mechanics know no difference in the direction of time. Nevertheless, there appear to be dependencies due to purely mechanical processes, which according to only the effect the **primal? times** conditional or with probability, but not the **primal factor** the effect; and the reverse also occurs. Meanwhile, **let me** show **you** that? **folche** asymmetries on special **um?** ***They*** are based on: 1. (subjectively) **on the fact that** freedom is exercised in a special way, as much as possible to define which areas of possibilities (**phafen**) **are considered** as events with a **commercial** relationship; 2. (Objectively) **on there**? Cases are considered in which there are actually special circumstances, **al so** specific **armament arrangements** at a specific time, ***with*** the speed possibly also **being** given (ontological conditions). In the second case, of course, the relationships in question will only apply ***if*** the more specific conditions are met, which**are** therefore also taken into account in the foreground of the implication? can. An exception, however, are the facts, of **which** we are convinced once and for all, namely **folche**, which ***show*** the entropy reserve of the world and the speed distribution of its molecules in a very distant time**? point** (basics of thermodynamics and irreversibility and similar facts (Erk. Vol. 1, p. 217 ff., cited below as Pr.). |
| **Trapp, Rainer. “Eine Verfeinerung Des Reduktionssatzverfahrens Zur Einführung Von Dispositionsprädikaten.” Erkenntnis 9, no. 3 (1975): 355-382.** | **Top 3 topics**  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (34%)  C-Experiment (12) datum; experiment; value; use; test; result; experimental; model; hypothesis; method (18%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (16%) |
| **Original text** | **English translation** |
| Einleitung Dispositionspr?dikate sind zweifellos eine der wichtigsten Arten von deskriptiven Pr?dikaten. Dies gilt f?r die Alltagssprache ebenso wie f?r die verschiedenen einzelwissenschaftlichen Fachsprachen. Umso schwerer wiegt daher die Tatsache, da? die Bedeutungs***festlegung*** dieser Art von Pr?dikaten der Wissenschaftstheorie bislang ernste Schwierigkeiten **be? reitet**. Der urspr?ngliche Versuch, solche Pr?dikate in einer extensionalen Sprache explizit zu definieren (unter Ber?cksichtigung aller Anforder? ungen, die an totale Explizitdefinitionen zu stellen sind, insbesondere des Prinzips der Eliminierbarkeit des Definiendums durch das Definiens) scheiterte bekanntlich. Auch der Rettungsversuch von Kaila2 sah sich ernsten Einw?nden von Seiten Carnaps3, Wedbergs\* und Paps5 ***aus? gesetzt***. ?hnlich erging es weiteren Versuchen etwa von Storer6, die M?glichkeit totaler Explizitdefinitionen f?r Dispositionspr?dikate zu verteidigen. Carnap selbst gab solche Versuche schon fr?her ganz auf. Bereits in 'Testability and Meaning' schlug er vor, stattdessen sogenannte Reduktions**s?tze** zur Einf?hrung von Dispositionspr?dikaten zu **ver? wenden**. Es soll hier gezeigt werden, **daman** den Haupteinw?nden, die sich in der Folge auch gegen dieses Verfahren erhoben und die schlie?lich zu seiner Preisgabe (u.a. durch Carnap selbst) f?hrten, entkommen kann, indem man die Methode der **Reduktionss?tze7** nicht grunds?tzlich **auf? gibt**, sondern sie nur wesentlich verfeinert. Ein in revidierter Form beibe? haltenes BRS-Verfahren st?nde nat?rlich nicht im Konkurrenzverh?ltnis zu neueren Vorschl?gen, die zur Einf?hrung von DP's gemacht wurden, etwa induktionslogischer8 Art oder durch die Auffassung von DP's als theoretische Terme9. Es w?re nur - sollten sich keine weiteren Argumente finden, die zur Aufgabe auch der im folgenden von mir vorgeschlagenen logischen Verfeinerung des BRS-Verfahrens zwingen - eine weitere Methode zur Einf?hrung von DP's vorhanden, die den Vorteil hat, eine **ad?quate** Explikation der Regeln zu geben, nach denen solche Pr?dikate in der allt?glichen und wissenschaftlichen Praxis haupts?chlich verwendet werden. 2. Kurze Darstellung des carnapschen brs-verfahrens und der einw?nde dagegen Nach Carnap ist ein BRS von der Form I: /\x(Tx- ;{Rx++ Dx))10 (6T9 steht dabei f?r die Testbedingung, der ein Objekt, das auf die Disposition D hin untersucht wird, ausgesetzt wird, 'R9 f?r die Reaktion, die es zeigen mu?, damit ihm D zugesprochen wird.) Einige allseits bekannte Merkmale eines solchen BRS sind die folgen? **den**: (1) /ist keine totale Explizitdefinition von D. (2) Aus 'Ta/\Ra9 folgt auf Grund der Definition logisch 'Da9, d.h. wenn ein Objekt a einem positiv ausfallenden Test ausgesetzt wird, so hat es die Eigenschaft D. Gilt hingegen **T?a ?iRa9**, d.h. f?llt der Test negativ aus, so folgt 6-\Da9. (3) Gilt **hft**', d.h. wird der Test nicht vorgenommen, so bleibt es unbestimmt, ob das Objekt die Eigenschaft D hat. Um den so entstehenden Unbestimmtheitsspielraum zu beseitigen, k?nnte man (wie Carnap ur? spr?nglich) auf den Gedanken kommen, weitere Tests vorzuschlagen, auf die a positiv reagieren mu?, um D zugesprochen zu bekommen. Es erg?be sich so ein System S von BRS : Ix : /\x (Txx - (Rtx ;r+ Dx)) In: Ax(Tnx-\*(Rnx++Dx)) Ii...***In*** sind dabei-wie etwa ein **Pr?missensystem** - als logische **Kon? junktion** zu denken. Durch Abschw?chung folgt daraus, da? a dann **be? reits** die Eigenschaft D zugesprochen bekommen mu?, wenn mindestens einer der Tests Tt positiv ausfallt, wenn also in mindestens einem Fall gilt ^TfiARfl9. Dabei ist es gleichg?ltig, wie die ?brigen Tests ausfallen. | Introduction Disposition predicates are undoubtedly one of the most important types of descriptive predicates. This applies to everyday language as well as to the various specialist scientific languages. So the fact that? The ***definition*** of the meaning of these types of predicates in the philosophy of science has serious difficulties to **date? rode**. The original attempt to explicitly define such predicates in an extensional language (taking into account all requirements that have to be made for total explicit definitions, in particular the principle that the definiendum can be eliminated by defining) failed, as is well known. The rescue attempt by Kaila2 also looked serious objections from Carnaps3, Wedbergs \* and Paps5? ***set***. Similar attempts were made by Storer6 to defend the possibility of total explicit definitions for disposition predicates. Carnap itself abandoned such attempts in the past. Already in 'Testability and Meaning' he proposed to use so-called reduction **rates** to introduce disposition predicates ***instead? turn***. It is to be shown here **that** the main objections, which subsequently rose against this procedure and which ultimately led to its disclosure (by Carnap itself, among others), can escape by using the method of **reduction? tze7** not basically **on? there**, but only significantly refined them. A revised form? The BRS method held would of course not be in competition with newer proposals that were made for the introduction of DPs, such as induction logic8 or through the understanding of DPs as theoretical terms9. There would only be - should there be no further arguments which also give up the logical refinement of the BRS method that I proposed in the following - another method for introducing DPs, which has the advantage of having an **ad?** to give a clear explanation of the rules according to which such predicates are mainly used in everyday and scientific practice. 2. Brief description of the Carnap brs method and the objection to it. According to Carnap, a BRS of the form I: / \ x (Tx-; {Rx ++ Dx)) 10 (6T9 stands for the test condition, the one Object that is being examined for disposition D is exposed to 'R9 for the reaction it must show in order for D to be awarded to it.) Some well-known features of such a BRS are the following? **den**: (1) / is not a total explicit definition of D. (2) 'Ta / \ Ra9 logically follows from the definition' Da9, ie if an object a is subjected to a positive test, it has the property D. However, ***if*** **T? A? IRa9** applies, ie if the test is negative, 6- \ Da9 follows. (3) If **hft** 'applies, ie if the test is not carried out, it remains uncertain whether the object has the property D. In order to eliminate the room for uncertainty that arises in this way, one could (like Carnap originally) think of proposing further tests to which a must react positively in order to be awarded D. A system S of BRS would result: Ix: / \ x (Txx - (Rtx; r + Dx)) In: Ax (Tnx - \* (Rnx ++ Dx)) Ii ... about a test system - as a logical **con? junction** to think. By weakening it follows that a then **be?** Property D must already be awarded if at least one of the tests Tt is positive, i.e. if at least one case applies ^ TfiARfl9. It doesn't matter how the other tests turn out. |
| **Zoubek, G and B. Lauth. “Zur Rekonstruktion des Bohrschen Forschungsprogramms. I.” Erkenntnis 37, no. 2 (1992): 223-247.** | **Top 3 topics**  G-Particles (3) theory; energy; law; particle; electron; atom; physical; physic; chemical; system (40%)  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (16%)  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (13%) |
| **Original text** | **English translation** |
| Die Bohrsche Atomtheorie steht historisch gesehen an der Nahtstelle zwischen klassischer Physik und Quantenmechanik. Sie bildet daher aus wissenschaftstheoretischer Sicht eine h?chst interessante Fallstudie f?r Untersuchungen zur Theoriendynamik, also f?r die Untersuchung von Vorg?ngen, die bei der Entstehung neuer Theorien und der **?ber? windung** traditioneller Konzeptionen eine Rolle spielen. Der historische Ausgangspunkt f?r das Bohrsche Atommodell waren die Experimente von Rutherford mit a-Strahlen.1 Diese Experimente hatten die Vermutung nahegelegt, da? Atome aus einem positiv **gela? denen** Kern und einer **H?lle** von negativ geladenen Elektronen ***bestehen***. Eine Beschreibung dieses Atombaus im Rahmen der **klas? sischen** Physik f?hrt aber zu un?berwindlichen Schwierigkeiten, weil die um den Kern beschleunigten Elektronen nach den Gesetzen der Elektrodynamik elektromagnetische Strahlung abgeben und durch den damit verbundenen Energieverlust auf einer spiral**f?rmigen** Bahn in den Kern st?rzen **m??ten**. Das Atom w?re also nicht lebensf?hig. Ein weiterer Widerspruch zum Experiment ergibt sich daraus, da? die Elektronen w?hrend ihres Kernsturzes ein kontinuierliches Spektrum emittieren m??ten, da die Umlauffrequenzen beim Durchlaufen der Spiralbahnen stetig anwachsen. Bekanntlich besitzen aber alle Atome ein diskontinuierliches (diskretes) Linienspektrum.2 Diese Widerspr?che zwischen Theorie und Experiment k?nnen als "Anomalien" im Sinne von Kuhn interpretiert werden. Letztere sind oft Ausgangspunkt f?r wissenschaftliche Revolutionen, bei denen alte Theorien durch neue Konzeptionen (ein neues "Paradigma") ersetzt werden mit dem Ziel der Kl?rung und Beseitigung der Widerspr?che.3 I. Lakatos hat in seiner Studie "Falsifikation und die Methodologie wissenschaftlicher Forschungsprogramme" das Bohrsche Atommodell als Fallstudie f?r sein Konzept der "progressiven Forschungs? programme" im Rahmen des "gel?uterten" (sophisticated) Falsifikatio nismus verwendet.4 Im Unterschied zum "naiven" und "dogmatischen" Falsifikationismus k?nnen nach Lakatos wissenschaftliche Theorien nie durch Beobachtungen und Experimente (Poppers Basiss?tze) allein widerlegt werden. Falsifikation einer Theorie T ***setzt*** immer die **Ex? istenz** einer Alternativtheorie T' ***voraus***, die gegen?ber der alten **Theo? rie** einen "empirischen **Gehalts?berschu?**" besitzt, d.h. "7" ***sagt*** neuart? ige Tatsachen ***voraus***, Tatsachen, die im Lichte von T nicht wahrscheinlich, ja verboten waren". Empirische Tests sind daher nach Lakatos nie eine blo?e Konfrontation von Theorie und Experiment, sondern mindestens dreiseitige K?mpfe zwischen rivalisierenden Theo? rien und den **einschl?gigen** empirischen Daten.5 Eine wichtige Konsequenz aus dieser Auffassung ist, da? wir nie einzelne, isolierte Theorien zu beurteilen haben, sondern eine ganze Reihe von Theorien, die in Bezug auf ihren empirischen Gehalt ver? glichen werden sollen. Das methodologische Prinzip der kritischen Pr?? fung von Theorien durch empirische Daten ist also durch ein modi? fiziertes Kriterium der "konstruktiven Kritik"6 zu ersetzen - in ?bereinstimmung mit der Erkenntnis von Kuhn, da? wissenschaftliche Theorien, die einmal den Status eines "Paradigmas" erlangt haben, nur dann revidiert werden, wenn eine geeignete Alternativtheorie zur Verf?gung steht: "Die Entscheidung, ein Paradigma abzulehnen, ist immer gleichzeitig ***auch*** die Entscheidung, ein anderes anzunehmen, und das Urteil, das zu dieser Entscheidung f?hrt, beinhaltet den **Ver? gleich** beider Paradigmata mit der Natur und untereinander."7 Stegm?ller hat versucht, Lakatos' Konzept der wissenschaftlichen Forschungsprogramme im Rahmen des Strukturalistischen Theorien? konzepts zu interpretieren und zu pr?zisieren.8 Ein "progressives **For**? schungsprogramm" im Sinne dieser Interpretation ist eine Folge von Theorien bzw. von "starken Theoriepropositionen"(Ramsey-**S?tzen**), die durch schrittweise Kernspezialisierung auseinander hervorgehen. In neueren Arbeiten hat Stegm?ller den Begriff der Kernerweiterung durch den intuitiv und technisch einfacheren Begriff ***der*** "Kernspezialisierung" ersetzt. | Historically, Bohr's atomic theory is at the interface between classical physics and quantum mechanics. From a scientific-theoretical point of view, it therefore constitutes a highly interesting case study for investigations into theoretical dynamics, i.e. for the investigation of processes that arise when new theories and the traditional conceptions play a role. The historical starting point for Bohr's atomic model was the Rutherford experiments with a-rays.1 These experiments suggested that Atoms from a positive which consist of a nucleus and a shell of negatively charged electrons. A description of this atomic structure in the context of the **klas?** However, physical physics leads to insurmountable difficulties because the electrons accelerated around the nucleus emit electromagnetic radiation according to the laws of electrodynamics and, due to the associated loss of energy, **have** to plunge into the core on a spiral path. So the atom would not be viable. Another contradiction to the experiment arises from the fact that the electrons would have to emit a continuous spectrum during their nuclear collapse, since the orbital frequencies increase continuously as they travel through the spiral tracks. As is well known, however, all atoms have a discontinuous (discrete) line spectrum.2 These contradictions between theory and experiment can be interpreted as "anomalies" in Kuhn's sense. The latter are often the starting point for scientific revolutions in which old theories are replaced by new conceptions (a new "paradigm") with the aim of clarifying and eliminating the contradictions.3 I. Lakatos in his study "Falsification and the methodology of scientific research programs "uses Bohr's atomic model as a case study for his concept of" progressive research programs "in the context of" refined "(sophisticated) falsification.4 In contrast to" naive "and" dogmatic "falsificationism According to Lakato's scientific theories, they can never be refuted by observations and experiments (Popper's basic theorems) alone. Falsification of a theory T always ***sets*** the **ex? istenz** ***ahead*** of an alternative theory T 'compared to the old **Theo? rie** an "empirical **salary excess?**" owns, ie "7" ***says*** new? facts ***ahead***, facts that were not probable or even forbidden in the light of T. "According to Lakatos, empirical tests are therefore never a mere confrontation of theory and experiment, but at least tripartite struggles between rival theories and the **incl Valid** empirical data.5 An important consequence of this view is that we never have to assess individual, isolated theories, but a whole series of theories that are to be compared in terms of their empirical content Critical examination of theories by empirical data must therefore be replaced by a modified criterion of "constructive criticism" 6 - in accordance with Kuhn's finding that scientific theories that have attained the status of a "paradigm" have to be revised only if a suitable alternative theory is available: "The decision to reject a paradigm is always at the same time ***ch*** the decision to accept another, and the judgment that leads to this decision includes the **Ver? equal** to both paradigms with nature and with each other. "7 Stegmüller tried to interpret and specify Lakatos' concept of scientific research programs within the framework of the structuralist theory concept.8 A" progressive **for?** research program "in the sense of this interpretation is a sequence of theories or of" strong theoretical propositions "(Ramsey **propositions**), which emerge from each other through step-by-step core specialization. In more recent work, Stegmüller has the concept of core expansion through the more intuitive and technically simpler ***The*** term "core specialization" replaced. |
| **Schröder, Jürgen. “Searles Kritik am Funktionalismus - Eine Untersuchung des Chinesischzimmers.” Journal for General Philosophy of Science 22, no. 2 (1991): 321-336.** | **Top 3 topics**  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (37%)  E-Neurosciences (13) system; information; process; cognitive; level; mechanism; state; representation; structure; function (20%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (19%) |
| **Original text** | **English translation** |
| Geistes hat in den letzten Jahren eine ganze Reihe von Versuchen hervorgebracht, eine Auffassung in Frage zu stellen, die seit nun mehr als zwei Jahrzehnten das Verstandnis des Geistes in Philosophic und Psychologie gepragt hat, den Funktionalismus. Die funktionalistische Auffassung des Geistes loste die Identitatstheorie ab, nachdem diese in begriffliche und empirische Schwierigkeiten gekommen war. Die Besonderheit der funktionalistischen Sichtweise besteht darin, die Identitat, d.h. den Typ eines mentalen Zustande nicht mehr wie die Iden titatstheorie durch die Angabe von korrelierenden physikalischen Para metern zu bestimmen, sondern durch die Beziehungen, die dieser Zustand zu vorangehenden und nachfolgenden Zustanden ***einerseits*** und zu Reizen und Reaktionen andererseits hat. Fiir diese neue Sichtweise war die Be schreibung von Computern maBgeblich. Die Funktionsweise eines Com puters kann namlich hinreichend durch die Angabe der Beziehungen zwischen input, output und internen Zustanden beschrieben werden. Eine geordnete Liste dieser Beziehungen, die angibt, in welchen Zustand die Maschine iibergehen soil bei einem bestimmten input und einem bestimmten Ausgangszustand und welchen output sie generieren soil, ist ein Programm. Mit dem Funktionalismus wurde es popular, das Verhaltnis von Gehirn und Geist in genauer Analogie zum Verhaltnis von hardware und software zu sehen. Die Gegner dieser Auffassung kommen aus ganz unterschiedlichen Richtungen und verfolgen verschiedene Ziele mit ihrer Kritik. Da gibt es die Eliminativisten, deren Ziel es ist, die intentionale Psychologie, die in ihren Erklarungen von Verhalten mit **Ausdriicken** wie ,fiirchten', ,hoffen', ,glauben', ,wiinschen' etc. ***operiert***, aufzugeben und zu ersetzen durch Theorien, die ihre Vokabeln aus der Neurophysiologie beziehen (Church land, 1984 und Churchland, 1986). Aus der Sprachphilosophie kommt Putnam (Putnam, 1988) und macht **Uberlegungen** zur Bedeutung sprach licher Ausdriicke gegen solche Vertreter des Funktionalismus wie Fodor und Chomsky geltend, die nach den Regeln und Reprasentationen einer Sprache des Denkens suchen (Fodor, 1975 und Chomsky, 1980). Wieder anders versucht Dennett die Traume der Anhanger des 'computational approach' auf den Boden zu holen. Seiner Ansicht nach gibt es bei intentionalen Zustanden wie Uberzeugungen und Wunschen keine besondere innere Natur zu entdecken, da es sich um Idealisierungen handelt und gar nicht um etwas, das so beschreibbar ware wie abstrakte Prozesse in einer Maschine oder biochemische Prozesse in einem Organismus (Dennett, 1981). Diejenige Figur aber, um deren Kritik an der Computermetapher des Geistes es im Folgenden gehen soil, hat vor allem durch ein Gedankenexperiment in die Diskussion eingegriffen, das demonstrieren sollte, daB es den Zu standen in einem Computer an einer fiir mentale Zustande wesentlichen Eigenschaft, **namlich** Intentionalitat **fehlt**. (Searle, 1980). Seine positiven Uberlegungen beziiglich des Leib-Seele-Problems machte Searle einige Jahre spater in einem Rundfunkvortrag der Offentlichkeit zuganglich. Die folgenden Uberlegungen stellen einen Versuch dar, Searles Kritik am Funktionalismus kritisch zu untersuchen und die Frage nach ihrer Plausibilitat zu beantworten. 1. Searles Ziel ist es, eine Ant wort auf die spatestens seit Turing ***bohrende*** Frage zu finden, ob Computer denken konnen. Das Prinzip, nach dem er diese Frage zu beantworten sucht, besteht darin, eine bestimmte Ei genschaft des menschlichen Denkens als fiir den Begriff des Denkens wesentlich auszugeben und dann zu zeigen, daB diese Eigenschaft in Digitalcomputern nicht vorkommt. | Mind has produced a number of attempts in recent years to question a view that has shaped the understanding of mind in philosophy and psychology, functionalism, for more than two decades. The functionalist view of the mind replaced identity theory after it had come into conceptual and empirical difficulties. The peculiarity of the functionalist view is that the identity, i.e. the type of a mental state, is no longer determined by specifying correlating physical parameters like the identity theory, but by the relationships that this state has with the preceding and subsequent states Stimuli and reactions on the other hand. The description of computers was decisive for this new perspective. The functionality of a computer can be adequately described by specifying the relationships between input, output and internal states. An ordered list of these relationships, which specifies the state in which the machine should transition to a certain input and a certain initial state and which output it should generate, is a program. With functionalism, it became popular to see the relationship between brain and mind in exact analogy to the relationship between hardware and software. The opponents of this view come from very different directions and pursue different goals with their criticism. There are the eliminators, whose aim is to abandon and replace intentional psychology, which in its explanations of behavior **expresses** such as "fear", "hope", "believe", "wish" etc., by theories, who get their vocabulary from neurophysiology (Church land, 1984 and Churchland, 1986). Putnam (Putnam, 1988) comes from the philosophy of language and **argues** about the meaning of linguistic expressions against representatives of functionalism such as Fodor and Chomsky who search for the rules and representations of a language of thought (Fodor, 1975 and Chomsky, 1980). Dennett tries again to bring the dreams of the followers of the 'computational approach' to the ground. In his view, there is no special inner nature to discover in intentional states such as convictions and desires, since they are idealizations and not at all something that could be described as abstract processes in a machine or biochemical processes in an organism (Dennett, 1981). The figure, however, whose criticism of the computer metaphor of the mind is to be discussed below, intervened in the discussion above all by means of a thought experiment that was intended to demonstrate that the state of affairs in a computer had an essential property, namely, a mental state **There is no intentionality**. (Searle, 1980). A few years later, Searle made his positive considerations regarding the mind-body problem available to the public in a radio lecture. The following considerations represent an attempt to critically examine Searle's criticism of functionalism and to answer the question of its plausibility. 1. Searle's goal is to find an answer to the question that has been ***boring*** since Turing, whether computers can think. The principle by which he tries to answer this question is to output a certain property of human thinking as essential to the concept of thinking and then to show that this property does not occur in digital computers. |
| **Janich, Peter and Michael Weingarten. “Verantwortung ohne Verständnis? Wie die Ethikdebatte zur Gentechnik von deren Wissenschaftstheorie abhängt.” Journal for General Philosophy of Science 33, no. 1 (2002): 85-120.** | **Top 3 topics**  E-Evolution (5) selection; population; organism; evolutionary; gene; biological; individual; group; evolution; specie (32%)  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (18%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (12%) |
| **Original text** | **English translation** |
| In der Diskussion um die Chancen und Risiken der Gentechnik trifft man immer wieder auf eine Metaphorik, die von Bef?rwortern wie von Kritik ern der Gentechnik in Anspruch genommen wird. Sie l??t sich kennzeich nen als (in der Regel impliziter) Rekurs auf Traditionen, in denen wir uns als ?Sch?pfer", ?Erzeuger" oder ?Hersteller" von Produkten beschreiben, und die in Analogie zum g?ttlichen **Sch?pfungshandeln** auf uns Menschen ?bertragen wurden und werden. Komplement?r zu diesen Metaphern ist die Beschreibung unseres Tuns als ,Lesen im Buch der Natur'1 zu sehen. Im Unterschied zum metaphorischen Verweis auf unsere ?sch?pferischen" F?higkeiten wird in der zweiten Redeweise darauf abgehoben, uns als ?In terpreten" und ?***Nachvollzieher***" des g?ttlichen Sch?pfungshandelns, nicht aber selbst als ?Sch?pfer" und ?Konstrukteure" zu beschreiben. Zum Problem werden diese Metaphern-Felder nicht nur durch die merk w?rdige Durchmischung theologischer, naturphilosophischer und ethischer Argumentationslinien. Auff?llig ist vor allem, dass auch von Gentechnik Kritikern die (implizite) Unterstellung akzeptiert wird, das von den Gen technikern behauptete K?nnen sei ein tats?chliches K?nnen, d.h. die Gen techniker ***seien*** tats?chlich Konstrukteure von Lebendigem, und die gezielte Manipulation von Lebewesen oder gar die gezielte Herstellung von Lebe wesen f?r bestimmte Zwecke seien grunds?tzlich technisch machbar. Daraus folgt als eine Konsequenz, dass sich die Debatte um die Gen technik auf die Fragestellung verengt, ob das, was als ein K?nnen be hauptet wird, auch gemacht werden **d?rfe** (z.B. weil ?die Natur" es eben auch so macht - so gern die Bef?rworter der Gentechnik) oder eben nicht (weil wir Menschen wie die anderen Lebewesen Gesch?pfe Gottes oder **Gesch?pfe** evolution?rer, also nat?rlicher Prozesse seien - so gern die Kritiker). **?berl??t** ***man nicht***, wenn man die Gentechnik-Debatte unter dieser Beschr?nkung f?hrt, zwangsl?ufig die Beurteilung der Wissenschaften und ihrer Ziele, Zwecke und Mittel auf riskante Weise den **Naturwissenschaft lern**? Wenn man sich ihnen in der Meinung angeschlossen hat, es sei mit den Mitteln der Gentechnik zumindest prinzipiell m?glich, gezielt Lebe wesen f?r bestimmte, von uns gesetzte Zwecke herzustellen, Tiere und Menschen zu ?klonieren", Organe zu **z?chten** usw., ***wodurch sollen dann noch Behauptungen der*** **Ungef?hrlichkeit** oder doch der Beherrschbarkeit der ***nichtbeabsichtigten*** Nebenfolgen gentechnischer Experimente entkr?f tet werden k?nnen? Denn die Gentechniker berufen sich dabei im gleichen Sinne auf ?Natur" wie die Kritiker? Die g?ngigen Argumentationsmuster sehen **ungef?hr** folgenderma?en aus: Wenn der Wandel der Lebewesen im Laufe der Naturgeschichte durch ?Mutationen" oder andere Ver?nderungen auf der Ebene der Gene (etwa genetische Rekombination bei sexueller Fortpflanzung) ***verursacht werde***, und wenn wir uns in der Erkl?rung unserer eigenen nat?rlichen Entste hung auf solche genetischen Mechanismen berufen - warum sollte der durch uns selbst bewirkte Wandel von Lebewesen mit den Mitteln der Gentechnik zu neuen, vielleicht gar unbeherrschbaren Gefahren f?r uns und die Natur **f?hren**? Und au?erdem: haben die Menschen nicht selbst durch die Art und Weise, wie sie Tiere und Pflanzen von Wildformen zu den heute g?ngigen ertragreichen Sorten **gez?chtet** haben, genetische Me chanismen f?r ihre Zwecke benutzt? Man betrachte nur etwa die k?mmer lich erscheinenden Ausgangspflanzen (etwa Emmer, Einkorn) unserer Ge treidesorten und vergleiche sie mit heutigem Weizen, Roggen oder Mais! Angesichts dieser gewaltigen Ver?nderungen durch konventionelle Z?ch tung (die ja auch gezielte Eingriffe in den Genpool einer Population durch Ver?nderung der Reproduktionsbedingungen der **gez?chteten** Tiere und Pflanzen darstellt) erscheinen die von der Gentechnik realisierten Ver?n derungenz.B. von herk?mmlichen Tomaten zur ,Anti-Matsch-Tomate" doch eher ***gering***. | In the discussion about the opportunities and risks of genetic engineering, one always comes across a metaphor that is used by both advocates and critics of genetic engineering. It can be characterized as a (usually implicit) recourse to traditions in which we describe ourselves as "creator", "producer" or "manufacturer" of products, and in analogy to the divine **Sch acts of cultivation** were and are transferred to us. Complementing these metaphors is the description of our actions as reading in the book of nature'1. In contrast to the metaphorical reference to our "creative" abilities in the second way of speaking emphasized on describing us as "interpreters" and "***followers***" of the divine act of creation, but not ourselves as "creators" and "constructors". These fields of metaphors are not only a problem due to the strange mixture of theological, natural philosophical and ethical lines of argument. Above all, it is striking that critics of genetic engineering also accept the (implicit) assumption that the skills claimed by the gene technicians are real skills, ie the gene technicians ***are*** actually constructors of living things, and the targeted manipulation of living beings or even the targeted production of living beings for specific purposes are fundamentally technically feasible. As a consequence, the debate about genetic engineering narrows down to the question of whether what is claimed to be a skill ***can*** also be done (eg because "nature" does it that way) - as much as the proponents of genetic engineering) or not (because we humans, like other living beings, are creatures of God or **creatures are** more evolutionary, that is, natural processes - so much the critics like). If one conducts the genetic engineering debate under this restriction, ***doesn't one*** necessarily have to **learn** the **science** of science and its goals, purposes and means in a risky way, if one has joined them in the opinion that it is at least in principle possible with the means of genetic engineering to specifically produce living beings for specific purposes set by us, to "clone" animals and humans, to **breed** organs, etc. **nuisance** or controllability of the ***non-absentee*** ***legitimate*** side effects of genetic engineering experiments can be weakened? Because genetic engineers refer to "nature" in the same way as critics? The common argumentation patterns look something like this: If the change in living beings in the course of natural history through "mutations" or other changes at the level of the genes (such as genetic recombination in sexual reproduction), and if we refer to such genetic mechanisms in the explanation of our own natural origins - why should the change of living beings caused by ourselves with the means genetic engineering to new, perhaps even uncontrollable dangers for us and nature? And also: did not the people themselves use genetic mechanisms for their purposes by the way in which they **reared** animals and plants from wild forms into the current high-yielding varieties? Just take a look at the pitiful starting plants (such as Emmer, Einkorn) of our cereals and compare them with today's wheat, rye or corn! In view of these enormous changes due to conventional breeding (which also represents targeted interventions in the gene pool of a population by changing the reproductive conditions of the **bred** animals and plants), the changes realized by genetic engineering, for example, appear conventional tomatoes for the "anti-slush tomato" are rather ***low***. |
| **Mikulinskij, S. R and M. G. Jaroševskij. “Psychologie des wissenschaftlichen Schaffens und Wissenschaftslehre.” Journal for General Philosophy of Science 1, no. 1 (1970): 83-103.** | **Top 3 topics**  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (51%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (16%)  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (10%) |
| **Original text** | **English translation** |
| Zusammenfassung Die Wissenschaftspsychologie wird als ein Gebiet interdisziplinarer Forschungen an der Grenze zwischen Psychologie und allgemeiner Theorie und Geschichte der Wissenschaft erortert und ihr Verhaltnis zu den anderen Richtungen der Wissenschaftsforschung, ins besondere zur Logik der Wissenschaftsentwicklung und zur Wissenschaftssoziologie **dar gestellt**. Dabei heben die Autoren hervor, daB die Ausarbeitung jeder dieser Disziplinen eine Umgestaltung ihrer Ausgangsbegriffe und -methoden voraussetzt, was der Natur der Wissenschaft als spezifischen Systems und als besonderer sich historisch entwickelnder Tatigkeitsform entspricht. Als Grundprobleme werden u.a. behandelt: Kreativitat, Motivation und **SchafEensdynamik des Wissenschaf tiers**, das Verhaltnis von Personlichkeit und Kollektiv in der modernen Wissenschaft und das Funktionieren ,,kleiner Gruppen". Je bedeutender die Rolle ist, die die Wissenschaft spielt, desto groBer wird das Interesse fiir die Menschen, die sie bearbeiten. Schon am Ende des XIX. bzw. zu Anfang des XX. Jahrhunderts finden sich die ersten Versuche, das Studium der Personlichkeit des Gelehrten, des Prozesses seines Schaffens, ***zu*** einem Gegenstand der speziellen Forschung ***zu machen***. Bewirkt wurde es durch die stark und deutlich spiirbar gewordenen Erschiitterungen der fundamentalen Theo rien der Naturwissenschaften, durch das Streben, angesichts der zu nehmenden Zahl von Ereignissen, die geschichtliche Erfahrung der Wissenschaft, ihre Wege und Perspektiven richtig zu erkennen. Die intensive Suche nach neuen Losungen und nach einer neuen Ein stellung hat natiirlicherweise zu der Notwendigkeit einer Analyse der Prozesse des wissenschaftlichen Schaffens **gefiihrt**, hat die Wissenschaftler angeregt, in das eigene Schaffenslabor einzudringen und jene Eigen schaften aufzuzeigen, die den Forscher befahigen, entscheidende Um formungen der iiberkommenden Vorstellungen und Prinzipien durchzu fiihren, ja sogar neue zu schaffen. ***Schon bei*** W. Ostwald stoBen wir auf eine klar gestellte Forderung, so friih wie moglich Menschen mit schopfe rischen ***Anlagen*** zu erkennen, ihre Entwicklung zu kultivieren und gleich zeitig, ausgehend von der Analyse charakteristischer Besonderheiten bei Wissenschaftlern, ihrer Art des Denkens und Arbeitens, eine Typo logie zu entwickeln, die man bei der Losung von Problemen der professio nellen Orientierung auf dem Gebiete der wissenschaftlichen Tatigkeit anwenden konnte. Uber die Eigenart des Schaffens, seiner Bedingungen \* Wir danken Herrn Prof. Dr. P. Orlik vom Psychologischen Institut der Universitat Diisseldorf herzlich fur die Durchsicht der Ubersetzung des russischen Manuskriptes, die Frau B. de Costi (Duisburg) anfertigte (Die Herausgeber). und M. G. JaroSevskij und Ausloser, dachten die groBten Naturforscher nach ? H. v. Helmholtz, J. M. Secenov\*\*, A. Einstein, M. Planck, V. I. Vernadskij und viele andere. Anfang des XX. Jahrhunderts sind von dem Mathematiker H. Poincar6 und dem Chemiker W. Ostwald die ersten ausfiihrlichen Ver offentlichungen iiber die Probleme des wissenschaftlichen Schaffens **er schienen**. Es ist interessant, daB Ostwalds Buch ? **GroBe Manner**", das typologi sche Charakteristiken von Personlichkeiten auf dem Gebiete der exakten Wissenschaften beinhaltet, im Zusammenhang mit einer Bitte des japa nischen Ministeriums fiir Erziehung entstanden ist, zu einer Zeit, in der die europaischen Methoden der Organisation der wissenschaftlichen Arbeit in Japan erstmalig angewandt wurden, mit dem Ziel, ein ratio nales Erziehungs-und Auswahlsystem aufzubauen. Ostwald sprach off en von einer ?radikalen Veranderung unserer An sichten iiber die ***Erscheinung*** hervorragender Menschen, die einen iiber groBen EinfluB auf die Entwicklung des menschlichen Fortschritts, insbesondere der Wissenschaft, haben". | Summary Science psychology is discussed as an area of interdisciplinary research on the border between psychology and general theory and history of science, and its relationship to the other directions of science research, in particular the logic of science development and the sociology of science, is **presented**. The authors emphasize that the elaboration of each of these disciplines requires a redesign of their starting terms and methods, which corresponds to the nature of science as a specific system and as a special, historically developing form of activity. The basic problems dealt with include: Creativity, motivation and the **dynamic of the scientific community**, the relationship between personality and collective in modern science and the functioning of "small groups". The more important the role that science plays, the greater the interest For the people who work on it, as early as the end of the 19th and the beginning of the 20th century, the first attempts to make the study of the personality of the scholar, the process of his creation, a subject of special research ***can be found*** It was made possible by the strong and clearly noticeable shocks in the fundamental theories of the natural sciences, by the striving, in view of the increasing number of events, to correctly recognize the historical experience of science, its paths and perspectives. The intensive search for new solutions and after a new setting has naturally to the necessity **e** Having carried out an analysis of the processes of scientific creation, the researchers were encouraged to penetrate their own creative laboratory and to show those properties that enable the researcher to carry out decisive transformations of the conventional ideas and principles, and even to create new ones. ***At*** W. Ostwald we already come up with a clearly stated requirement to recognize people with creative ***systems*** as early as possible, to cultivate their development and, at the same time, to start with, based on the analysis of characteristic features of scientists, their way of thinking and working To develop typology that could be used to solve problems of professional orientation in the field of scientific activity. About the peculiarity of creation, its conditions \* We thank Prof. Dr. P. Orlik from the Psychological Institute of the University of Diisseldorf for the review of the translation of the Russian manuscript that Ms. B. de Costi (Duisburg) prepared (The Editors). and MG JaroSevskij and Ausloser, did the greatest naturalists think? H. v. Helmholtz, JM Secenov \*\*, A. Einstein, M. Planck, VI Vernadskij and many others. Beginning of the XX. The first detailed publications on the problems of scientific creation **appeared** by the mathematician H. Poincar6 and the chemist W. Ostwald. It is interesting that Ostwald's book? **Groee Manner** ", which includes typological characteristics of personalities in the field of exact science, was created in connection with a request from the Japanese Ministry of Education at a time when the European methods of organizing scientific work were first used in Japan Ostwald spoke openly of a? radical change in our views on the ***appearance*** of excellent people who have a major influence on the development of human progress, especially science ". |

**Google Translate manual checks – Sample of Dutch articles**

Samples of texts in original languages with their corresponding translations. These samples of approximately 500 words each have been randomly chosen across time-periods and journals. Three types of anomalies have been identified, with possible impact on computational textual analyses: (i) anomalies that are present both in the original text and in the translation (in bold); (ii) anomalies that are introduced by the translation and that were not present in the original text (in bold italics), (iii) anomalies that were present in the original text and that have been corrected through machine-translation (underlined).

**[Encoder 3]**

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| **Article and original text** | **Topics and English translation** |
| **Van Hinloopen Labberton, D. “De Kategorieënleer der Hindhu-wijsbegeerte in vergelijking met die van Plato, Aristoteles en Kant.” Synthese 1, no. 1 (1936): 11-14.** | **Top 3 topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (59%)  H-History (0) work; time; man; history; new; year; make; life; century; write (21%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (15%) |
| **Original text** | **English translation** |
| De **Kategorie?nleer** der Hindhu'wijsbegeerte in vergelijking met die van Plato, Aristoteles en Kant door Dr. D. van Hinloopen Labberton **Drawyam-Goenaas tathaa Karma Saamaanyam. Sa-wi-sjeesikani Sam-awa-ayas tathaa (A)-bhawas pada-arthaas sapta klrttitaahaa** De Wijsbegeerte als **A a t m a-W i d y a a** ***houdt zieh onledig*** met het nasporen van **A a-t m a a** en **A n-a a t m a a**, het Zelf en het Niet-zelf, het Verband tusschen beiden en de Goddelijke Wijsheid als **Brahma W i d y a a** of **Theo-sophia** met beheersching van het Niet-zelf door het Zelf, dat in dat Niet-zelf (de totale verschijning der Veelheid en ***Veelvul*** ***digheid*** in de Natuur) Zichzelf heeft herkend en ***erkend***. De Dualiteit (**D w a i t a m**, Twee-heid) der tweeledige of twee kanten vertoonende verschijning (**Dwam-dwam**, Twee-twee), en het herstel der transcendente Eenheid (**A-d w a i t a m**, Niet-twee-heid) is de grond slag van de Indische Wijsbegeerte, van **A a t m a-W idyaa** en **Brahma W i d y a a**, terwijl ook van deze beide de Identiteit wordt gezien: **Aatman^ Brahman**. Om tot deze Synthese te komen gaat zij niet uit, als Hegel, van Zijn en Niet-zijn, want met deze categorie?n is men reeds te ver van huis, maar van Zichzelf zijn, het primaire en alles primeerende Zelf bewustzijn, zonder hetwelk ***als*** ?a priori" gegeven en aanwezige, er van geen subject en object sprake zou zijn. ?Das Sein an sich" is maar schijnbaar het aller eenvoudigste en meest onbepaalde kernbegrip, dat als uitgangspunt zou **m?gen** dienen. Inderdaad is het **?**ik-ben" besef (**As-mi**, Latijn **(a)sum(i)**, met toonlooze u, dus niet met oe, Engelsch **a(s)m(i)** **?*mijn zijn***", **?**ik ben") de ware basis van alle besef en van alle denken. Het ?***zijn zonder meer***", zooals Bolland het noemt, van het ***praedicaatlooze*** iets, dat daardoor tot een ?zijn van niets" wordt, waarmede dan de identiteit van zuiver **?**zijn**"** ***en*** ?niet-zijn" is ***beseft***: dat ?zijn" van ?iets" zou niet tot ons bewustzijn kunnen zijn doorgedrongen, indien dat zelfbewustzijn er niet reeds a priori ware geweest. Het ?zijn van iets" is een inferentie, door het ***zich bewust-zijn***, het beseffen van het **Asmi**, ik-ben, mogelijk gemaakt. De beroemde spreuk van Descartes: **Cogito ergo sum**, luidt naar de op vatting der Hindhu-wijsbegeerte: **Sum ergo sum**, d.w.z. **?**ik-ben, dus ik ben", Tegen de vanzelfsprekendheid van het **Sum ergo Sum** zal wel niemand bezwaar kunnen hebben. Als men nu het **?Sum"** aanvult met **JJ** elk praedicaat, dat daaraan inhoud kan geven, want het primaire zelf bewustzijn is een nog on-gevuld, latent bewustzijn, en men ontneemt er dan weder alle inhoud aan, dan ***blijft*** het immanent-transcendente substratum ***over***, dat de Indische wijsbegeerte **Aatmaa** noemt, de ??ne ongedeelde Monade, het Noumenon, waarop de veelheid der Phenomena zieh ontplooit. Het woord is met ons Adem, Duitsch **Odem**, identiek evenals met het Grieksche **atmos**, ?damp", in **atmo-spheer**. Daar tot nu toe de goede afleiding niet is gegeven **x) m?ge het mij vergund zijn** deze voor te stellen. Het woord is namelijk afgeleid van den **Sanskrta**-wortel **d h m a a** (1974) die gedefinieerd wordt als **?sjabda-agri sam-yoogayooh"**, thuisbehoorende in de twee categorie?n van **?geluidgeven**, spreken etc." en van **?**verbinden, vormen, etc."; **dh?mati** hij blaast, ademt uit, schept door aanblazen; causatief **d h m a a-p ? y a t i**, **?**doet bol staan" Met het praefix **a a-**, dat zoowel aan ons ***aan***-als ons uit-beantwoordt, **aa-dhmaa** **?*uitademen***, ***aanblazen*** (van het vuur), ***bol blazen*** (van een ***zeil*** of een zak) ".**Aatmaa** is uit **a a d h m a a** verhardt en dus niet verwant met **animus** en **anima**, waarmede men het woord **wreleens** in verband heeft pogen te brengen. | The **Category** of Hindu philosophy compared to that of Plato, Aristotle and Kant by Dr. D. van Hinloopen Labberton **Drawyam-Goenaas tathaa Karma Saamaanyam. Sa-wi-sjeesikani Sam-awa-ayas tathaa (A) -bhawas pada-arthaas sapta klrttitaahaa** The Philosophy as **A atm aW idyaa** ***keeps its way*** in tracing **A at maa** and **A na atmaa**, the Self and the Not-Self , the Relationship between the two and the Divine Wisdom as **Brahma W idyaa** or **Theo-sophia** with control of the Not-self by the Self, which in That Not-self (the total appearance of the Multiplicity and ***Multiplicity*** in Nature) has recognized Itself and ***recognized***. The Duality (**D waitam**, Two-ness) of the dual or two-sided appearance (**Dwam-dwam**, Two-two), and the restoration of the transcendent Unity (**Ad waitam**, Non-two-ness) is the foundation of the Indian Philosophy, of **A atm aW idyaa** and **Brahma W idyaa**, while also of these the Identity is seen: **Aatman ^ Brahman**. To arrive at this Synthesis it does not start as Hegel, of Being and Non-being, because with these categories one is already too far from home, but being of Self, the primary and all-priming Self-consciousness, without which ***if*** "a priori" given and present, there would be no subject and object.  "Das Sein an sich" is but apparently the simplest and most indefinite core concept, which **should** serve as a starting point. Indeed it is**?** I-am "awareness (**As-mi**, Latin **(a) sum (i)**, with toneless u, so not with oe, English **a (s) m (i)? *Being my***",**?** I am ") the true basis of all awareness and of all thought. The "***being***," as Bolland calls it, of the ***pradeless*** something, which thereby becomes a "being of nothing", with which then the identity of being pure**?** ***[and]*** "non-being" is ***realizing***: that "being" of "something" could not have penetrated our consciousness, if that self-awareness had not already been there a priori. The "being of something" is an inference, by the ***conscious -being***, realizing the **Asmi**, I-am, made possible. Descartes' famous saying: **Cogito ergo sum**, is according to the conception of Hindhu philosophy: **Sum ergo sum**, ie**?** I am, so I am ". Nobody can object to the self-evident nature of **Sum ergo Sum**. If one now supplements the**? Sum "**with **JJ** any predicate, which can give substance to it, because the primary self consciousness is an as yet unfilled, latent consciousness, and one then again deprives all content of it, then the immanent-transcendent ***remains*** substratum, which Indian philosophy calls **Aatmaa**, the one undivided Monad, the Noumenon, upon which the multiplicity of Phenomena unfolds. The word is identical with our Breath, German **Odem**, just as with the Greek **Atmosphere**, "vapor", in **atmospher**. Since so far the good derivation has not been given **if I am allowed** to represent it. The word is derived from the **Sanskrta**-root **dhmaa** (1974) which is defined as**? Sjabda-agri sam-yoogayooh "**, belonging in the two categories of**" giving**, speaking, etc. "and of**"** connecting, forming, etc. . "; **dh? mati** he blows, exhales, creates by breath; causative **dhma ap? yati,?** bows up "With the praefix **a a-**, which responds to us ***[on]*** as well as ours out, ***breathe*** **aa-dhmaa?** ***breathe*** (from the fire), ***billow*** (from a ***sail*** or a bag)" **Atmaa** is hardened out of **aadhmaa** and is therefore unrelated to **animus** and **anima**, with which one has tried to associate the word **wrelen**. |
| **Kruseman, W. M. “De "Gestalt"-theorie van Köhler.” Synthese 1, no. 11 (1936): 355-357.** | **Top 3 topics**  E-Perception (10) object; experience; perception; see; color; perceptual; visual; content; red; image (35%)  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (20%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (11%) |
| **Original text** | **English translation** |
| De **?Gestalt"'th?orie** van **K?hler** door Dr. W. M. Kruseman In aansluiting aan mijn artikel in het Augustusnummer van ?Synthese", zou ik hier in korte trekken nog eens nader de aandacht willen vestigen op hetgeen daar in verband met de z.g. ?Gestalten" van **K?hler** is gezegd. Onder dergelijke ?Gestalten" verstaat deze onderzoeker z.g. **?l?mentaire** vormen als cirkel, rechthoek, enz. Nu hebben wij in ons vorig artikel **uiteerure/ei**, dat het **euer** niet zoozeer reageert op **??n** bepaald voorwerp, als wel op de ?Gestalt", waarvan een groot aantal verschillende voorwerpen de representanten kunnen zijn. Zoo bleek de hond van Buytendijk **ge dresseerd** te zijn, **wet** op ??n specialen driehoek, doch op de figu reering, die in het begrip driehoek besloten ligt. De beteekenis van dit ?Gestalt"-begrip kan nu nader ge?llustreerd worden aan de hand van wat ik zou willen noemen de wetten der standvastigheid. Allereerst zou ik dan de aandacht willen vragen vfoor de standvastigheid van de grootte van een beeld. **Ver?ndert** men den afstand van een voorwerp dat dicht in de buurt van**-**den waarnemer ligt, dan zien wij geen verschil in grootte, hoewel toch het netvliesbeeld een zeer aanzienlijk verschil kan opleveren. Buiten een zekeren afstand is dit echter niet langer het geval. Wanneer we bijvoorbeeld op een berg staan, dan zien wij de huizen in het dal zoo klein, dat zij den indruk van speelgoed maken. Vroeger trachtte men volgens de voorstelling^n van Helmholtz dit constant blij ven van de grootte op rekening van de ervaring te brengen. Ook Stern en B?hler staan nog voornamelijk op dit standpunt. Zoo stelt B?hler zieh voor, dat de betrekkelijke onafhankelijkheid van de schijnbare grootte van het retinabeeld **?vom Kinde einmal erworben und ge?bt werden musz."** Interessant is nu in dit verband een proef, die ***door*** **K?hler** met een **4-jarigen chimpans?** werd genomen. Het dier was er op gedresseerd om van twee kisten, die even ver van hem verwijderd waren, de grootste te kiezen. Onder de noodige voorzorgsmaatregelen, werd de grootste kist nu zoo ver weggezet, dat haar retinabeeld het kleinste moest worden. In dit geval werd toch door den **Chimpans?** de grootste kist uitgekozen. **K?hler** ziet in deze proef een bewijs, dat het hier niet zoo zeer op ervaring, als wel op de wetmatigheden van de gezamenlijke structuur aan komt. ***Eenigszins in tegenspraak hiermede*** schijnt de uitkomst van een proef, die door Stern genomen werd met zijn zoontje, toen dit acht maanden oud was. Voor de grap werd het jongetje, toen het om voedsel schreide, een vijftien maal kleinere zuigflesch getoond. ***De baby geraakte*** hierover op de gebruikdijke wijze in gro?te opwinding. **M?gelijk** is echter, dat bij het jonge kind de standvastigheid van de grootte nog niet de rol speelt, welke zij op ouderen leeftijd verkrijgt. Deze standvastigheid is nu ook bij de Gestalten van groot belang. Bij de proef van Buytendijk reageerde de hond op een groot aantal driehoeken van zeer verschillende gedaanten. We hebben er in ons vorig artikel echter niet op gewezen, dat ook het onder verschillende omstandigheden rea geeren op ??n en dezelfden driehoek een nadere verklaring behoeft. | The**? Gestalt "'theory** of **K? Hler** by Dr. WM Kruseman Following on from my article in the August issue of? Synthesis", I would like to draw a closer attention here to what is happening there in connection with the So-called "Figures" by **K? hler** has been said. By such "figures" this researcher understands so-called **mental** shapes such as circle, rectangle, etc. Now, in our previous article, we have **quotation** that the **euer** does not respond so much to **A** certain object, as well as on the? Gestalt ", of which a large number of different objects can be the representatives. Thus the dog of Buytendijk turned out to be **interested**, **law** on one special triangle, but on the figure, which is contained in the concept of triangle. The meaning of this? gestalt "concept can now be further illustrated by what I would like to call the laws of constancy. First of all, I would like to draw your attention to the constancy of the size of an image. If one **reduces** the distance of an object that is close to the observer, we see no difference in size, although the retinal image can still produce a very significant difference. However, this is no longer the case beyond a certain distance. For example, when we stand on a mountain, we see the houses in the valley so small that they make the impression of toys. In the past, according to Helmholtz's ideas, attempts were made to keep this constant size in account of experience. Stern and Bühler are also still mainly in this position. Thus Bühler proposes that the relative independence of the apparent size of the retina image**? Vom Kinde einmal erworben und be? Bt were musz. "**Interesting in this connection is now an experiment, which **K? Hler** ***awarded*** a **4- chimpanzees** were taken. The animal was prepared to choose the largest of two boxes that were the same distance away from him. Under the necessary precautions, the largest box was now placed so far that her retina image had to be the smallest. In this case the **Chimpans** chose the largest coffin after all, **K? hler** sees in this test a proof that it is not so much about experience as it is about the laws of the joint structure.  ***[Somewhat in contradiction to]*** This seems to be the result of a test taken by Stern with his son when he was eight months old. Just as a joke, when the boy cried for food, the boy was shown a 15 times smaller baby bottle. ***[The baby became]*** about it in the usual way in great excitement. However, **it is the same** that the steadfastness of the size does not yet play a role in the young child, which she obtains in old age. This steadfastness is now also of great importance with the Gestalten. In Buytendijk's test, the dog responded to a large number of triangles of very different shapes. However, we did not point out in our previous article that responding to one and the same triangle under different circumstances also needs further explanation. |
| **Groot, H. “De bouw van de materie.” Synthese 1, no. 5 (1936): 143-147.** | **Top 3 topics**  G-Particles (3) theory; energy; law; particle; electron; atom; physical; physic; chemical; system (33%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (29%)  H-History (0) work; time; man; history; new; year; make; life; century; write (11%) |
| **Original text** | **English translation** |
| De bouw van de materie door Dr. KL Groot Vragen wij aan iemand, die geen filosofische of natuurwetenschappelijke schooling heeft, wat hij onder ?materie" of ?stof" verstaat, dan loopen wij kans hem in niet geringe verlegenheid te brengen. Natuurlijk w??t hij wat materie is: ?hier, dit, deze tafel, waar ik met m'n hand op sla; deze muur, die een grens aan mijn bewegingsmogelijkheden in die richting stelt; dit stuk klei, dat ik naar willekeur kan vervormen **?** d?t is materie"' Maar te zeggen w?t materie is ? dat blijkt zoo eenvoudig niet te zijn. Na moeizame denkarbeid zal ons slachtoffer misschien vrede hebben met de definitie, dat materie datgene is, wat uitgebreidheid bezit. Wij zullen niet ***zoo*** wreed zijn hem te wijzen op de oude regel van de formeele **l?gica**: **ignotus pet ignotius**, die waarschuwt niet het onbekende door nog onbekendere dingen te verklaren, want wij zien in, dat onze vraag niet anders te beantwoorden is, zonder behoorlijke filosofische en fysische voorkennis, dan op de wijze, die het eerst in hem opkwam, n.l. door te zeggen: dit en dit en dit ? dat is materie. Hij kent de materie enkel als belevenis, die steeds concreet is, niet in begripmatig kennen. ***Filosofie en*** fysica hebben een lange worsteling achter zieh om tot een duidelijk inzicht te komen van het geheel van voorstellingen en be grippen, die samengevat zijn in dat eene woord: materie. Reeds grove waarnemingen leidden tot de overtuiging, dat de meeste Stoffen uit de **dagelijksche** ervaring een samengesteld karakter moesten be zitten. Het was daartoe voldoende, nauwkeurig acht te geven op wat er gebeurt, als een druppel melk in een glas water valt, of als water op een klontje suiker wordt geschonken. De melk mengt zieh met het water; het klontje suiker lost op. Deze beide verschijnselen, menging en oplossing, worden begrijpelijk, als wij ons de Stoffen opgebouwd denken uit kleine deeltjes met onderlinge tusschenruimten. Tot dezelfde opvatting ***brengt ons*** de waarneming van de samendruk baarheid der vaste Stoffen en de **?** reeds moeilijker vast te stellen **?** eigen schap van de uitzetting der Stoffen bij verwarming. Er zouden meer verschijnselen te noemen zijn, maar ***het gezegde*** kan volstaan om duidelijk te maken, dat er geen ingewikkelde proefnemingen noodig zijn, doch alleen scherp nadenken over alledaagsche belevenissen om tot het besluit te komen, dat de materie opgebouwd moet zijn uit kleine, voor het oog onzichtbare deeltjes. Moeilijker is het een inzicht te krijgen in aard dezer deeltjes en de wijze, waarop de materie hieruit opgebouwd is. De beantwoording van deze vraag is de taak van de fysica, en de moderne atoom-fysica is het sprekend bewijs van de ernst, waarmede ***aan*** deze vraag J gewerkt wordt en van de gro?te moeilijkheden, die de beantwoording met zieh medebrengt. Het is hier de plaats niet nader in te gaan op de ***ver bluffende*** toepassingen in de techniek, die als afvalproducten van de steeds scherper toegespitste experimenten gewonnen zijn. Ook kunnen wij ons niet verdiepen in de vernuftige methoden, die de fysica schiep om haar behulpzaam te zijn bij het vervolgen van het vluchtige wild, dat zij na jaagt: de bouw van de materie. | The construction of the matter by Dr. KL Groot If we ask someone who does not have a philosophical or scientific education what he understands by "matter" or "matter", we run the risk of embarrassing him. Of course he knows what matter is: here, this, this table, where I slap my hand on; this wall, which sets a limit to my possibilities of movement in that direction; this piece of clay that I can deform at will**?** It is matter. "" But to say what matter is? it turns out that it is not so simple. After laborious thinking, our victim may be at peace with the definition that matter is that which has extension. We will not ***[be so]*** cruel to point him to the old rule of the formal **l? gica**: **ignotus pet ignotius**, who warns not to explain the unknown by explaining even more unknown things, for we see that our question cannot be answered otherwise, without proper philosophical and physical foreknowledge, then in the way that first arose in him, namely by saying: this and this and this? that is matter He only knows matter as an experience, which is always concrete, not in conceptual knowledge.  ***[Philosophy and]*** Physics have been struggling for a long time to come to a clear understanding of the entirety of representations and concepts, which are summarized in that one word: matter. Rough observations have led to the conviction that most of the Substances from the **da equal** experience had to have a composite character. It was sufficient to pay close attention to what happens when a drop of milk falls into a glass of water or when water is poured onto a lump of sugar. The milk mixes with the water; the lump of sugar dissolves. Both of these phenomena, mixing and dissolution, become understandable when we imagine the Substances built up of small particles with interspaces between them. The same view ***brings us*** ***to*** the observation of the compressibility of the solids and the**?** already more difficult to determine**?** property of the expansion of the substances on heating. There could be more phenomena to mention, but ***the saying*** can suffice to make it clear that no complicated experiments are necessary, but only careful consideration of everyday experiences in order to come to the conclusion that the matter must be made up of small, for the eye invisible particles. It is more difficult to gain insight into the nature of these particles and the way in which matter is built up from them. The answer to this question is the task of physics, and modern atomic physics is the clear proof of the seriousness with which this question is being worked ***[on]*** and of the great difficulties which the answer entails. It is not the place here to elaborate on the ***bluffing*** applications in technology that have been extracted as waste products from the increasingly sharply focused experiments. Nor can we delve into the ingenious methods that physics created to help it pursue the fleeting game it pursues: the construction of matter. |
| **Koch, H. “Nieuwe Economie.” Synthese 2, no. 11 (1937): 492-494.** | **Top 3 topics**  E-Evolution (5) selection; population; organism; evolutionary; gene; biological; individual; group; evolution; specie (24%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (18%)  D-Agent-decision (8) agent; action; decision; game; choice; act; utility; strategy; moral; preference (15%) |
| **Original text** | **English translation** |
| Nieuwe Economie door Dr. H. Koch De maatschappelijke crisis, die wij beleven, is geenszins beperkt tot het gebied der voortbrenging en het verbruik der stoffelijke goederen, doch speelt zieh o.m. ook af op het wetenschappelijk terrein, reikt zelfs tot de grondslagen der wijsbegeerte. Maar zij is wel bijzonder sterk ook op het gebied van de economische wetenschap. Er staan op dit gebied zelfs uitersten tegenover elkander, die beweren, dat er eigenlijk nooit een ?economische wetenschap, een af zonder lijke wetenschap der **volkshuis houding** bestaan heeft, die met recht die naam droeg, ? en dat we, wan neer er eenmaal een waarlijke ***volkshuishouding*** zal bestaan, die inder daad die naam van ***volkshuishouding*** verdient, in het geheel geen econo mische wetenschap als afzonderlijk leer vak meer nodig zullen hebben. Het is mogelijk, dat hetgeen we nu **?conomie** noemen zal uiteenvallen, wanneer we eenmaal een zodanige samenleving hebben, waarin vol komen bewust voortbrenging en distributie ***enerzijds*** in overeenstemming gebracht zullen worden met de behoeften der bevolking ***anderzijds***. Uiteenvallen in berekening en boekhouding voor het ene deel, en in een onderdeel van de physiologie voor het andere deel. Hoewel dan toch nog een bijzondere tak van wetenschap zieh zal moeten bezig houden met de vraag, hoe de onderlinge belangrijkheid der behoeften zieh in het menselijk bewustzijn kan openbaren in een schatting der waarden der economische goederen, tenzij men dit bij voorbaat aan de psychologie wil toewijzen. Intussen, al zouden we op politiek terrein hebben afgerekend met de machtsverhoudingen, die de oude, kapitalistische vorm van samenleving in stand houden, dan zouden we toch komen te staan voor een tijdperk van overgang, dat onvermijdelijk stukken van het oude, naast stukken van het ***nieuwe*** economische leven ***te zien zou geven***. Ook het bestuur van zulk een tijdperk zou behoefte hebben aan wetenschappelijke grond regelen, die te zamen dan weer als de economische wetenschap van de overgangstijd zouden kunnen gelden. ***Het is met*** de oude economische wetenschap ***gegaan, gelijk met*** andere wetenschappen: wanneer nieuwe feiten opdagen, die niet passen in de oude th?orie, of wanneer de oude th?orie onmachtig blijkt, om de praktijk van het doelmatig handelen **in goede ba?en** te leiden, en met vereiste gra?d van juistheid te voorspellen, wat de toekomst zal brengen, dan vervallen de oude opvattingen en moeten plaats maken voor betere. De oude economische wetenschap heeft gefaald in haar voorspellingen. Zij kon de crisis van thans niet voorzien, ***heeft die niet voorzien***, kon die niet voorkomen. Het is immers overbekend, dat in de kapitalistische wereld |g vrijwel niemand in het voorjaar van 1929, toen iedereen nog droomde en profeteerde van ?prosperity", heeft voorzien, dat in het najaar de geruchtmakende ineenstorting al zou komen. ***De oude economische wetenschap*** heeft immers van het crisisverschijnsel geen studie gemaakt, althans niet voldoende diep. Indien we een aantal bekende, moderne leer-en handboeken der Economie opslaan, dan vinden we ***bij*** ***Mr. Cohen (Hoofdlijnen der Staathuishoudkunde),*** Mr. Polak (Inleiding in de Economie, 2e druk), Prof. C. A. Verrijn Stuart (Hoofdtrekken van de leer der maatschappelijke voortbrenging), niets over het crisisverschijnsel, hoewel de 19e en 20e eeuw toch een groot aantal economische crisissen gekend hebben. Prof. Diepenhorst (Voorlezingen over Economie, 1915) zegt: ?Niets geeft steun aan de bewering, dat bij de ontwikkeling der huidige maatschappelijke orde het crisisgevaar zieh in verscherpte mate moet doen gevoelen. | New Economy by Dr. H. Koch The social crisis that we are experiencing is by no means limited to the field of production and the consumption of material goods, but it also plays a part in the scientific field, even reaching the foundations of philosophy. But it is also particularly strong in the field of economic science. There are even extremes against each other in this area, who argue that there has never actually been an "economic science, a separate science of the **people's attitude** that rightfully bore that name," and that once a true ***people's household*** exists, which indeed deserves the name of ***people's households***, we will no longer need any economic science as a separate subject. It is possible that what we now call **conomy** will disintegrate once we have such a society in which fully conscious production and distribution ***[on the one hand]*** will be brought into line with the needs of the population ***on the one hand***. Breakdown in calculation and accounting for one part, and part of physiology for the other part. Although then still a special branch of science will have to deal with the question, how the mutual importance of needs can be revealed in human consciousness in an estimate of the values of economic goods, unless one wants to assign this to psychology in advance . Meanwhile, if we had dealt politically with the balance of power that perpetuates the old, capitalist form of society, we would nevertheless face an era of transition, which inevitably ***[would show]*** pieces of the old alongside pieces of the ***old*** new economic life. The administration of such an era would also need scientific ground rules which, together, could be regarded as the economic science of the transitional period. The old economics ***has gone along with*** other sciences: when new facts show up that do not fit with the old theory, or when the old theory turns out to be impotent, for the practice of effective action **in good ba? and** to lead, and to predict, with the required degree of correctness, what the future will bring, then the old ideas will lapse and must make way for better ones. Ancient economic science has failed in its predictions. It could not foresee the current crisis, ***could not have foreseen it***, could not prevent it. After all, it is well known that in the capitalist world, hardly anyone in the spring of 1929, when everyone was still dreaming and prophesying "prosperity", had foreseen that the sensational collapse would already come in the autumn. after all, no study has been made of the crisis phenomenon ***[by the old economic science]***, at least not sufficiently deeply.If we look at a number of well-known, modern learning and handbooks of Economics, we will find ***[in] [Mr. Cohen (General ideas of State Economics),]*** Mr. Polak (Introduction to Economics, 2nd edition), Prof. CA Verrijn Stuart (Main features of the doctrine of social production), nothing about the crisis phenomenon, although the 19th and 20th centuries have nevertheless experienced a large number of economic crises Prof. Diepenhorst (Readings on Economics, 1915) says There is nothing to support the assertion that, in the development of the present social order, the danger of crisis should be exacerbated by an intensified sense. |
| **Schächter, Josef. “Bijdrage tot de analyse van het begrip "Cultuur".” Synthese 2, no. 2 (1937): 47-54.** | **Top 3 topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (31%)  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (15%)  H-History (0) work; time; man; history; new; year; make; life; century; write (14%) |
| **Original text** | **English translation** |
| **Weenen** In dit artikel stel ik voorop, dat wijsbegeerte (in strikten zin) niets anders te doen heeft dan de beteekenis van woorden en de bedoeling van volzinnen te onderzoeken. Aile **kendaden** aangaande de ?werkelijk heid", die wij in philosofische verhandelingen vinden, zijn in-den-grond wetenschappelijke oordeelen, al zijn zij ook met wijsgeerige overwegingen saamgevlochten. Ook cultuurphilosofisch en ethisch werk moet **betee kenisinhouden** formuleeren en mag niets zeggen over werkelijkheid, voor zoover het wijsgeerig en niet wetenschappelijk wil zijn. De taak van een wijsbegeerte van de cultuur en van de ethiek is ook niet cul tureele en ethische waarden te fundeeren of af te wijzen; zij moet niets anders geven dan ?grammaticale constateeringen". Want ethische fun deeringen beteekenen ten slotte getuigenissen. En ethische afwijzingen zijn altijd uit te drukken in een volzin als: ?Er is geen x" (analytisch is aan te toonen, dat ook zij getuigenissen zijn; daarover zal ik spreken in een ander artikel). Voor getuigenissen en afwijzingen is echter geen plaats, waar ons onderzoek niets anders wil blootleggen dan de be teekenis (de taalhanteering) van getuigenissen en afwijzingen. Wanneer de wijsgeer bepaalde gedragingen, situaties enz. goedkeurt ?f er geen waarde in ziet, dan doet hij dat ?voor eigen rekening", ***als*** iemand die bepaalde wenschen koestert, maar hij doet dat ni?t als wijsgeer. Schrij vers van onze richting (***de Weensche Kring***) hebben wel bij gelegenheid partij gekozen in strijdvragen van cultureelen en ethischen aard, maar met onze philosofische m?thode had hun meening dan niets te maken. In deze Studie wil ik beginnen \*) met de verklaring van het begrip cultuur, zooals het gangbaar is in onzen tijd. En daarom moet deze Studie wijsgeerig heeten. Het woord ?cultuur" wordt in verschillende beteekenissen gebruikt. Ik wil hier twee beteekenissen analyseeren, die, naar het mij voorkomt, de belangrijkste zijn. Als een volk iets groots heeft gepresteerd, zeggen we, dat het een ***cultuurvolk*** is, terwijl we een ander volk, dat niet **zck&gt; )** Het woord **?**beginnen" kenmerkt het voorloopige karakter van de meeste mijner formuleeringen. De eerste stoot ***tot*** deze gedachten ***is uitgegaan*** van Prof. Schlick. Voor de formuleeringen is de schrijver verantwoordelijk. **veel gepresteerd heeft, g??n cultuurvolk noemen.** Daarentegen spreken we van de cultuur van het steenen tijdperk, ofschoon de menschen van dat tijdperk heel primitief waren, veel primitiever dan een volk van thans dat we geen cultuurvolk zouden noemen. Deze voorbeelden wijzen onweersprekelijk op twee beteekenissen van het woord cultuur, en deze twee beteekenissen kies ik als voorwerp van mijn verhandeling. Eerst zullen we de beteekenis bespreken, die aile cultuurwijzen en alie cul tuurtreden omvat; de beteekenis dus, die we ook ontmoeten in de aan duiding **?**cultuurwetenschap". Het traditioneele uitgangspunt is hier de tegenstelling: natuur-cultuur. Want men is gewend cultuur te beschou wen als het tegengestelde van natuur. Schlick heeft in zijn colleges ge wezen op de verwarring, die door deze tegenstelling kan ontstaan als zij niet goed ge?nterpreteerd wordt. De ?natuur" omvat alle zaken en zakelijke situaties van de wereld, met haar causale verbindingen. Zoo opgevat is de natuur studieobject van de verschillende takken van wetenschap (physica, biologie, historie enz). | **Weeping** In this article I propose that philosophy (in the strict sense) has nothing to do but to examine the meaning of words and the meaning of sentences. All **deeds** of reality, which we find in philosophical treatises, are fundamentally scientific judgments, even though they are intertwined with philosophical considerations. Cultural philosophical and ethical work must also formulate **meaning** and must not say anything about reality, insofar as it does not want to be philosophical or scientific. The task of a philosophy of culture and of ethics is also not to establish or reject cultural and ethical values, but to give nothing but "grammatical observations". After all, ethical foundations mean testimonies. And ethical rejections can always be expressed in a sentence like: "There is no x" (analytically it can be shown that they too are testimonies; I will speak about this in another article). However, there is no place for testimonies and rejections. , where our research does not reveal anything other than the meaning (the language handling) of testimonies and rejections. When the philosopher approves of certain behaviors, situations, etc. - or sees no value in it, he does so "for his own account", ***if*** someone who has certain desires, but he does not do that as a philosopher. Writers from our direction (***de Weensche Kring***) did occasionally take sides in cultural and ethical questions, but their opinion had nothing to do with our philosophical method. In this Study I want to start \*) with the explanation of the concept of culture, as it is customary in our time. Therefore, this Study should be called philosophical. The word "culture" is used in different meanings. I want to analyze here two meanings, which I think are the main ones. When a nation has accomplished something great, we say it is a ***culture people***, while another people, **who do not zck>)** The word**?** begin "characterizes the provisional character of most of my formulations. The first thrust ***until*** these thoughts ***have been taken*** from Prof. dr. Schlick. The writer is responsible for the formulations. **has done a lot, not to call any culture people.** On the other hand, we speak of the culture of the Stone Age, although the people of that age were very primitive, much more primitive than a people of today that we would not call cultural people. These examples irrefutably point to two meanings of the word culture, and I choose these two meanings as the subject of my treatise. First we will discuss the meaning, which includes all cultural modes and all cultural steps; the meaning, which we also encounter in the term**?** cultural science ". The traditional starting point here is the contrast: nature-culture. Because people are used to regard culture as the opposite of nature. Schlick has pointed out in his lectures. the confusion that can arise from this contradiction if it is not interpreted properly. Nature includes all the business and business situations of the world, with its causal connections. Thus conceived, nature is the object of study of the various branches of science (physics, biology, history, etc.). |
| **Jodjana, Raden Ajoe. “Beschouwingen over ruimte-verhoudingen (Opgedragen aan Mevrouw Dawine de Jaager-Vreede).” Synthese 2, no. 8 (1937): 313-315.** | **Top 3 topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (53%)  E-Perception (10) object; experience; perception; see; color; perceptual; visual; content; red; image (31%)  C-Experiment (12) datum; experiment; value; use; test; result; experimental; model; hypothesis; method (5%) |
| **Original text** | **English translation** |
| De aanhoudende gemeenschap met en inwerking van de ruimte (en tegelijk daarmede de aanraking en inwerking van alies wat in de ruimte is) biedt ons de mogelijkheid ons rekenschap te geven aangaande de verhouding van het ons omringende (de wereld, het andere) tot ons zelf (het eigene). Door die aanraking en inwerking ontstaat namelijk de verhouding van het waargenomene tot den waarnemende (en omgekeerd van den waar nemende tot het waargenomene) en schept: waarneming. Er bestaat veel onzekerheid en daardoor veel verwarring aangaande de zuiverheid van onze waarnemingen, zoowel in de wetenschappelijke we reld als in **leeken-kringen**. Dit komt omdat men uitgaat van een ge scheidenheid tusschen het waargenomene en de waarnemende, tusschen het object en het subject, het andere en het eigene. De onzuiverheid bij de waarneming wordt toegeschreven aan en afge meten naar de mate van subjectieve begrenzing, die de waarneming be invloedt. Men geeft zieh rekenschap, dat bij de waarneming die begren zing van den waarnemende het wezen van het waargenomene ***geweld*** aandoet en dat het waargenomene dus daardoor niet tot openbaring van zijn eigen-heid kan komen. Vele vruchtelooze pogingen worden aangewend ***om bij*** de tegenstelling subject-object, zichzelf, dus het subject, zoo eerlijk en onpersoonlijk moge lijk ***tegenover het object te stellen***. Deze pogingen zijn vruchteloos (en zullen steeds vruchteloos blijven), omdat nu eenmaal de mensch als waarnemende n?odzakelijk is en blijft bij iedere vorm van waarneming. Hij kan nooit ontkomen aan het vanuit het eigene en door middel van het eigene waarnemen. Waarneming omvat: het waargenomene en de waarnemende. Die z.g. tegenstelling vormt in de waarneming een volkomen eenheid, die men niet in tegenstelling mag brengen. **313** De waarneming ontstaat juist door de aanraking, inwerking en ??n wording van object en subject. En de onzuiverheid ontstaat in de waar neming door van de tegenstelling van object en subject uit te gaan. Die tegenstelling bestaat echter niet. De mensch, die van die tegenstelling uitgaat, schuift bij het waarnemen aanhoudend op de as object-subject heen en weer en zoekt eigenlijk het midden van die as, het midden, dat het absolute evenwicht van de **vol komen ??nheid** der waarneming vormt, d.w.z. de volkomen ??nheid van het waargenomene en den waarnemende. Het wezenlijke in de waarneming en de zin van waarneming liggen alleen in de mogelijkheid van **??nwording** van het waargenomene en den waarnemende en niet in een toestand van op-zich-zelf-bestaan van object en subject, want die toestand ***komt nergens in de ruimte voor***. De begrenzing van het subjectieve ligt in het ***aannemen*** en uitgaan van een toestand van gescheidenheid, afgescheidenheid, begrensdheid van den waarnemende, welke toestand de waarnemende weer op het object (op het waargenomene, op het andere) over-draagt (projecteert). Daarmee wordt de waarneming echter reeds bij voorbaat verstoord en de mogelijk heid tot zuivere waarneming opgeheven. Kant mag worden beschouwd het probleem der subjectiviteit ten op zichte van het object zeer klaar en uitvoerig te hebben gesteld en be handeld, en van hem is afkomstig de probleemstelling van: het wezen van een ding-op-zichzelf. Door den waarnemende als een ding-op-zichzelf te beschouwen, gaat men bij het zoeken naar het wezen der dingen uit van een on-wezenlijkheid. Het wezen van iedere vorm behoort tot het wezen der dingen, dus tot het wezen van alle vormen. Alleen daardoor is het mogelijk dat waar neming kan plaats hebben. | The continued communion with and influence of space (and at the same time the touch and influence of everything that is in space) offers us the opportunity to account for the relationship of the surrounding (the world, the other) to ourselves***.*** (the own). For through that touch and effect arises the ratio of the observed to the perceiving (and vice versa from the perceiving to the perceived) and creates: perception. There is much uncertainty and therefore much confusion about the purity of our observations, both in the scientific world and in **lay circles**. This is because one assumes a distinction between the perceived and the perceiving, between the object and the subject, the other and the own. The impurity in perception is attributed to and measured by the degree of subjective limitation that influences perception. It is accounted that in the perception that limitation of the observer touches the essence of the perceived ***violence***, and thus the observed cannot thereby reveal his individuality. Many fruitless attempts are made ***to*** contrast ***the*** subject-object, itself, ie the subject, ***with the object*** as honestly and impersonal as possible. These attempts are fruitless (and will always be fruitless), because man is, as observing, necessary and remains with any form of observation. He can never escape perceiving from his own and by perceiving his own. Perception includes: the observed and the observing. This so-called contradiction forms a perfect unity in perception, which cannot be contrasted. **313** Perception arises precisely through the touch, effect and becoming of object and subject. And the impurity arises in the perception by starting from the opposition of object and subject. However, there is no such contradiction. The human being, departing from this contradiction, constantly shifts to and fro on the axis object-subject, and in fact searches for the center of that axis, the center, which forms the absolute balance of the **perfection** of perception, that is, the wholeness of the observed and the perceiving. The essential in perception and the sense of perception lie only in the possibility of the **becoming** of the observed and the perceptive and not in a state of self-existence of object and subject, for that state ***does not come anywhere in the Space for***. The limitation of the subjective lies in the ***assumption*** and assumption of a state of separation, separateness, limitation of the perceiving, which state transfers (projects) the perceiving back onto the object (on the observed, on the other). However, this already disturbs perception in advance and removes the possibility of pure observation. Kant may be considered to have drawn up and dealt with the problem of subjectivity with regard to the object in a very clear and detailed manner, and from him comes the problem definition of: the essence of a thing-in-itself. Considering the perceiving as a thing-in-itself, the search for the essence of things assumes an un-essentiality. The essence of every form belongs to the essence of things, so to the essence of all forms. Only because of this is it possible for observation to take place. |
| **Holstijn, A. J. Westerman. “Hoofdstukken uit de psychoanalytische criminologie: Inleiding.” Synthese 3, no. 2 (1938): 69-81.** | **Top 3 topics**  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (27%)  H-History (0) work; time; man; history; new; year; make; life; century; write (26%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (20%) |
| **Original text** | **English translation** |
| Sinds ***in*** de laatste decenni?n in de moderne psychologie en **patho psychologie** het inzicht is gaan domineeren, dat bij elke bewuste denking en bij elke bewuste daad tegelijkertijd een aanmerkelijk psychisch functio neeren plaats vindt waarvan de persoon **in questie** zelve niets afweet; sinds men regels en samenstelling van dat ?onbewuste" wat nader is gaan leeren kennen, en ingezien heeft, dat in de onbewuste doeleinden veelal de allervoornaamste oorzaken van alle gedragingen liggen, sindsdien heeft men ook zooals vanzelf spreekt allerlei ongewone, abnormale ge dragingen in hun verband ten opzichte van het onbewuste ***beschouwd***, en heeft men dan zoo ook de misdaad van een geheel andere zijde be keken en leeren kennen, dan te voren geschied was. Dat wil niet zeggen, dat men een groot aantal misdadigers die met den strafrechter in aanraking gekomen waren, psychoanalytisch **kon be handelen**, of met psychoanalytische methoden direct en uitvoerig **kon onderzoeken**. Ten eerste waren en ***zijn*** in de meeste landen (de Vereenig de Staten wellicht uitgezonderd***)*** de rechters zoowel als de medische en psychiatrische adviseurs, ***[have been and continue to be assisted.]*** ***wier hulp*** dan ***van tijd tot tijd*** ingeroepen werd, in de methoden van het psychoanalytisch onderzoek absoluut niet **onder legd**, en stonden zij nog geheel vreemd en **ouderwetsch** tegenover de dieptepsychologische kijk op den mensch, doch ten tweede is ook bij goeden wil en goede kennis de hechtenis of de dreiging van een zware straf een absoluut beletsel om een psychoanalyse **lege artis** te verrichten. Daartoe is absolute vrijheid noodig, vrijheid om alles te denken, te spre ken, te uiten, daartoe is een zeer lange beschikbare tijdsruimte noodig en daartoe moet de ***onderzochte*** de absolute zekerheid hebben, dat de analyticus de verkregen inzichten in geen enkel opzicht ***ter kennis van*** anderen zal ***brengen***. Toch, ook zonder een dergelijk uitvoerig systematisch onderzoek, dat dan vnl. gebruik maakt van de m?thode van het ?vrije associeeren" #) en van de ?overdrachts"-verhouding ten opzichte van den analyticus, is het vaak mogelijk uit allerlei gegevens eenig oordeel te vormen aan gaande de onbewuste ***drijfkrachten*** of motieven, die de misdaad **deter mineerden**. Zooals de medicus van het lichaam uit allerlei Symptomen, die voor den leek een andere beteekenis schijnen te hebben, met min of meer **gro?te** waarschijnlijkheid of zekerheid kan concludeeren tot het be staan van niet direct zichtbare processen of afwijkingen, zoo kan ook hij, die vertrouwd is met de onbewuste psychismen en met de mechanismen waardoor zij zieh kunnen uiten, uit allerlei gebeurlijkheden, uitingen en kleine indices, concludeeren tot het in actie zijn of geweest zijn van bepaalde onbewuste ?complexen", van onbewuste driften en doeleinden**?** ***Deze uitleggingen*** zullen dan op hem, die van de onbewuste mecha nismen geen ervaring heeft, veelal een onwaarschijnlijken, **?gezochten"** indruk maken. Dat zegt natuurlijk niets tegen hun juistheid. En wel moet men hierbij bedenken, dat juist de analyseerende zenuwartsen, al zijn zij dan niet gewoon ?zware jongens" en gevangenisbewoners direct te onderzoeken, toch de menschen zijn, die met de misdaad het meest en dagelijks in aanraking komen, die de meeste practische ***[have]*** ervaring be treffende de psychologie van de misdaad hebben. Want dagelijks krij gen zij v??r zieh diezelfde psychische constellaties die tot de verschillende misdaden drijven, krijgen zij gelegenheid de remmen te observeeren die bij den niet-misdadiger soms net-aan beletten dat eenige misdaad begaan wordt en kunnen zij onder die remmende psychische laag de woelende, onbewuste(?) tendenties waarnemen, die anderen tot misdaad nopen. | Ever since ***[in]*** the last decades in modern psychology and **patho psychology** the insight has dominated, that with every conscious thought and every conscious act at the same time a considerable psychological function takes place of which the person **in quest** himself knows nothing; since people have come to know the rules and composition of that "unconscious" in more detail, and have realized that the unconscious goals are often the main causes of all behaviors, since then all kinds of unusual, abnormal behaviors have naturally in relation to the unconscious ***[been considered]***, and so one has also looked at and got to know the crime from a completely different angle than had previously happened. That is not to say that a large number of criminals who come into contact with the criminal judge **are** psychoanalytically, or could directly and extensively **investigate** with psychoanalytical methods.First, in most countries (with the possible exception of the United States***,*** the judges, as well as medical and psychiatric counselors, ***have been and continue to be assisted.*** ***[whose help]*** was invoked ***in time***, ***was*** absolutely not **explained** in the methods of psychoanalytic research, and they were still completely strange and **against** the deep psychological view of man, but secondly, even with good will and good knowledge, the detention or threat of serious punishment is an absolute impediment to performing a psychoanalysis **empty artis**. This requires absolute freedom, freedom to think, speak, express everything, to do this requires a very long available space of time, and to this end the ***researcher*** must have absolute certainty that the analyst does not in any way ***know*** the insights obtained. will bring others. Nevertheless, even without such an extensive systematic investigation, which then mainly uses the method of 'free association' #) and the 'transfer' ratio to the analyst, it is often possible from all kinds of data. to make any judgments about the unconscious ***motives*** or motives that **deter** crime. Just as the physician of the body can conclude with more or less **[big]** probability or certainty from the existence of not immediately visible processes or deviations from all kinds of Symptoms, which seem to have a different meaning to the layman, he can also, who is familiar with the unconscious psychisms and with the mechanisms by which they can express themselves, from all kinds of events, utterances and small indices, conclude to the action or have been in action of certain unconscious "complexes", of unconscious urges and goals**?** ***[These explanations]*** will then make an impression on him, who has no experience of the unconscious mechanisms, often an improbable, **"wanted"**. That, of course, says nothing against their correctness. And it should be remembered that the analyzing neurologists, even if they are not used to directly investigating "heavy boys" and prisoners, are the people who come into contact with crime the most and every day, who have the most practical ***have*** experience of the psychology of crime, because every day they get the same psychic constellations that drive the various crimes, they are given the opportunity to observe the brakes that sometimes prevent the non-criminal from any crime is committed and under that inhibiting psychological layer they can observe the tossing, unconscious (?) tendencies, which compel others to commit crimes. |
| **Van Lohuizen, T. “Geest en stof.” Synthese 3, no. 5 (1938): 197-209.** | **Top 3 topics**  G-Particles (3) theory; energy; law; particle; electron; atom; physical; physic; chemical; system (40%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (35%)  H-Classics (24) motion; body; force; newton; law; galileo; earth; move; light; time (10%) |
| **Original text** | **English translation** |
| Wanneer ik het probleem van geest en stof ga bespreken, dan wil ik vooraf zeggen, dat ik dit onderwerp niet volgens een bepaald, welom schreven filosofisch systeem zal gaan behandelen. Ik voor mij zie naast de belangrijke taak van de wetenschappelijke behandeling der verschil lende filosofische Systemen met al hun problemen, die ik zeker niet onderschat, maar die ik graag aan anderen, daarin meer ***bevoegden***, overlaat, ook nog een andere taak der wijsbegeerte op het gebied van wereldbeschouwing, als het ware overkoepelend en samenverwerkend alles wat de verschillende wetenschappen als bijdragen tot die wereldbeschou wing kunnen leveren. Van die verschillende wetenschappen zijn vooral de natuurwetenschap pen het meest aan verandering onderhevig en de uiterst snelle ontwik keling van deze, vooral in de laatste decennia, maakt het noodzakelijk, dat, wil de wijsbegeerte haar belangrijke taak van overkoepeling en samenbinding der wetenschappen trouw blijven, zij van de moderne uit komsten der natuurwetenschappen op de hoogte blijft, om, wat belang rijk is voor de gehele wereldbeschouwing, ***daarvan*** te kunnen opnemen en verwerken. Is het dus niet in mijn bedoeling een bepaald afgesloten systeem te geven, zo m?ge ik dan aan de hand van een van de grote problemen, waarmede de denkende mensheid heeft geworsteld, duidelijk maken, hoe de uitkomsten van het moderne natuuronderzoek ***er toe*** voeren nieuw licht op deze problemen te werpen. Vooraf nog dit: bij de behandeling kan het soms gebeuren, dat de grens tussen physica en metaphysica wel cens wordt overschreden. Of is er soms geen scherpe grens? Als wij van Planck h?ren de uitspraak: **?Denn es kann kein Zweifel dar?ber bestehen, dasz unsere Gedanken uns ohne weiteres ?ber jedes uns bekannte Naturgesetz hinausf?hren k?nnen und dasz wir Zusammenh?nge auszumalen verm?gen, die mit eigentlicher Physik ?berhaupt nichts mehr zu tun haben"**, dan blijkt wel, dat deze grens gemakkelijk kan worden overschreden. Gaan wij dus nu over tot de behandeling van het gestelde probleem: Het is U **alien** bekend, dat ***sinds de mensheid ging denken*** over geest en stof, verschillende opvattingen daarbij om de voorrang hebben ge streden. Daar hebben wij de dualistische beschouwing, die geest en stof opvat als tegenstellingen, vaak zelfs vijandig tegenover elkaar staande, bijv. Descartes. Bij Descartes ***vormen*** de stoffelijke en de geestelijke wereld twee, beide even werkelijke, maar van elkaar volkomen verschil lende en niet in elkaar omzetbare wereldhelften. Hij beschouwt ook, dat de materie tot in het oneindige deelbaar is. ***Daartegenover hebben wij altijd weer zien*** komen monistische stro mingen die bijv. in de 18de en 19de eeuw vooral voerden tot het posi tivisme en mat?rialisme: Alles is Stof; Geest is maar een byproduct; waartegen dan de andere monistische stroming van het **id?alisme** en het psychisch-monisme tot gelding kwam en aan de Geest de voorrang gaf: Alles is Geest of Idee of Absoluut Denken. Ik hoop U nu duidelijk te kunnen maken dat de uitkomsten van de moderne natuurwetenschappen steun geven aan de opvatting: ?Alles is Geest". Daarvoor begin ik in Uw herinnering te roepen de atomistische filosofie van Democritos en Lucretius. Alle stof bestaat uit onschepbare, onveranderlijke, onvernietigbare atomen. De totale hoeveelheid stof blijft dus onveranderd. Als toneelspelers spelen altijd dezelfde atomen hun rol, wel in verschillende groeperingen, maar zonder verandering van iden titeit. Deze toneelspelers genoten dus de onsterfelijkheid. Toen de scheikunde zieh ontwikkelde, bleek, dat het Democritische ?atoom" zijn naam moest veranderen in ?molecuul", terwijl de naam ?atoom" gereserveerd bleef voor de deeltjes van de elementen, waarin een molecuul is te verdelen. | When I go to discuss the problem of mind and matter, I would like to say in advance that I will not deal with this subject according to a certain well-defined philosophical system. In addition to the important task of the scientific treatment of the various philosophical systems with all their problems, which I certainly do not underestimate, but which I would like to leave to others who were more ***empowered***, I also see another task of philosophy in the field of worldview, as it were overarching and collaborative, everything that the different sciences can contribute as a contribution to that worldview. Of these different sciences, the natural sciences in particular are the most subject to change, and the extremely rapid development of these, especially in recent decades, makes it imperative that for philosophy to remain faithful to its important task of overarching and unifying the sciences, it keeps abreast of the modern results of the natural sciences, in order to be able to record and process ***them***, which is important for the whole worldview. So it is not my intention to give a certain closed system, so may I clarify, on the basis of one of the great problems with which thinking humanity has struggled, how the results of modern nature research lead ***to it?*** to shed new light on these problems. In advance this: during treatment it can sometimes happen that the boundary between physics and metaphysics is exceeded. Or is there sometimes no sharp boundary? If we from Planck hear the statement**:? Denn es kann kein Zweifel dar? Ber bestehen, dasz unsere | die mit eigenentlicher Physik? berhaupt nichts mehr zu tun haben "**, it turns out that this limit can easily be exceeded. So let us now turn to the problem posed: It is known to you **alien**, that ***has been thinking since mankind*** on spirit and matter, different conceptions have competed for precedence.There we have the dualistic view, which views mind and matter as opposites, often even hostile to each other, eg Descartes.In Descartes, the material world and the spiritual world ***[form]*** two, both equally real, but completely different and not convertible world halves. He also considers that matter is infinitely divisible. ***[On the other hand we have always seen]*** monistic currents are emerging which, for example, in the 18th and 19th centuries led mainly to positivism and materialism: Everything is Matter; Spirit is just a byproduct; against which the other monistic movement of **idalism** and psychic monism came into effect and gave priority to the Spirit: Everything is Spirit or Idea or Absolute Thinking. I now hope to make it clear to you that the results of the modern natural sciences support the view: "Everything is Spirit." For this I begin to recall the atomic philosophy of Democritos and Lucretius. All matter consists of invincible, immutable , indestructible atoms, so the total amount of matter remains unchanged. As actors, the same atoms always play their part, in different groups, but without any change of identity. So these actors enjoyed immortality. When chemistry developed, it turned out that Democratic "atom" had to change its name to "molecule", while the name "atom" was reserved for the particles of the elements into which a molecule can be divided. |
| **Boerma, N. Westendorp. “De ethische wijsgeer I. J. de Bussy.” Synthese 4, no. 12 (1939): 540-543.** | **Top 3 topics**  D-Agent-decision (8) agent; action; decision; game; choice; act; utility; strategy; moral; preference (34%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (21%)  H-History (0) work; time; man; history; new; year; make; life; century; write (20%) |
| **Original text** | **English translation** |
| Het is mij een voorrecht de schrijver van het hiervolgend **artik?l** over **,JEg?isme** en Altruisme bij de lezers van **?**Synthese" te m?gen inleiden. Want naar mijn overtuiging heeft **I. J. de B?ssy**, hoogleeraar te **Amster dam** van 1892 tot 1916, **fl920**, voor de ethiek in ons land baanbrekend werk ***verricht***, dat nog steeds zeer de aandacht verdient. Hij was als geen ander een vijand van vage **es**, en heeft zonder ophouden gestreden tegen slordig woordgebruik, zoo gewoon in de ethiek, **waar door** wij l?ngs elkaar heen redeneeren, anderen niet begrijpen en ons zelf evenmin. ?De ethiek is voor de helft een woordkwestie", schreef hij eens. En hij liet het niet bij die uitspraak; scherp en duidelijk wees hij in voorbeelden het siecht woord-gebruik aan, en hij schreef geen Studie zonder eerst nauwkeurig op de woorden acht te slaan. Hij deed meer; in zijn Inleiding tot de zedekunde (1898) schonk hij ons een werk program van wetenschappelijk ethiek, dat orde tracht te brengen in den chaos, en waarvan ieder, die tot deze Studie zieh getrokken voelt, profijt kan trekken, nog altijd. Het best geef ik een indruk van zijn bedoeling door uit de Inleiding een proeve van woord-behandeling te nemen, en in aansluiting d?arvan heel kort zijn m?thode en indeeling van ethiek te schetsen. Wij kiezen daarvoor de woorden ?zedelijk" en ?zedelijkheid", omdat zij in de ethiek de meest principie?le woorden zijn. Ik bekort, maar de hoofdzaak is duidelijk genoeg. *?*Het woord zedelijk (en zedelijkheid) heeft twee beteekenissen; het wordt gebezigd voor begrippen, die niet alleen van verschillenden, maar zelfs van ongelijksoortigen aard zijn." Wij noemen den mensch een zedelijk wezen; wij spreken van zedelijke verschijnselen en zedelijke eigenschappen, van zedelijke waarde en zedelijk gehalte, van zedelijke waarheden en begrippen, enz.. In al die verbindingen wil men met het woord niet te kennen geven, dat de ver schijnselen, waaraan men het praedicaat ***zedelijk*** toekent, goedkeuring verdienen, maar wil men hun aard aan wij zen, ze onderscheiden van de gene, die tot ***een*** ander gebied, het niet-zedelijke behooren. De prostitutie zoowel als de middernachtzending, het alcoholisme zoowel als de **ont houdersbeweging** zijn zedelijke verschijnselen; zonder een oordeel uit te spreken over de waarde van den godsdienst, kan men hem een zedelijk verschijnsel noemen. ***Wij meenen*** met dat praedicaat niet een lofspraak, maar een bepaling. Op dezelfde wijze gebruiken wij ook ?zedelijkheid" als een verzamel woord voor al de ***openbaringen*** van 's menschen praktische natuur. Wij spreken van de zedelijkheid der Vandalen en der **T?rken**, van de zede lijkheid der eerste of tiende eeuw, en bedoelen dan aan te wijzen zekere verschijnselen in het leven dier volkeren of dier eeuwen, om ze te onder scheiden van andere, b.v. van die welke behooren tot het gebied van de kunst of van de wetenschap. Daarnevens echter heeft het woord zedelijk een andere beteekenis. In het dagelijksch leven gebruiken wij het gewoonlijk als een afkorting van ?zedelijk-goed". Wij bedoelen dan niet een bepaling, maar een lof spraak. Wij willen niet zeggen, hoe iets is, in onderscheiding van andere dingen, maar wij geven te kennen, dat het zoo behoort te zijn als het is. Evenzoo met het woord zedelijkheid. | It is my privilege to introduce the author of the following **article?** **L** about, **JEg? Ism** and Altruism to the readers of**?** Synthesis ". Because I believe that **IJ de B? Ssy**, professor in **Amsterdam dam** of 1892 until 1916, **fl920**, ***[has realized]*** a pioneering work for ethics in our country, which is still very much worthy of attention.He was an enemy of vague **ash** like no other, and has fought relentlessly against sloppy words, so common in ethics, **where** we reason through each other, do not understand others, nor ourselves. "Ethics are half a word issue," he once wrote. And he didn't stop at that statement; sharply and clearly he pointed out the bad word usage in examples, and he did not write a Study without first paying close attention to the words. He did more; in his Introduction to Moral Science (1898) he gave us a work program of scientific ethics, which tries to bring order to chaos and from which everyone who feels drawn to this Study can still benefit. The best way to give an impression of his intention is to take a word-treatment sample from the Introduction, and to outline briefly his method and classification of ethics. We choose the words "moral" and "morality" because they are the most basic words in ethics. I shorten, but the main thing is clear enough. The word moral (and morality) has two meanings; it is used for concepts which are not only of different but even of dissimilar nature. "We call man a moral being; we speak of moral phenomena and moral qualities, of moral value and moral quality, of moral truths and concepts, etc. In all these connections one does not want to use the word to indicate that the phenomena to which the predicate is awarded ***morally*** deserve approval, but one wants to point out their nature, to distinguish them from those that form ***a*** another area, the non-moral. Prostitution, as well as the midnight mission, alcoholism, as well as the **constituent movement** are moral phenomena, without judging the value of religion, one can call him a moral phenomenon. ***[We intend]*** with that predicate not a praise, but a provision. In the same way we also use "morality" as a collective word for all the ***revelation. gene*** of man's practical nature. We speak of the morality of the Vandals and of the **T? Rken**, of the morality of the first or tenth century, and we mean then to indicate certain phenomena in the life of peoples or centuries, to distinguish them from others, eg of those belonging to the field of art or of science. In addition, however, the word moral has a different meaning. In everyday life we usually use it as an abbreviation of "moral good". We do not mean a provision, but a praise speech. We do not want to say how something is, in distinction from other things, but we indicate That it ought to be so as it is. Likewise with the word morality. |
| **Holstijn, A. J. Westerman. “Hoofdstukken uit de psychoanalytische criminologie.” Synthese 4, no. 7 (1939): 351-364.** | **Top 3 topics**  H-History (0) work; time; man; history; new; year; make; life; century; write (37%)  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (34%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (14%) |
| **Original text** | **English translation** |
| De Historische Vorstenmoord. Het klassieke voorbeeld van een vorstenmoord die realiter vadermoord was, is de moord op Caesar door Brutus. De politieke moordenaar ge looft in het algemeen eerlijk aan zijn idealistische motieven, en Brutus deed dat zeker, want Brutus was een achtenswaardig man. En toch was er duidelijk iets ?aan de hand" met zijn Ik-ideaal. Hij was zoo een zijdig eerlijk, dat hij daardoor tot ?stommiteiten" kwam. Immers de uit voering van de moord was een domheid, gezien uit het oog van het belang der **res publia**. Brutus beweerde namelijk, dat hij geen bloed wen schte te vergieten, en liet daarom tegen ieders advies in, ***[against]*** den gevaarlijk sten tegenstander, Antonius, leven. Als het hem er werkelijk om te doen geweest was, het keizerschap te voorkomen, had hij nooit aan de **keizer partij** haar kracht kunnen laten, nu bereikte hij slechts, dat een **klei nere** dan Caesar keizer moest worden, waartoe dan voorloopig **An tonius** de aangewezene ***werd***. Brutus legde zoo den bodem voor het tweede driemanschap, voor het keizerschap van minder capabelen. Zijn scherp inzicht faalde in deze omstandigheden, en door ***Antonius*** te laten leven, omdat hij z.g. geen bloedvergieten wilde, moest er nu burgeroorlog en nog veel meer bloedvergieten ontstaan, en werd zijn bewuste bevrij dingsdaad een misse daad, een moord. Doordat hij niet deed wat gedaan moest worden om het keizerschap te voorkomen, en door zijn misplaatst overmatig accentueeren van zijn wensch om geen bloed te vergieten, be wees hij dat het ***hem*** er all??n maar om te doen was, het bloed van Caesar te vergieten. Door zijn id?alisme kon hij dien wensch uit zijn bewustzijn wegdringen. ?Niet omdat ik Caesar minder lief had, doch om dat ik Rome **m??r** lief had" zou hij het gedaan hebben. **?Wijl** Caesar mij lief had, ween ik om hem, wijl hij gelukkig was verheug ik mij, wijl hij dapper was ***eer*** ik hem ? maar wijl hij eerzuchtig was, doodde ik hem. Daarom tr?nen voor zijn liefde, vreugde voor zijn geluk, eer voor zijn dapperheid, en de dood voor zijn heerschzuchtl" Woord voor woord moet hier waar en eerlijk zijn, doch voor ons spreekt hieruit zijn **Am bivalentie**, zijn infantiele driftverhouding, waar haat en liefde, of beter waar vernietigingsdrift en ***erosdrift*** zonder elkaar te ***temperen***, doch **veel eer** elkaar aanwakkerend, op eenzelfde persoon gericht waren. Doch hoe ?**echt"** en waar het voor zijn bewustzijn ook mocht zijn, dat hij het deed omdat hij Rome **m??r** liefhad **?** voor zijn **?Es"** was het zeker **?nwaar**: hij deed het omdat hij in zijn weldoener zijn vader haatte, en dien wilde dooden. Dat de vader **?semper incertus"** is, geldt wel bijzonder voor Brutus, die geboren is ten tijde dat zijn moeder Servilia een verhouding had met Caesar, waarom Caesar hem dan ook volgens Plutarchus in zekeren zin als zijn zoon beschouwde. ***Merkwaardig was steeds de verhouding*** tus schen beide. Caesar had Brutus steeds met weldaden overladen. Kort nadat de officieele vader van Brutus op last van Pompeius gedood was, koos Brutus in den strijd tusschen Pompeius en Caesar, tot gro?te ver bazing van een ieder, onverwacht de zijde van ***Pompeius***, z.g. omdat de zaak van Pompeius rechtvaardiger zou zijn dan die van Caesar! Voor het publiek gold dit altijd als een bewijs van de onkreukbare rechtvaar digheidszin van Brutus, dat hij alle persoonlijke motieven, die hem kon den nopen voor zijn vaderlijken vriend Caesar partij ***te kiezen*** tegen den moordenaar van zijn vader, opzij zette, terwille van de rechtvaardigheid. Doch de psycholoog, die om te beginnen weet, dat de rechtmatigheid van Pompeius zaak boven die van Caesar niet bepaald zeker was, zal hier de vraag moeten stellen, of er geen innerlijke gronden waren, die Brutus noopten, nu juist aan deze zijde het recht te zien. | The Historical Royal Assassination. The classic example of a royal assassination that was actually paternal murder is the murder of Caesar by Brutus. In general, the political murderer honestly believes in his idealistic motives, and Brutus certainly did, because Brutus was an honorable man. And yet there was clearly something "going on" with his I-ideal. He was so one-sidedly honest that it made him "stupid". After all, the execution of the murder was a stupidity, in view of the importance of the **res publia**. Brutus claimed that he did not want to shed blood, so he let live ***against*** the most dangerous opponent, Antonius, against everyone's advice. If he had really cared to prevent the emperorship, he could never have given the **emperor's power** its strength, but now he only achieved that a **clay** must become emperor more than Caesar, for which purpose **An tonius** was appointed for the time being. ***became.*** Brutus thus laid the ground for the second triumvirate, for the emperorship of fewer capables. His keen insight failed in these circumstances, and by letting ***Antony*** live, because he did not want bloodshed, there must now be civil war and many more bloodshed, and his deliberate act of liberation became a crime, a murder. By not doing what had to be done to prevent emperorship, and by misplacing his excessive emphasis on his wish not to shed blood, he proved that it was all about ***him***, Caesar's blood to shed. His idealism allowed him to push that wish out of his consciousness. "Not because I loved Caesar less, but because I loved Rome **[more]**" he would have done it.**?** **[Because]** Caesar loved me, I weep for him, because he was happy I rejoice, because he was brave ***before*** I ***was*** him, but because he was ambitious, I killed him, therefore tears for his love, joy for his happiness, honor for his prowess, and death for his lordship "Word for word must be true and honest here, but to us this speaks of his **Am bivalence**, his infantile temper, where hatred and love, or rather, destruction and ***erosion*** without ***damaging*** each other, but **much** fostering each other, were aimed at the same person. But how? **Real "**and wherever it may be for his consciousness that he did it because he loved Rome **[more]** for his**? Es"** was it **true?** He did it because he hated his father in his benefactor and wanted to kill him. The fact that the father is**? Semper incertus "**is particularly true for Brutus, who was born when his mother Servilia had an affair with Caesar, why according to Plutarch Caesar regarded him as his son in a certain sense. ***[The relationship was always remarkable]*** between the two Caesar had always showered Brutus with mercies Shortly after Brutus' official father was killed on Pompey's orders, Brutus, in the battle between Pompey and Caesar, unexpectedly sided with ***everyone. Pompey,*** so called because the case of Pompey would be fairer than Caesar's! To the public, this was always a testament to Brutus's unimpeachable sense of justice, that he had all the personal motives that could require him ***[to choose]*** for his paternal friend Caesar's party. against the murderer of his father, set aside for the sake of righteousness, but the psychologist, who knows first of all, that the legality of Pompey's case ***is*** above that of Caesar was not exactly sure, will have to ask here whether there were no inner grounds which required Brutus to see the right on this side. |

**Google Translate manual checks – Sample of French articles**

Samples of texts in original languages with their corresponding translations. These samples of approximately 500 words each have been randomly chosen across time-periods and journals. Three types of anomalies have been identified, with possible impact on computational textual analyses: (i) anomalies that are present both in the original text and in the translation (in bold); (ii) anomalies that are introduced by the translation and that were not present in the original text (in bold italics), (iii) anomalies that were present in the original text and that have been corrected through machine-translation (underlined).

**[Encoder 1]**

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| **Article and original text** | **Topics and English translation** |
| **Bourgin, Georges (1956) « Neutralité ». Synthese 10 : 265-269.** | **Top 3 topics**  H-History (0) work; time; man; history; new; year; make; life; century; write (57%)  D-Agent-decision (8) agent; action; decision; game; choice; act; utility; strategy; moral; preference (14%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (6%) |
| **Original text** | **English translation** |
| Qui peut et **n'enpesche p?che"** (Loysel) La Soci?t? Internationale de ***Signifique*** se pr?occupe? juste titre de la s?mantique des mots et de la valeur des concepts em ploy?s en mati?re de politique nationale et internationale. Elle trouvera des ?l?ments utiles d'enqu?te et d'information aupr?s des VAssociation fran?aise des Sciences politiques qui a d?sormais son organe dans la ***Revue*** fran?aise de Science politique (no 1-2 janv., juin 1951, Presses universitaires), ainsi que dans le vocabulaire philosophique d? ? l'?minent professeur **Andr?** Lalande et dans le Vocabulaire historique du Centre de **Synth?se** dirig? par le non moins eminent Henri Berr. Le mot et le concept de neutralit? doit aux circonstances actu elles de la politique internationale qu'on s'arr?te sur sa **significa tion**. Et d'abord, sans ?laborer une ?tude vraiment s?mantique du terme, **il** convient d'indiquer tout de suite qu'il se rattache au pronom ind?fini latin ?neuter", ?ni l'un ni l'autre".  C'est **?** la m?me origine qu'est d? le mot neutralisme, dont nous examinerons rapidement aussi le sens. Je viens de dire que la neutralit? a sa place dans la politique internationale, sa place essentielle, mais le mot est employ? aussi dans la politique int?rieure de certains pays, **?** l'occasion des probl?mes scolaires qui ***mettent aux prises*** les partisans de l'enseignement d'?tat **?** ceux de l'enseignement confessionnel, dit ?libre" **?** appli cation particuli?re d'un adjectif ***?quivoque***: la ?neutralit? scolaire" consiste dans la doctrine et la pratique politiques en vertu de laquelle l'?tat organisateur de l'enseignement national, ne se pr?oc cupe pas et ne doit point se pr?occuper de la confession religieuse ni de la doctrine philosophique des parents qui confient leurs enfants aux ?coles et ?tablissements officiels d'enseignement.  Sur le plan de la politique internationale, la neutralit? signifie l'engagement bilat?ral et parfois pluraliste que tel?tat ou tels ?tats ne prendront pas part aux conflits arm?s, aux guerres dans lesquels seront impliqu?s le ou les ?tats **avec lesquels ils ont pass?** des conventions. Deux types de neutralit? se pr?sentent dans l'histoi re: la neutralit? conventionnelle **indiqu?es** r?sultant de trait?s pass?s, d'ordinaire, temporairement dans les conditions qui viennent d'?tre; la neutralit? perp?tuelle, r?sultant d'accords internationaux et d'actes finals de congr?s, qui d?munit, en quelque sorte, l'?tat b?n?ficiaire du droit d'intervenir par la force dans les conflits internationaux, mais surtout le **met ? l'abri** des cons?quences destructives des con flits internationaux. Ces ?tats de chose ont exist? dans l'antiquit?, mais ce n'est qu'au cours des guerres internationales du XVI?me et du XVIIe si?cle que le droit de neutralit? a ?t? mis au point par les juristes, pr?cis?ment dans les pays les plus menac?s par les conflits interna tionaux, les Pays-Bas et la Suisse. La Belgique, form?e en 1830 **?** la suite de sa s?paration d'avec les Pays-Bas, a **b?n?fici?** d'un r?gime de neutralit? auquel elle n'a renonc**?** qu'aux approches de la seconde guerre mondiale. La Suisse est le seul ?tat soumis ? un pareil **r?gime0**. Dans la pratique, le r?gime de neutralit? a d'ailleurs ?t? plus ou moins **tourn?** par certains usages: internation alement par le ?droit de passage" en vertu duquel le territoire d'un ?tat neutre pouvait ?tre utilit? par les arm?es des ?tats en guerre; par des groupes d'individus ou des individus isol?s qui, faisant fi des interdictions sp?cifi?es par les trait?s, continuaient de commercer avec les ?tats en guerre ou certains de leurs organis mes. | Who can and **does not fish "**(Loysel) The International ***Significant*** Society is rightly concerned with the semantics of words and the value of the concepts used in matters of national and international policy. She will find useful elements of inquiry and information near the FrenchAssociation of Political Sciences which henceforth its organ in the French ***Review*** of Political Science (no 1-2 Jan, June 1951, University Press), as well as in the philosophical vocabulary of the eminent professor **Andr?** Lalande and in the historic Vocabulary of the Center of **Synth?** Directed by the no less eminent Henri Berr. The word and the concept of neutrality owes to the current circumstances of international politics that we stop on its **significance**. And first, without developing a really semantic study of the term, should immediately indicate that it is related to the indefinite Latin pronoun neuter ", neither neither".  It is the same origin that is he word neutralism, whose meaning we will also quickly examine. I just said that neutrality**?** has its place in international politics, its essential place, but the word is used**?** also in the internal politics of certain countries,? the occasion of the school problems which ***put in*** the supporters of the education of state**?** those of denominational education, said to be "free" ***with a*** particular application of an ***unambiguous*** adjective: "school neutrality" consists of political doctrine and practice by virtue of which the organizing state of national education, is not concerned and should not concern itself with the religious confession or the philosophical doctrine of parents who entrust their children to schools and official educational establishments.  In terms of international policy, neutrality**?** signifies the bilateral and sometimes pluralist commitment that a state or states will not take part in armed conflicts, wars in which the state (s) with which they will have been involved **will be involved** conventions. Two types of neutrality? present themselves in history: neutrality**?** conventional **indicated** resulting from past treaties, ordinarily, temporarily under the conditions which have just been; neutrality**?** perpetual, resulting from international agreements and final acts of congresses, which, in a way, deprives the beneficiary state of the right to intervene by force in conflicts international, but above all **the food? sheltered** from the destructive consequences of international conflicts. These states of affairs have existed. in antiquity, but it was only during the international wars of the sixteenth and seventeenth centuries that the right of neutrality was developed by jurists, precisely in the countries most threatened by international conflicts, the Netherlands and Switzerland. Belgium, formed in 1830**?** following its separation from the Netherlands, which **benefits?** of a neutral regime which she has not given up**?** only near the Second World War. Switzerland is the only state subject to such a **regime0**. In practice, the neutral regime was by the way more or less **turned?** by certain uses: internationally by the "right of way" under which the territory of a neutral state could be used by the armies of states at war; by groups of individuals or isolated individuals who, ignoring the prohibitions specified by the treaties, continued to trade with states at war or certain of their organizations. |
| **Fraïssé, Roland (1966) « Une hypothèse sur l'extension des relations finies et sa vérification dans certaines classes particulières (Deuxième Partie) », Synthese 16(1): 34-46.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (91%)  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (2%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (1%) |
| **Original text** | **English translation** |
| La premi?re partie de cet article (Paragraphes 1 ? 4 inclus) est parue en traduction anglaise ? The Theory of Models (Proceedings of the 1963 **Inter national** Symposium at Berkeley, ed. by J. W. Addison, L. Henkin and A. Tarski), Studies in Logic and the Foundations of Mathematics, **Amster dam** 1965, 96-106. Rappelons ses d?finitions et ses principaux r?sultats. Une relation n-aire, ou **?'arit? n** (entier positif fini) et de base A, est une fonction qui, **?** chaque ?l?ment de An9 associe l'une des valeurs + ou ?. Si B^A9 la restriction de la relation R k B, not?e R\B, est la relation de base B, prenant la m?me valeur que R pour chaque ?l?ment de Bn. Une application bijective/de A sur A' est un isomorphisme de R sur R' (***de base*** A') lorsque R(xl9 ..., xn) = R'(f(x1)9 ...,f(xn)) quels que soient X?9 ..., XnGA. Une multirelation v-aire, ou **?'arit?** v = (nl9 ..., nh) (h entier positif fini) et de base A, est une suite M=(Ri9 ..., Rh) de h relations **d'arit?s** nl9...9nh (entiers positifs finis) et de base commune A. Lorsque h = \, on identifie M=(R1) avec la relation R. La multirelation (?ventuellement la relation) est **?itQ** finie, infinie, d?nombrable, de cardinal a, selon que sa base est finie, infinie, d?nombrable, de cardinal a. La, restriction **?** B^A de M=(Rl9 ..., Rh) est N=M\B=(Ri\B, ..., Rh\B); on dit aussi que M est une extension de N ? A. L'application bijective / de A sur ? est un isomorphisme de M sur M' = (R'l9 ..., R'h)9 de base ?9 lorsqu'elle est un isomorphisme de Ri sur R't pour /=1, .... h. Soit M une multirelation de base infinie A, et soit A'^A; moyennant l'axiome de choix, et plus pr?cis?ment l'axiome d'existence d'un ultra filtre plus fin qu'un filtre donn?, // existe une extension M' de M ? A' telle que toute restriction finie de M' soit isomorphe **?** une restriction de M. l'extension des relations finies Autrement dit M et Mf auront les m?mes restrictions finies **?** l'isomorphie ***pr?s*** (voir [2] ou [3]). Deux multirelations Met M'sont dites **p-?quiv aient** es lorsque toute restriction de M **?** ^p ?l?ments est isomorphe **?** une restric tion de M', et inversement. Etant donn? la suite finie d'entiers v, et l'entier p: 1. // existe un entier s(y,p) tel que toute multirelation v-aire de cardinal ^s(v9p), admette une multirelation d?nombrable p**-?quiv alent?**. 2. Il existe un entier s'(y9p) tel que toute multirelation v-aire, de **car dinal** ^s'(y9p), admette une restriction p**-?quiv alent?**, ayant elle-m?me une extension d?nombrable p**-?quiv alent?.** Ces ?nonc?s sugg?rent l'hypoth?se suivante, que nous n'avons pu ni d?montrer ni infirmer : Etant donn? la suite finie d'entiers v et **Ventier** p9 il existe un entier t(v9p) tel que toute multirelation v-aire, de cardinal ^t(v9p), admette une extension d?nombrable p-?quivalente. | The first part of this article (paragraphs 1 to 4 inclusive) was published in English. The Theory of Models (Proceedings of the 1963 **Inter national** Symposium at Berkeley, ed. By JW Addison, L. Henkin and A. Tarski), Studies in Logic and the Foundations of Mathematics, **Amster dam** 1965, 96-106. Let us recall its definitions and its main results. An n-ary relationship, or**? Arit? n** (finite positive integer) and of base A, is a function which,**?** each element of An9 associates one of the values + or?. If B ^ A9 the restriction of the relation R k B, noted R \ B, is the basic relation B, taking the same value as R for each element of Bn. A bijective map **/** of A on A 'is an isomorphism of R on R' (***basic*** A ') when R (xl9 ..., xn) = R' (f (x1) 9 ..., f (xn) ) whatever X? 9 ..., XnGA. A v-ary multirelation, or**? Arit? v** = (nl9 ..., nh) (h finite positive integer) and of base A, is a sequence M = (Ri9 ..., Rh) of h **arit** relations nl9 ... 9nh (positive integers finite) and of common base A. When h = \, we identify M = (R1) with the relation R. The multirelation (possibly the relation) is**? itQ** finite, infinite, countable, of cardinal a, according to that its base is finite, infinite, countable, of cardinal a. The restriction **?** B ^ A of M = (R19 ..., Rh) is N = M \ B = (Ri \ B, ..., Rh \ B); we also say that M is an extension of N? A. The bijective / A application on? is a basic isomorphism of M on M '= (R'l9 ..., R'h) 9? 9 when it is an isomorphism of Ri on R't for / = 1, .... h. Let M be an infinite basic multirelation A, and let A '^ A; by means of the axiom of choice, and more precisely the axiom of existence of an ultra filter finer than a given filter, // there exists an extension M 'of M? A 'such that any finite restriction of M' is isomorphic**?** a restriction of M. the extension of the finite relations In other words M and Mf will have the same finite restrictions**?** the ***near*** isomorphy (see [2] or [3]). Two Met M multi-relationships are said to be **p-? Iv** when any restriction of M**? ^** elements is isomorphic**?** a restriction of M ', and vice versa. Given the finite sequence of integers v, and the integer p: 1. // exists an integer s (y, p) such that any v-ary multirelation of cardinal ^ s (v9p), admits a countable multirelation p- **? quiv nearby ?**. 2. There exists an integer s '(y9p) such that any v-ary multirelation, of **car dinal** ^ s' (y9p), admits a restriction p**-? Quiv around**, having itself a countable extension p**-? quiv around ?**. These statements suggest the following hypothesis, which we could neither demonstrate nor refute: Given the finite sequence of integers v and **Ventier** p9 there exists an integer t (v9p) such that any v-ary multirelation, of cardinal ^ t (v9p), admits a p-equivalent countable extension. |
| **Bourgeois, Bernard (2002) « Le XXe Siècle Philosophant: Post-Hégélien? » Synthese 130(2): 227-233** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (51%)  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (11%)  B-Arguments (22) argument; claim; say; question; make; view; reason; fact; case; point (5%) |
| **Original text** | **English translation** |
| Si la source est homog?ne ? ce qui sourd d'elle et peut donc ?tre **re vendiqu?e** commie telle, c'est**-?-dire ?** travers un lien positif reconnu ? elle, m?me dans l'insistance mise sur son ***d?passement*** et sa critique, la racine, quant ? elle, nourrit ce qui ***ditf?re*** d'elle et la nie ou - puisqu'il va s'agir ici du destin, dans le si?cle qui s'ach?ve, d'un ***h?g?lianisme*** qui parlait bien ainsi du rapport entre eux des divers moments de la plante! - la "r?fute". Et la r?futation elle-m?me peut ne pas r?fl?chir sa position ou positivit? premi?re, o? elle ne vit pas sa relation n?gative ? ce qu'elle r?fute en fait, dans une saisie proprement dialectique de son surgissement; elle aime m?me ? se rattacher ? un principe **auto-pos?** et non pas simplement pos? par la n?gation - qu'elle dit bien plut?t susciter - de son pass?. II ne suffit pourtant pas que la ***r?futation*** refuse pour ainsi dire ***d'h?g?lianiser*** en sa ***saisie*** de soi pour qu'elle ?chappe r?ellement ? la puissance de la dialectique, laquelle peut parfaitement rendre compte de sa n?gation par ce qui s'affirme comme son Autre absolu. Mais comme il est tout aussi vrai que la n?gation de la r?duction dialectique du positif au n?gatif s'entend ? restituer la "***g?n?alogie***" d'une telle r?duction, la question de savoir si la ***r?futation*** se nourrit, pour ?tre elle-m?me, du ***r?fut?***, et y a donc sa racine, ne peut recevoir de r?ponse absolument contraignante par son objectivit?. Tel sera bien le lot de la pr?sente interrogation sur la relation du XXe si?cle philosophant ? l'intervention ***h?g?lienne***: quel r?le celle-ci a-t-elle jou? dans le d?veloppement de celui-l?? C'est un fait que les courants novateurs de la pens?e au XXe si?cle ne se r?clament gu?re de l'?v?nement h?g?lien, ni comme d'une source, ni comme d'un racine. Ce fut d?j? le cas, en ve?rit?, pour le XIXe si?cle. Certes - et pour nous en tenir aux courants philosophiques devenus cul turellement pr?gnants et appel?s ainsi ? constituer le contexte stimu lant majeur de la pens?e de notre si?cle - les quatre grands rejets du h?g?lianisme, au nom du processus mat?riel (Marx), de la vie (**Schopen harier**, puis, in fine, Nietzsche), de l'existence (Kierkegaard) et du sens (Schleiermacher, prolong? ult?rieurement par Dilthey), furent **profond? men**t impliqu?s dans le renouvellement de l'engagement philosophique au cours du si?cle pr?c?dent.1 Mais force est bien de constater que toutes ^M S les nuances dans le jugement sur l'importance de l'intervention de Hegel relativisent celle-ci: de la reconnaissance qu'en fait son "disciple" Marx, elle-m?me d?j? bien temp?r?e par le r?le soulign? de ces m?diations non proprement philosophiques du marxisme que furent l'?conomie politique anglaise et le socialisme fran?ais, ? la d?nonciation absolue, par **Schopen hauer**, de la perversion inutile, ***"?picyclique***", du kantisme que fut, ? ses yeux, le ***h?g?lianisme***. Il est vrai que Hegel lui-m?me - pour qui le vrai se pr?suppose dans ce par quoi il semble compos? - s'est employ?, par ex emple, ? r?trograder Kant au sein de ***l'eud?monisme*** empiriste et ? creuser ***corr?lativement*** l'hiatus entre la fausse et la vraie r?volution copernicienne en philosophie! | If the source is homogeneous? what springs from it and can therefore be **re-sold** as such, that is to **say?** through a recognized positive link? it, even in the insistence put on its ***overflow*** and its criticism, the root, as for it nourishes what ***denies*** it and denies it or - since it will be a question here of destiny, in the century which ends, of a ***Helianism*** which spoke well so the relationship between them of the various moments of the plant! - the "refute". And the denial itself may not reflect its position or positivity. first, where she does not live her negative relationship? what it refutes in fact, in a properly dialectical grasp of its emergence; she even loves relate ? an **auto-pos** principle? and not just posed? by the negation - which it says rather rather arouse - of its past. However, it is not enough that the ***refusal*** refuses, so to speak, to make the self-***grip*** more ***generalized*** so that it really escapes. the power of dialectics, which can perfectly account for its negation through what asserts itself as its absolute Other. But as it is equally true that the negation of the dialectical reduction from positive to negative is understood to reproduce the "***genogy***" of such a reduction, the question of knowing whether the ***restoration*** feeds, to be itself, of the ***dream***, and therefore has its root there , cannot receive an absolutely binding response due to its objectivity. Such will be the lot of the present interrogation on the relation of the twentieth century philosophical? the ***helicopter*** intervention: what role did it play? in the development of this one ?? It is a fact that the innovative currents of thought in the twentieth century did not claim much from the Hegelian event, neither as a source, nor as a 'a root. It was already the case, in fact, for the nineteenth century. Certainly - and to stick to the philosophical trends that have become culturally significant and so called? constitute the major stimulating context of the thought of our century - the four great rejections of helianism, in the name of the material process (Marx), of life (**Schopen harier**, then, in fine , Nietzsche), existence (Kierkegaard) and meaning (Schleiermacher, later extended by Dilthey), were **profound**. involved in the renewal of philosophical engagement during the previous century.1 But it is clear that all ^ MS the nuances in the judgment on the importance of the intervention of Hegel put it in perspective: the recognition that her "disciple" Marx, herself already, makes of it. well tempered by the underlined role of the not properly philosophical mediations of Marxism that were the English political economy and French socialism, the absolute denunciation, by **Schopen hauer**, of the useless, "***picyclic***" perversion, of the kantism that was,? his eyes, ***helianism***. It is true that Hegel himself - for whom the true presumes in what he seems composed by? - has been employed, for example,? downgrade Kant within empiricist ***eudonism*** and? ***Correctly*** dig the hiatus between the false and the true Copernican revolution in philosophy! |
| **Destouches, Jean-Louis (1948) « Le rôle de l'activité subjective dans l'élaboration des notions de la physique moderne » Synthese 7(1/2): 75-78** | **Top-topics**  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (40%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (18%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (11%) |
| **Original text** | **English translation** |
| E par Jean-Louis Destouches (Paris) Hier M. Piaget nous a dit que le but de cette conf?rence ?tait de ?retracer la gen?se psychologique des notions et leur formalisation logistique". Ma t?che doit ?tre d'essayer de remplir ce but pour quelques notions de la physique moderne. Quand on veut aborder l'?tude d'une discipline pour pouvoir ensuite prendre une part active dans son d?veloppement, on est amen? tout d'abord ? examiner passivement la derni?re phase de son ?volution historique. Ensuite on sera conduit ? faire une analyse de cette ?volution dans un but de compr?hension, en vue d'une action provo quant de nouveaux d?veloppements. Alors ce qu'on a compris, on est conduit ? de formaliser, et cette formalisation va permettre une action qui fera avancer d'une fa?on plus ou moins restreinte la discipline consid?r?e, suivant la valeur de ce que l'on a compris. Pour ma part, je me suis attach? ? faire progresser les th?ories de la microphysique et j'ai ?tudi? passivement l? d?veloppement de la m?canique ondulatoire. Un jour il m'est apparu que le caract?re fondamental des th?ories quantiques ?tait le calcul de pr?visions: ? partir du r?sultat d'une mesure initiale effectu?e par un observateur, on cherche ? calculer des pr?visions concernant le r?sultat de mesures ult?rieures susceptibles d'?tre effectu?es par certains observateurs. On peut alors partir uniquement de cette id?e et la traduire en formules. Cette expression formalis?e va entra?ner un certain nombre de cons?quences, et c' est leur ensemble qui constitue la th?orie g?n?rale des pr?visions\*). Par exemple on y d?montre que tout r?sultat de mesure peut ?tre traduit en un ensemble d'?l?ments abstraits dit ensemble des ?l?ments initiaux associ? au r?sultat de la mesure, et chaque ?l?ment initial Xo peut ?tre transform? ? l'instant \*) Pour plus de d?tail? voir: Jean-Louis Destouches, Corpuscules et syst?mes de corpuscules, t. I (Gauthier-Villars, Paris 1941) et Principes fondamentaux de physique th?orique} t-II (Hermann, Paris 1942). Voir aussi: Paulette Destouches ***F?vrier***, Recherches sur la structure des th?ories physiques (Les Presses **Univer sitaires**, Paris 1948). Jean-Louis Destouches. Le R?le de L'Activit? subjective t en un ?l?ment abstrait dit ?l?ment de pr?vision ? **Vinstant** t associ? ? un ?l?ment initial Xo. La transformation est repr?sent?e par un op?ra teur U (t, to, S, ob) dit op?rateur d'?volution qui d?pend du syst?me ?tudi? S et de l'observateur consid?r? **ob**. On a donc: X (t) = U (t, to, S, ob) Xo. Les pr?visions, exprim?es sous formes de probabilit?s, se calculent alors par une loi ind?pendante du temps ? partir des ?l?ments de pr?vision X (t). Toute l'?volution au cours du temps se trouve contenue dans l'op?rateur d'?volution U (t, to), c'est a dire dans le passage de Xo ? X (t). La m?canique ondulatoire se montre bien un cas particulier de ce sch?ma: les Xo sont alors les fonctions d'ondes initiales i^o, les X (t) sont les fonctions d'ondes \p (t) ? l'instant t. Cette m?thode est toute diff?rente de celle de la physique clas sique, qui ?tait totalement objective en ce sens qu'on y d?crivait des objets et leurs propri?t?s intrins?ques, ind?pendamment de tout **obser vateur**. Ici au contraire on part d'actions effectu?es par des obser vateurs et on cherche ? pr?voir le r?sultat d'actions ult?rieures. | E by Jean-Louis Destouches (Paris) Yesterday Mr. Piaget told us that the aim of this conference was to retrace the psychological genesis of concepts and their logistical formalization ". My task must be try to fulfill this goal for a few notions of modern physics. When we want to approach the study of a discipline so that we can then take an active part in its development, we are first of all led to passively examine the last phase of its historical evolution. Then we will be led to make an analysis of this evolution with the aim of understanding, with a view to an action provoking as for new developments. understood, we are led to formalize, and this formalization will allow an action which will advance in a more or less restricted way the discipline considered, according to the value of what we understood. For my part, I set out to advance the theories of microphysics and I studied passively the development of e wave mechanics. One day it occurred to me that the fundamental character of quantum theories was the calculation of forecasts: starting from the result of an initial measurement carried out by an observer, we seek to calculate forecasts for the outcome of subsequent measurements that may be made by some observers. We can then start from this idea only and translate it into formulas. This formalized expression will lead to a certain number of consequences, and it is their whole which constitutes the general theory of forecasts \*). For example, we show that any measurement result can be translated into a set of abstract elements called a set of associated initial elements. at the result of the measurement, and each initial element Xo can be transformed ? the moment \*) For more details? see: Jean-Louis Destouches, Corpuscules et systems de corpuscules, t. I (Gauthier-Villars, Paris 1941) and Fundamental Principles of Theoretical Physics} t-II (Hermann, Paris 1942). See also: Paulette Destouches ***February***, Research on the structure of physical theories (Les Presses **Univer sitaires**, Paris 1948). Jean-Louis Destouches. The Role of Activity subjective t in an abstract element called predictive element? Has it **been** associated? ? an initial element Xo. The transformation is represented by an operator U (t, to, S, ob) said operator of evolution which depends on the system studied. S and the observer considered? **ob**. We therefore have: X (t) = U (t, to, S, ob) Xo. The forecasts, expressed in the form of probabilities, are then calculated by a law independent of time. from the forecast elements X (t). All the evolution over time is contained in the evolution operator U (t, to), that is to say in the passage of Xo? X (t). The wave mechanics is clearly a special case of this scheme: the Xo are then the functions of initial waves i ^ o, the X (t) are the functions of waves \ p (t)? the instant t. This method is very different from that of classical physics, which was completely objective in the sense that it described objects and their intrinsic properties, regardless of everything **observed. vateur**. Here, on the contrary, we start from actions carried out by observers and we seek to predict the outcome of further actions. |
| **Piaget, Jean. “Méthode axiomatique et méthode opérationnelle.” Synthese 10, no. (1956): 23-43.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (27%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (25%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (11%) |
| **Original text** | **English translation** |
| Nous examinerons les relations entre les m?thodes axiomatique et op?rationnelle selon trois cat?gories de probl?mes: un probl?me psy chologique, d'abord, car ces deux sortes de m?thodes, tout en ?tant utilis?**es** dans un but logique, c'est-?-dire normatif, constituent par ailleurs des d?marches de la pens?e, donc des faits psychologiques; un probl?me de relation entre la psychologie et la logique, ensuite, car les op?rations constituent le point de contact entre ces deux disciplines; un probl?me **?pist?mologique**, enfin, car ces m?mes questions sont significatives du point de vue de la connaissance en g?n?ral. I. Le point de vue psychologique. Consid?r?e sous l'angle psychologique, une axiomatique est un syst?me de propositions, donc de pens?es verbales (ou significations attach?es ? un syst?me designes). Il est inutile de rappeler, en ***notre*** ?Soci?t? internationale de ***Signifique***" que ces pens?es verbales cons tituent essentiellement des actes de communication, c'est-?-dire que les propositions (et les d?monstrations auxquelles elles donnent lieu les unes ? partir des autres) sont avant tout des actions exerc?es sur autrui de mani?re ? provoquer chez lui la formation d'un syst?me de pens?es correspondant, de fa?on bi-univoque, ? celles qui constituent la th?orie envisag?e, telle qu'elle a ?t? con?ue par son cr?ateur m?me. Les op?rations, au contraire, consistent psychologiquement en ac tions g?n?rales, exerc?es non pas seulement sur autrui, mais en premier lieu sur les objets eux-m?mes, que ces objets soient mat?riels ou **sym bolis?s** par des signes quelconques. Mais la plupart des op?rations ne demeurent pas ? l'?tat d'actions mat?rielles (telles une **r?union** d'objets r?els en une collection, ou une mesure par superposition de **T** deux grandeurs physiques, etc.).  Les op?rations sont au contraire sus ceptibles de **s'int?rioriser** sous la forme d'actions **mentalis?es** qui con stituent donc ***?*** leur tour des pens?es, mais sans perdre leur caract?re d'actions effectives: ce sont alors des actions simplement esquiss?es et portant sur des objets symboliques, mais conservant tous les autres caract?res psychologiques de l'action mat?rielle. Il est donc erron?, ou du moins **?quivoque**, de soutenir avec Mach, Rignano, Goblot, etc., que les op?rations sont des ?exp?riences" ou des actions ?mentalement ex?cut?es": **r?unir** deux objects symboliques A et A' en une classe B est psychologquement la m?me action que de r?unir ***mat?riellement*** deux objets physiques en une collection, ? cette seule diff?rence **pr?s** que la premi?re de ces deux actions ne se d?ploie pas en gestes ext? ***rieurs*** mais demeure int?rioris?e, et cela parce qu'elle porte sur des objets symboliquement ?voqu?s et non pas des choses physiquement donn?es.  Mais les op?rations ne sont pas simplement des actions **int?riori s?es**, car chacune de ces derni?res ne constitue pas une op?ration. Toute op?ration comporte en outre deux cacact?res, ***que*** ne poss?de pas n'importe quelle action int?rioris?e. Le propre des op?rations est d'abord de former entre elles des syst?mes ***d'ensemble*** ***?*** propri?t?s d?finies relativement ? leur **totalit?**. C'est ainsi que l'action d'ordon ner deux objets (ex?cut?e mat?riellement ou **int?rioris?e**) ne consti tue une op?ration que dans la mesure o? elle peut ?tre **coordonn?e ?** d'autres actions de m?me esp?ce (ordonner un troisi?me objet par rap port aux deux premiers, etc.) et **o?** cette coordination **ob?it ?** cer taines lois de totalit? (syst?mes semi-ordonn?s, bien ordonn?s, etc.) ? | We will examine the relations between the axiomatic and operational methods according to three categories of problems: a psychological problem, first, because these two kinds of methods, while being used **es** with a logical aim, that is to say a normative one, constitute in addition steps of the thought, therefore psychological facts; a problem of relation between psychology and logic, then, because the operations constitute the point of contact between these two disciplines; a **pistemological** problem, finally, because these same questions are significant from the point of view of knowledge in general. I. The psychological point of view. Considered from the psychological angle, an axiomatic is a system of propositions, therefore of verbal thoughts (or meanings attached to a designated system). It is useless to recall, in ***our?*** Society? International ***Significant*** "that these verbal thoughts constitute essentially acts of communication, that is to say that the propositions (and the demonstrations to which they give rise one from the other) are above all actions exercised on others in such a way as to provoke in him the formation of a system of thoughts corresponding, in a bi-unequivocal manner, to those which constitute the theory envisaged, such as it was designed by its very creator. The operations, on the contrary, consist psychologically in general actions, exercised not only on others, but primarily on the objects themselves, whether these objects are material or **sym bolated** by any signs. But most operations do not remain in the state of material actions (such as a **r union** of real objects in a collection, or a measure by superposition of **T** two physical quantities, etc.).  On the contrary, operations are likely to be **improved** under the ***f*** form of **mental** actions which therefore constitute their turn ***of*** thoughts, but without losing their character of effective actions: they are then actions simply sketched and bearing on symbolic objects, but preserving all the other psychological characteristics of the action mat? rielle. It is therefore wrong, or at least **unequivocal**, to argue with Mach, Rignano, Goblot, etc. that the operations are experiences "or actions mentally executed": **r? to unite** two symbolic objects A and A 'in a class B is psychologically the same action as ***to*** reunite two physical objects in a collection, this only difference **near** that the first of these two actions does not deploy in external gestures ***laughs*** but remains interiorized, and this because it relates to symbolically evoked objects and not to physically given things.  But operations are not simply **internal** actions, because each of these is not an operation. All operations also have two characters, ***which*** do not have any internalized action. The peculiarity of operations is first of all to form whole systems ***between*** ***them***. properties defined relatively to **all** of them. This is how the action of ordering two objects (executed materially or **internally**) only constitutes an operation insofar as it can be **coordinated?** other actions of the same kind (order a third object in relation to the first two, etc.) and **where?** this coordination **obeys?** certain laws of totality? (semi-ordered, well-ordered systems, etc.)? |
| **Gonseth, Ferdinand. “L'idée de la loi naturelle.” Erkenntnis 6, no. (1936): 421-430.** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (37%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (34%)  F-Explanation (16) model; explanation; explain; account; explanatory; phenomenon; use; case; system; provide (6%) |
| **Original text** | **English translation** |
| L'id?e de la loi naturelle i. Il me semble conforme aux buts g?n?raux qui sont propos?s aux travaux de ce Congr?s de rappeler ici la ?Semaine de synth?se? de Paris qui, du 29 mai au 3 juin 1933, ^ut totalement consacr?e au sujet ?Science et loi?, tout proche de celui qui nous occupe aujourd'hui. Dans l'expos?: La loi dans les sciences math?matiques, je m'attachai tout d'abord ? r?futer l'id?e de P. Boutroux, selon laquelle les math?matiques ont, au moins partiellement, pour but, d'expliciter la notion g?n?rale de loi qui se trouve, dans sa ***g?n?ralit?***, dans notre entendement. Il est vrai que les math?matiques ***four? nissent*** le mod?le de divers types de lois, de la loi de structure, qui ?tait la seule qu'imaginait la science grecque, de la loi fonctionnelle, qui est encore ? la base de la science moderne, de la loi statistique, de la loi de corr?lation, etc. Mais il est facile de montrer que, si l'on veut pousser l'id?e de loi jusqu'? sa plus grande g?n?ralit?, dans l'une ou l'autre des voies ouvertes par les math?matiques, l'abou? tissement ne peut ?tre que la notion du hasard ou de l'arbitraire. En un mot, on ne trouve pas quelque part dans notre entende? **ment**, toute faite et toute pr?te, l'id?e abstraite et g?n?rale de la loi. Celle-ci doit ?tre pens?e comme un ?tre en devenir, dont l'?volution n'est pas pr?d?termin?e, limite, ce dernier n'existant pas. L'?volution de cette id?e se fait ? partir des exemples les plus simples, ol'esprit aper?oit une loi ***r?alis?e****,* que ce soit la loi ***arith? m?tique*** {n +i)2 = n2 + (m ou que ce soit la constante p?riodicit? des mouvements de certains astres. En bref, l'explicitation de la notion g?n?rale de loi ne peut se passer des exemples o? elle est r?alis?e en tant que loi naturelle, dans la sph?re du r?el physique ou dans le domaine du num?rique. Je suis revenu, au Congr?s de Paris de l'ann?e pass?e, sur la nature de ces lois soi-disant absolues, dont l'arithm?tique et la logique offrent les plus purs exemples. Et q'ai expos? que leur analyse approfondie ne peut se passer de **l'id?e** de loi naturelle dans la sph?re des objets qui tombent le plus imm?diatement sous notre connaissance. La logique et l'arithm?tique ?l?mentaire doivent, ? un certain niveau, ?tre regard?es comme le premier chapitre d'une science naturelle tr?s primitive, ? laquelle j'ai donn? le nom de ?Physique de l'objet quelconque?. Je ne veux pas r?p?ter ici les d?tails de cette argumentation, dont le r?sultat, pour la notion de la loi g?n?rale, pourrait ?tre formul? comme suit: L'analyse de la notion abstraite g?n?rale de loi rencontre une fois, dans une assise profonde et fondamentale, la notion de loi naturelle dans son sens ordinaire. En face de cette analyse, je place maintenant celle de l'id?e de loi naturelle. Lorsque le physicien veut en pr?ciser la d?finition, c'est vers les math?matiques qu'il se tourne, et ceci ? juste droit, puisque ce sont les math?matiques qui ont pouss? l'id?e de loi le plus loin vers l'abstrait. | The idea of natural law i. It seems to me to be in line with the general aims which are proposed for the work of this Congress to recall here the? Synthesis week? of Paris which, from May 29 to June 3, 1933, was totally devoted to the subject “Science and law”, very close to that which occupies us today. In the presentation: The law in the mathematical sciences, I focused first on? reject the idea of P. Boutroux, according to which the aim of mathematics, at least partially, is to explain the general notion of law which is found in its ***genesis***. ***reality***, in our understanding. It is true that the mathematics ***oven*** the model of various types of laws, of the law of structure, which was the only one imagined by Greek science, of the functional law, which is still the basis of modern science, statistical law, correlation law, etc. But it is easy to show that, if one wants to push the idea of law up to its greatest generality, in one or the other of the paths opened by mathematics, the outcome This can only be the notion of chance or the arbitrary. In a word, we do not find somewhere in our understanding? **ment**, ready made and ready, the abstract and general idea of the law. It must be thought of as a being in the making, whose evolution is not predetermined, limit, the latter not existing. The evolution of this idea is done From the simplest examples, the mind sees a ***realized*** law, be it the ***arithmic*** law. ***metric*** {n + i) 2 = n2 + (m or that it is the constant periodicity of the movements of certain stars. In short, the explanation of the general concept of law cannot happen examples where it is realized as natural law, in the sphere of physical reality or in the digital domain. I came back, to the Paris Congress of the year The past, on the nature of these so-called absolute laws, of which arithmetic and logic offer the purest examples. And that I explained that their in-depth analysis cannot do without the **id** of natural law in the sphere of objects which most immediately fall under our knowledge. Elementary logic and arithmetic must, at a certain level, be regarded as the first chapter of a very primitive natural science, to which I have given the name of "Physics of any object". I do not want to repeat here the details of this argument, whose result, for the notion of general law, could be formulated as follows me: The analysis of the general abstract concept of law meets once, in a deep and fundamental basis, the concept of natural law in its ordinary sense. In front of this analysis, I now place that of the idea of natural law. When the physicist wants to specify its definition, it is to mathematics that he turns, and this? just right, since it was mathematics that pushed the law idea furthest towards the abstract. |
| **Engel-Tiercelin, Claudine. “Logique, psychologie et métaphysique: les fondements du pragmatisme selon C. S. Peirce.” Journal for General Philosophy of Science 16, no. 2 (1985): 229-250.** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (43%)  H-History (0) work; time; man; history; new; year; make; life; century; write (16%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (15%) |
| **Original text** | **English translation** |
| Il est vain de se demander qui, de William James ou de Charles Sanders Peirce est Pauthentique representant du pragmatisme. Encore plus peut-etre de les opposer en proposant de considerer l'oeuvre de James comme la version psychologique du pragmatisme, alors que celle de Peirce en serait la version logique. Certes, la rupture parait claire entre le ?psychologue en chaise longue? declarant publiquement a la fin de sa vie qu'il a renonce a la logique, qu'il se trouve ?mathematiquement imbecile\*, **?a-logique**, sinon illogique?1 et le logicien de Milford enjoignant son ami d'?essayer d'apprendre a penser avec plus d'exactitude?2. Pourtant James ne se trompera peut-etre pas tout a fait lorsque, portant un jugement sur les trois articles publies en 1868 par le Journal de Philosophie **Speculative3**, et tout en avouant n'y rien comprendre, il les qualifiera de ?psychologico-metaphysiques?4. Ces textes developpent, on le sait, outre une critique ?devastatrice?5 de l'intuition et de ?l'esprit du 1 Tous ces termes sont de James lui-meme et sont cites par Gallie, W.B. in Peirce and pragmatism, New York, 1966, p. 22. 2 ibid. p.23. 3 vol. 2 (1868), pp. 103-14; pp. 140-157; pp. 193-208. Il s'agit des Questions concernant certaines facultes que **Von** prete a l'homme, Quelques Consequences de Quatre Incapacites, et des Fondements de la validite des Lois de la Logique, tous trois reproduits dans le cinquieme volume des Collected Papers of C. S. Peirce, (vol. I a VI, edites par C. Hartshorne et P. Weiss, vol. VII et VIII edites par A. W. Burks, Cambridge, 1931-1958, que nous indiquerons selon l'usage par deux chiffres, le premier renvoyant au volume, le second au paragraphe): 5.213-263; 5.264-317; et 5.318-357. 4 Dans une lettre a Henry Bowditch de 1869, citee par Perry, The Thought and Character of William James, (2 vol.), Boston, 1936, vol. I, p. 292, James les decrit comme ?tres incisifs et originaux, extremement audacieux, subtils, **incomprehensibles?**, dont ?les eclarcissements qu'il (Peirce) m'en donna ne m'aiderent guere dans la **comprehension?** et enfin **?si** hermetiquement exprimes que Ton a du mal a saisir ce qu'ils veulent dire exactement?. 5 C'est notamment l'opinion de Gallie, op. cit. p. 61. **Zeitschrift fiir allgemeine Wissenschaftstheorie** XVI/2 (1985) ? Franz Steiner Verlag Wiesbaden GmbH, Stuttgart cartesianisme?6, la theorie selon laquelle ?toute pensee est un signe?7, que Peirce retiendra comme l'une des deux idees-force du pragmatisme8. En verite, Invocation par W. James de la psychologie et de la metaphysique est moins le fait d'une mecomprehension radicale de la pensee de Peirce que la mise en lumiere d'une ambiguite reelle qui existe des cette epoque entre logique, psychologie et metaphysique: tel est en effet le projet ambitieux que Peirce elabore tres tot sous l'influence de Kant, de Boole et des Scolastiques, d'une Logique qui serait plus formelle certes, mais qui pourrait s'etendre, par un certain usage logique du signe, a une Semiotique generalisee congue sur le modele scotiste d'une Grammaire Speculative. Des 1867, Peirce declare ouvertement qu'aucune etude ?ne parait aussi triviale que la logique formelle?, et ce, ?non seulement a premiere vue, mais meme apres de longues recherches. | It is pointless to wonder who, of William James or Charles Sanders Peirce is the authentic representative of pragmatism. Even more perhaps to oppose them by proposing to consider James' work as the psychological version of pragmatism, while that of Peirce would be the logical version. Certainly, the break seems clear between the? Psychologist in a lounge chair? publicly declaring at the end of his life that he has renounced logic, that he finds himself mathematically imbecile \*, **"logical**, if not illogical" 1 and Milford's logician enjoining his friend to try to learn to think more accurately? 2. Yet James may not be entirely wrong when, judging the three articles published in 1868 by the Journal of Speculative **Philosophy3**, and admitting to understanding nothing, he called them "psychologico-metaphysics"? 4. These texts develop, as we know, in addition to a devastating criticism 5 of the intuition and the spirit of the 1 All these terms are from James himself and are quoted by Gallie, WB in Peirce and pragmatism, New York , 1966, p. 22. 2 ibid. p.23. 3 vol. 2 (1868), pp. 103-14; pp. 140-157; pp. 193-208. These are the Questions concerning certain faculties that **Von** lends to man, Some Consequences of Four Disabilities, and the Foundations of the validity of the Laws of Logic, all three reproduced in the fifth volume of the Collected Papers of CS Peirce, ( vol. I to VI, edited by C. Hartshorne and P. Weiss, vol. VII and VIII edited by AW Burks, Cambridge, 1931-1958, which we indicate according to usage with two digits, the first referring to the volume, the second in paragraph): 5.213-263; 5,264-317; and 5.318-357. 4 In a letter to Henry Bowditch of 1869, quoted by Perry, The Thought and Character of William James, (2 vol.), Boston, 1936, vol. I, p. 292, James describes them as very incisive and original, extremely daring, subtle, **incomprehensible?**, Which in the clarifications which he (Peirce) gave me did not help me much in **understanding?** and **finally?** so tightly expressed that it’s hard to understand exactly what they mean ?. 5 This is notably the opinion of Gallie, op. cit. p. 61. **Zeitschrift fiir allgemeine Wissenschaftstheorie** XVI / 2 (1985)? Franz Steiner Verlag Wiesbaden GmbH, Stuttgart Cartesianism at 6, the theory that any thought is a sign at 7, which Peirce will retain as one of the two main ideas of pragmatism 8. In truth, W. James' invocation of psychology and metaphysics is less the result of a radical misunderstanding of Peirce's thought than the highlighting of a real ambiguity that existed at that time between logic, psychology and metaphysics : this is indeed the ambitious project that Peirce very early developed under the influence of Kant, Boole and Scholastics, a Logic which would be more formal certainly, but which could be extended, by a certain logical use of the sign , to a Generalized Semiotics conceived on the Scottish model of a Speculative Grammar. From 1867, Peirce openly declares that no study seems as trivial as formal logic, not only at first glance, but even after long research. |
| **Rougier, Louis. “La relativite de la logique.” Erkenntnis 8, no. 4 (1939): 193-217.** | **Top-topics**  A-Truth (23) logic; truth; true; proposition; sentence; logical; formula; follow; rule; world (33%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (23%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (12%) |
| **Original text** | **English translation** |
| La logique est d?finie comme l'art de bien conduire sa pens?e, Fart de raisonner avec justesse. Raisonner c'est montrer que **cer?** taines propositions sont n?cessairement ***vraies*** ***?*** supposer que d'autres ***propositions***, appel?es **pr?misses**, soient tenues pour telles. C'est dans les sciences du raisonnement, c'est-?-dire en math?ma thiques, que la logique, pour la premi?re fois, est entr?e en action. S'il faut en croire Proclus, c'est au **Vie** **si?cle** avant notre ?re que les math?matiques intuitives et empiriques des Orientaux se seraient transform?es en une discipline abstraite, deductive, et cette transformation serait due ? Pythagore : ?Vint Pythagore qui transforma la g?om?trie en un enseignement lib?ral, car il remonta aux principes premiers et rechercha les **th?or?mes** abstraitement et par l'intelligence pure". Cette transformation consiste essentiellement dans la substitution ? l'?vidence sensible, qui ne porte que sur la constatation de cas concrets particuliers, de l'?vidence intelligible qui repose sur le raisonnement et qui atteint l'universel. Aristote, dans les Seconds ***Analytiques***, a analys? la proc?***dure*** lo? gique de la science deductive appel?e par lui Apodictique, telle que la concevaient les math?maticiens grecs de son temps. Son analyse s'est impos?e aux logiciens jusqu'? la fin du XIXe si?cle. ***Selon*** lui, une science deductive, telle que la g?om?trie pythagoricienne, repose sur des principes ?vidents par eux-m?mes, qu'il appelle ses principes propres, et la d?monstration a pour but de transf?rer cette **?vidence** de proche en proche des principes ***propres*** ? leurs cons?quences les plus ?loign?es. ***C'est*** l'?vidence des principes propres qui fonde l'?vidence des **th?or?mes** et les principes propres sont plus ?vidents que les **th?or?mes** qu'on en d?duit, en vertu d'un principe qu'on peut appeler principe de Veminence de la cause, d'apr?s lequel une **qualit?** manifest?e par un effet doit se trouver ? un degr? plus eminent dans la cause de cet effet : ? Par exemple, la raison qui fait aimer un objet est encore plus aim?e que lui.  Puis donc que nous connaissons et que nous croyons en vertu des principes, nous devons les conna?tre et les croire mieux que les conclusions qu'on en tire 1)." Par suite, ?si nous avons bien ?tabli ce que c'est que savoir, il s'en? suit n?cessairement que la science d?monstrative part de propositions vraies, premi?res et imm?diates, et, relativement ? la conclusion, plus notoires et ant?rieures. Tels sont les principes propres des d?monstrations; car, sans eux, il n'y a pas de syllogisme, d'o? pas de d?monstration, d'o? pas de science 2)". La n?cessit? des **th?or?mes** d?rive de celle des principes ***propres'***. ?  On appelle **n?cessaire** la d?monstration qui tire sa n?cessit? de celle des pr?misses". La th?orie aristot?licienne de la d?monstration peut se **d?composer** en quatre propositions: Io) Il existe des principes qui sont ind?montrables par nature, ?tant, par nature, premiers et **imm?diats**. Ce sont les principes **pro? pres** des diff?rentes sciences d?monstratives. 2?) La n?cessit? des principes ***propres*** proc?de de leur ?vidence. 3?) L'?vidence des principes propres est propag?e aux th?or?mes par le moyen de la d?monstration. A ces trois affirmations, nous pouvons en ajouter une quatri?me, qu'Aristote ne formule pas explicitement, mais qui r?sulte des **pr?? c?dentes**. 4?) Quand la d?monstration a propag? l'?vidence des principes propres ? un th?or?me, l'?nonc? de ce th?or?me peut ?tre d?tach? de sa **d?monstration**. Il constitue une proposition vraie en soi, pourvu qu'on se souvienne de l'avoir correctement d?duit des principes propres. | Logic is defined as the art of properly conducting one's thinking, the art of reasoning with accuracy. To reason is to show that **cer?** some propositions are necessarily ***true?*** assume that other ***proposals***, called **presumptions**, are held to be such. It is in the sciences of reasoning, that is to say in mathematics, that logic, for the first time, came into action. If Proclus is to be believed, it was in **Life** so **ancient** before our era that the intuitive and empirical mathematics of the Orientals would have been transformed into an abstract, deductive discipline, and this transformation would be due to Pythagoras***:?*** Came Pythagoras who transformed geometry into a liberal teaching, because he went back to the first principles and sought the **theories** abstractly and by pure intelligence ". This transformation consists essentially in substitution Obviously sensitive, which relates only to the observation of specific concrete cases, of intelligible evidence which rests on reasoning and which reaches the universal. Aristotle, in the Seconds ***Analytiques***, analyzed the process. **hard** logic of deductive science called by him Apodictic, as conceived by the Greek mathematicians of his time.His analysis was imposed on logicians until the end of the XIXth century. ***he***, a deductive science, such as Pythagorean geometry, is based on principles evident by themselves, which he calls his own principles, and the purpose of the demonstration is to transfer this **Obviously**, step by step, principles ***specific*** to their most distant consequences. ***is*** the evidence of proper principles that underpins the evidence of **theories** and the principles are more obvious than **theories** that we deduce from it, by virtue of a principle which one can call the principle of the eminence of the cause, according to which a **quality?** manifested by an effect must be found a degree more prominent in the cause of this effect: For example, the reason that makes an object love is even more loved than it.  Then therefore that we know and that we believe by virtue of the principles, we must know them and believe them better than the conclusions which one draws from it 1). "Consequently, if we have well established what it is that knowing, it necessarily follows that the demonstrative science starts from true propositions, first and immediate, and, relatively to the conclusion, more notorious and earlier. These are the principles of the demonstrations, because without them there is no syllogism, hence no demonstration, no science 2) ". The need of **theories** derived from that of ***own*** principles'. ?  Demonstration which draws its necessity is called **necessary?** of that of the premisses ". The Aristotelian theory of demonstration can be **composed** of four propositions: Io) There are principles which are not demonstrable by nature, being, by nature, **first** These are the **main** principles of the different demonstrative sciences. 2?) The need for ***own*** principles is due to their obviousness. 3?) The obviousness for proper principles is propagated to **theories** by means of demonstration. To these three statements, we can add a fourth, which Aristotle does not formulate explicitly, but which results from the **predictions**. 4?) When the demonstration has propagated the evidence of the principles specific to a theorem, the statement of this theorem can be detached **from** It is a true proposition in itself, as long as one remembers having correctly deduced it from its own principles. |
| **Bernier, Réjane. “Origine et rôles de l'hypothèse en biologie.” Journal for General Philosophy of Science 14, no. 2 (1983): 213-233.** | **Top-topics**  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (25%)  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (13%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (16%) |
| **Original text** | **English translation** |
| La notion d'hypothese merite de faire l'objet d'une analyse approfondie car on la retrouve a toutes les etapes de la formation de la connaissance. En effet, des que l'on depasse le niveau de la description du phenomene singulier (ou collectif) et que l'on veut atteindre une connaissance intellectuelle de la realite, on est force de faire appel a Phypothese, que ce soit au niveau du concept et de la definition, de la loi ou de Pexplication. II est done difficile de definir des maintenant, de hqon precise, Phypothese. On peut simplement la caracteriser comme une supposition relative a la nature des choses, a leurs proprietes ou a leurs causes, qui est forcement un depassement des donnees objectives, brutes. Evidemment, cette supposition n'a pas les memes fondements lorsqu'elle est relative a une definition et lorsqu'elle est relative a une explication. Mais il faut se demander si, pour autant, la nature meme de la supposition est differente et je suis tentee de repondre negativement. Dans un cas, elle porte sur la nature de **Petre**, dans Pautre sur sa cause. Mais ce qui en fait une supposition au lieu d'un enonce descriptif, e'est, dans les deux cas, le fait que la relation entre les termes depasse Pobservation (cas de la definition et de la loi) ou meme n'est pas observee mais imaginee (cas de Pexplication) et qu'il faut chercher un moyen de controler si elle existe ou non et construire une experience permettant ce controle, qu'il s'agisse de connaitre quel est le poids moleculaire d'une proteine en vue de sa definition ou de savoir quels noyaux du cerveau servent de relais aux nerfs optiques ou auditifs en vue d'elaborer des lois structurales ou physiologiques. Le controle est different mais le caractere hypothetique de la demarche epistemologique est identique. C'est pourquoi il m'apparait possible de traiter de la question de Porigine de Phypothese de fa^on generate. \* Le present travail a ete rendu possible grace a l'aide du Conseil des Arts du Canada (aujourd'hui Conseil de Recherches en Sciences Humaines du Canada). 15 **Zeitschrift fur allgemeine Wissenschaftstheori**e XIV/2 (1983) ? Franz Steiner Verlag GmbH, D-6200 Wiesbaden HtSE II existe au sujet de Porigine de Phypothese scientifique des conceptions variees qui peuvent s'opposer parfois les unes aux autres. Au debut de Pemploi de la methode experimentale, la mefiance a Pegard de toute intervention subjective etait telle qu'on est venu a considerer Phypothese comme produite directement a partir des faits, comme une sorte de decalque de la realite objective, Pesprit humain n'etant alors que passif devant Pobjet. {**Hypotheses nonfingo**, declarait Newton). Mais cette position a suscite de vives reactions de la part des philosophes qui ont considere, au contraire, Phypothese comme un produit de Pesprit createur du savant, une sorte d'invention pratiquement independante des faits. Examinons cette derniere these et les difficultes qu'elle souleve. Popper et Hempel, tous deux defenseurs de Pindependance genetique de Phypothese par rapport aux faits, ont aborde cette question selon des perspectives differentes qui ont cependant en commun le fait de rejeter la these inductiviste. | The notion of hypothesis deserves to be the subject of an in-depth analysis because it is found at all stages of the formation of knowledge. Indeed, as soon as we go beyond the level of the description of the singular (or collective) phenomenon and we want to reach an intellectual knowledge of reality, we are forced to appeal to the hypothesis, whether at the level of concept and definition, law or explanation. It is therefore difficult to define now, precisely, the hypothesis. We can simply characterize it as a supposition relative to the nature of things, their properties or their causes, which is necessarily a surpassing of objective, raw data. Obviously, this supposition does not have the same foundations when it relates to a definition and when it relates to an explanation. But one must ask oneself whether, however, the very nature of the supposition is different and I am tempted to answer negatively. In one case it relates to the nature of **Petre**, in the other to his cause. But what makes it a supposition instead of a descriptive statement is, in both cases, the fact that the relation between the terms exceeds observation (case of definition and law) or even is not observed but imagined (case of the explanation) and that it is necessary to seek a means of controlling if it exists or not and to build an experiment allowing this control, that it is a question of knowing what is the molecular weight of a protein in sight of its definition or of knowing which nuclei of the brain serve as relays to the optic or auditory nerves in order to develop structural or physiological laws. The control is different but the hypothetical character of the epistemological approach is identical. This is why it seems to me possible to deal with the question of the origin of the hypothesis in a general way. \* This work has been made possible with the help of the Canada Council for the Arts (now the Social Sciences and Humanities Research Council of Canada). **15 Zeitschrift fur allgemeine Wissenschaftstheorie** XIV / 2 (1983)? Franz Steiner Verlag GmbH, D-6200 Wiesbaden HtSE There are various conceptions about the origin of the scientific hypothesis which can sometimes oppose each other. At the beginning of the use of the experimental method, the distrust of all subjective intervention was such that we came to consider the hypothesis as produced directly from the facts, as a kind of transfer from objective reality, the human mind not being while passive in front of the object. {**Nonfingo hypotheses**, Newton said). But this position has aroused strong reactions from philosophers who have, on the contrary, considered the hypothesis as a product of the creative mind of the scientist, a kind of invention practically independent of the facts. Let us examine this last thesis and the difficulties it raises. Popper and Hempel, both defenders of the genetic independence of the hypothesis from the facts, approached this question from different perspectives which, however, have in common the rejection of the inductivist thesis. |
| **Suppes, Patrick. “L'argument probabiliste pour une logique non classique de la mécanique quantique.” Synthese 16, no. 1 (1966): 74-85.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (33%0  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (29%)  A-Truth (23) logic; truth; true; proposition; sentence; logical; formula; follow; rule; world (11%) |
| **Original text** | **English translation** |
| l'argument Le but de cet article est simple. Je d?sire ?noncer aussi clairement que possible, sans une longue digression dans des questions techniques, ce que je consid?re ?tre l'argument unique le plus puissant en faveur de l'emploi d'une logique non classique en ***m?canique*** quantique. Il y a une tr?s grande litt?rature math?matique et philosophique sur la logique de la m?canique quantique, mais ? quelques exceptions pr?s, cette litt?rature fournit une tr?s pauvre justification intuitive du fait qu'on consid?re une logique non classique pour commencer. Le fameux article de Birkhoff et von Neumann (1936) constitue un exemple classique dans la litt?rature math?matique. Bien que Birkhoff et von Neumann aient **examin?** **exhaus tivement** le d?veloppement des propri?t?s des geometries projectives et des geometries de lattices qui sont li?es ? la logique de la m?canique quan tique, ils consacrent moins d'un tiers de page (p. 831) aux raisons physi ques qui entra?nent la consid?ration de telles lattices. Qui plus est, les quel ques lignes qu'ils y consacrent sont loin d'?tre claires. La litt?rature philoso phique est toute aussi mauvaise ? ce sujet. Une des discussions philo sophiques les mieux connues ***l?-dessus*** est celle qui est expos?e dans le dernier chapitre du livre de Reichenbach (1944) sur les fondations de la m?canique quantique. Reichenbach offre une logique fonctionnelle de v?rit? ? trois valeurs qui semble avoir peu de rapport avec les proposi tions de la m?canique quantique, qu'elles soient de nature exp?rimentale ou th?orique. Ce que Reichenbach ***n'arrive*** pas ? montrer, c'est comment la ***logique*** ? trois valeurs qu'il propose poss?de un r?le fonctionnel quelconque dans le d?veloppement th?orique de la m?canique quantique. Il est en effet facile de montrer que la logique qu'il propose ne pourrait certainement pas ?tre ad?quate pour un ?nonc? syst?matique et th?orique \* Je d?sire remercier Jean et Claudine Donio pour la traduction de cet article ? partir du manuscrit anglais. E de la th?orie telle qu'on la con?oit d'habitude. Les raisons pour cela de viendront claires plus tard dans le pr?sent article. Les pr?misses princi pales que je discute dans cet article sont peu nombreuses. Je vais les ?noncer sans justification d?taill?e, de ***fa?on*** ? ce que la structure g?n?rale de l'argument ?merge de la fa?on la plus simple possible. Pr?misse 1. Dans les contextes physiques ou empiriques comportant Vapplication de la th?orie de la probabilit? en tant que discipline math?ma tique, la logique fonctionnelle qui est importante est la logique des ?v?ne ments ou propositions auxquels on assigne des probabilit?s, et non pas la logique des ?nonc?s qualitatifs ou intuitifs que Von fait sur la th?orie formu l?e math?matiquement. (Dans les applications classiques de la th?orie de la probabilit?, cette logique des ?v?nements est une alg?bre d'ensembles de Boole; pour des raisons techniques, qui n'ont aucune importance ici, cette alg?bre de Boole est g?n?ralement suppos?e additive d?nombrable c.?.d., une cx-alg?bre.) Pr?misse 2. U alg?bre des ?v?nements devrait satisfaire la condition qu'une **probabilit?** est **assign?e** ? chaque ?v?nement ou ?l?ment de **Valg?bre**. Pr?misse 3. Dans le cas de la m?canique quantique, des probabilit?s peuvent ?tre assign?es aux ?v?nements tels que position dans une certaine r?gion ou moment dans des limites donn?es, mais la **probabilit?** de la conjonction de deux ?v?nements de ce type n'existe pas n?cessairement. Conclusion: La logique fonctionnelle de la m?canique quantique n'est pas classique. | the argument The purpose of this article is simple. I wish to state as clearly as possible, without a long digression in technical questions, what I consider to be the single most powerful argument in favor of the use of unconventional logic in ***memory***. quantum quantum. There is a very large mathematical and philosophical literature on the logic of quantum mechanics, but at with a few exceptions, this literature provides very poor intuitive justification for considering unconventional logic to begin with. The famous article by Birkhoff and von Neumann (1936) is a classic example in mathematical literature. Although Birkhoff and von Neumann have **examined?** **exhaus tively** the development of the properties of projective geometries and geometries of lattices which are related to using the logic of quantum mechanics, they devote less than a third of a page (p. 831) to the physical reasons which lead to the consideration of such lattices. What is more, whatever lines they devote to it are far from clear. Philosophical literature is just as bad? this subject. One of the best known philosophical discussions ***above*** is that which is set out in the last chapter of Reichenbach's (1944) book on the foundations of quantum mechanics. Reichenbach offers a functional logic of truth ? three values which seem to have little relation to the propositions of quantum mechanics, whether of an experimental or theoretical nature. What Reichenbach does not ***happen?*** show, how is ***logic?*** three values which he proposes possesses any functional role in the theoretical development of quantum mechanics. It is indeed easy to show that the logic which he proposes could certainly not be adequate for a statement. systematic and theoretical \* I would like to thank Jean and Claudine Donio for the translation of this article. from the English manuscript. E theory as we usually see it. The reasons for this will come clear later in this article. The main assumptions that I discuss in this article are few. I will speak them out without detailed justification, so ***what*** the general structure of the argument emerges in the simplest way possible. Premise 1. In physical or empirical contexts involving the application of the theory of probability as a mathematical discipline, the functional logic that is important is the logic of events or propositions to which we assign probabilities, and not the logic of qualitative or intuitive statements that we make on the theory formulated mathematically. (In classical applications of the theory of probability, this logic of events is an algebra of Boole sets; for technical reasons, which have no importance here, this algebra de Boole is generally assumed to be a countable additive i.e., a cx-algebra.) Premise 2. An algebra of events should satisfy the condition that a **probability?** is **assigned?** each event or element of **Valg? bre**. Premise 3. In the case of quantum mechanics, probabilities can be assigned to events such as position in a certain region or moment within given limits, but the **probability?** of the conjunction of two events of this type does not necessarily exist. Conclusion: The functional logic of quantum mechanics is not classical. |

**[Encoder 2]**

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| **Bourgin, Georges (1956) « Neutralité ». Synthese 10 : 265-269.** | **Top 3 topics**  H-History (0) work; time; man; history; new; year; make; life; century; write (57%)  D-Agent-decision (8) agent; action; decision; game; choice; act; utility; strategy; moral; preference (14%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (6%) |
| **Original text** | **English translation** |
| Qui peut et **n'enpesche p?che"** (Loysel) La Soci?t? Internationale de ***Signifique*** se pr?occupe? juste titre de la s?mantique des mots et de la valeur des concepts em ploy?s en mati?re de politique nationale et internationale. Elle trouvera des ?l?ments utiles d'enqu?te et d'information aupr?s des VAssociation fran?aise des Sciences politiques qui a d?sormais son organe dans la ***Revue*** fran?aise de Science politique (no 1-2 janv., juin 1951, Presses universitaires), ainsi que dans le vocabulaire philosophique d? ? l'?minent professeur **Andr?** Lalande et dans le Vocabulaire historique du Centre de **Synth?se** dirig? par le non moins eminent Henri Berr. Le mot et le concept de neutralit? doit aux circonstances actu elles de la politique internationale qu'on s'arr?te sur sa **significa tion**. Et d'abord, sans ?laborer une ?tude vraiment s?mantique du terme, **il** convient d'indiquer tout de suite qu'il se rattache au pronom ind?fini latin ?neuter", ?ni l'un ni l'autre".  C'est **?** la m?me origine qu'est d? le mot neutralisme, dont nous examinerons rapidement aussi le sens. Je viens de dire que la neutralit? a sa place dans la politique internationale, sa place essentielle, mais le mot est employ? aussi dans la politique int?rieure de certains pays, **?** l'occasion des probl?mes scolaires qui ***mettent aux prises*** les partisans de l'enseignement d'?tat **?** ceux de l'enseignement confessionnel, dit ?libre" **?** appli cation particuli?re d'un adjectif ***?quivoque***: la ?neutralit? scolaire" consiste dans la doctrine et la pratique politiques en vertu de laquelle l'?tat organisateur de l'enseignement national, ne se pr?oc cupe pas et ne doit point se pr?occuper de la confession religieuse ni de la doctrine philosophique des parents qui confient leurs enfants aux ?coles et ?tablissements officiels d'enseignement.  Sur le plan de la politique internationale, la neutralit? signifie l'engagement bilat?ral et parfois pluraliste que tel?tat ou tels ?tats ne prendront pas part aux conflits arm?s, aux guerres dans lesquels seront impliqu?s le ou les ?tats **avec lesquels ils ont pass?** des conventions. Deux types de neutralit? se pr?sentent dans l'histoi re: la neutralit? conventionnelle **indiqu?es** r?sultant de trait?s pass?s, d'ordinaire, temporairement dans les conditions qui viennent d'?tre; la neutralit? perp?tuelle, r?sultant d'accords internationaux et d'actes finals de congr?s, qui d?munit, en quelque sorte, l'?tat b?n?ficiaire du droit d'intervenir par la force dans les conflits internationaux, mais surtout le **met ? l'abri** des cons?quences destructives des con flits internationaux. Ces ?tats de chose ont exist? dans l'antiquit?, mais ce n'est qu'au cours des guerres internationales du XVI?me et du XVIIe si?cle que le droit de neutralit? a ?t? mis au point par les juristes, pr?cis?ment dans les pays les plus menac?s par les conflits interna tionaux, les Pays-Bas et la Suisse. La Belgique, form?e en 1830 **?** la suite de sa s?paration d'avec les Pays-Bas, a **b?n?fici?** d'un r?gime de neutralit? auquel elle n'a renonc**?** qu'aux approches de la seconde guerre mondiale. La Suisse est le seul ?tat soumis ? un pareil **r?gime0**. Dans la pratique, le r?gime de neutralit? a d'ailleurs ?t? plus ou moins **tourn?** par certains usages: internation alement par le ?droit de passage" en vertu duquel le territoire d'un ?tat neutre pouvait ?tre utilit? par les arm?es des ?tats en guerre; par des groupes d'individus ou des individus isol?s qui, faisant fi des interdictions sp?cifi?es par les trait?s, continuaient de commercer avec les ?tats en guerre ou certains de leurs organis mes. | Who can and **does not fish "**(Loysel) The International ***Significant*** Society is rightly concerned with the semantics of words and the value of the concepts used in matters of national and international policy. She will find useful elements of inquiry and information near the FrenchAssociation of Political Sciences which henceforth its organ in the French ***Review*** of Political Science (no 1-2 Jan, June 1951, University Press), as well as in the philosophical vocabulary of the eminent professor **Andr?** Lalande and in the historic Vocabulary of the Center of **Synth?** Directed by the no less eminent Henri Berr. The word and the concept of neutrality owes to the current circumstances of international politics that we stop on its **significance**. And first, without developing a really semantic study of the term, should immediately indicate that it is related to the indefinite Latin pronoun neuter ", neither neither".  It is the same origin that is he word neutralism, whose meaning we will also quickly examine. I just said that neutrality**?** has its place in international politics, its essential place, but the word is used**?** also in the internal politics of certain countries,? the occasion of the school problems which ***put in*** the supporters of the education of state**?** those of denominational education, said to be "free" ***with a*** particular application of an ***unambiguous*** adjective: "school neutrality" consists of political doctrine and practice by virtue of which the organizing state of national education, is not concerned and should not concern itself with the religious confession or the philosophical doctrine of parents who entrust their children to schools and official educational establishments.  In terms of international policy, neutrality**?** signifies the bilateral and sometimes pluralist commitment that a state or states will not take part in armed conflicts, wars in which the state (s) with which they will have been involved **will be involved** conventions. Two types of neutrality? present themselves in history: neutrality**?** conventional **indicated** resulting from past treaties, ordinarily, temporarily under the conditions which have just been; neutrality**?** perpetual, resulting from international agreements and final acts of congresses, which, in a way, deprives the beneficiary state of the right to intervene by force in conflicts international, but above all **the food? sheltered** from the destructive consequences of international conflicts. These states of affairs have existed. in antiquity, but it was only during the international wars of the sixteenth and seventeenth centuries that the right of neutrality was developed by jurists, precisely in the countries most threatened by international conflicts, the Netherlands and Switzerland. Belgium, formed in 1830**?** following its separation from the Netherlands, which **benefits?** of a neutral regime which she has not given up**?** only near the Second World War. Switzerland is the only state subject to such a **regime0**. In practice, the neutral regime was by the way more or less **turned?** by certain uses: internationally by the "right of way" under which the territory of a neutral state could be used by the armies of states at war; by groups of individuals or isolated individuals who, ignoring the prohibitions specified by the treaties, continued to trade with states at war or certain of their organizations. |
| **Fraïssé, Roland (1966) « Une hypothèse sur l'extension des relations finies et sa vérification dans certaines classes particulières (Deuxième Partie) », Synthese 16(1): 34-46.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (91%)  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (2%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (1%) |
| **Original text** | **English translation** |
| La premi?re partie de cet article (Paragraphes 1 ? 4 inclus) est parue en traduction anglaise ? The Theory of Models (Proceedings of the 1963 **Inter national** Symposium at Berkeley, ed. by J. W. Addison, L. Henkin and A. Tarski), Studies in Logic and the Foundations of Mathematics, **Amster dam** 1965, 96-106. Rappelons ses d?finitions et ses principaux r?sultats. Une relation n-aire, ou **?'arit? n** (entier positif fini) et de base A, est une fonction qui, **?** chaque ?l?ment de An9 associe l'une des valeurs + ou ?. Si B^A9 la restriction de la relation R k B, not?e R\B, est la relation de base B, prenant la m?me valeur que R pour chaque ?l?ment de Bn. Une application bijective/de A sur A' est un isomorphisme de R sur R' (***de base*** A') lorsque R(xl9 ..., xn) = R'(f(x1)9 ...,f(xn)) quels que soient X?9 ..., XnGA. Une multirelation v-aire, ou **?'arit?** v = (nl9 ..., nh) (h entier positif fini) et de base A, est une suite M=(Ri9 ..., Rh) de h relations **d'arit?s** nl9...9nh (entiers positifs finis) et de base commune A. Lorsque h = \, on identifie M=(R1) avec la relation R. La multirelation (?ventuellement la relation) est **?itQ** finie, infinie, d?nombrable, de cardinal a, selon que sa base est finie, infinie, d?nombrable, de cardinal a. La, restriction **?** B^A de M=(Rl9 ..., Rh) est N=M\B=(Ri\B, ..., Rh\B); on dit aussi que M est une extension de N ? A. L'application bijective / de A sur ? est un isomorphisme de M sur M' = (R'l9 ..., R'h)9 de base ?9 lorsqu'elle est un isomorphisme de Ri sur R't pour /=1, .... h. Soit M une multirelation de base infinie A, et soit A'^A; moyennant l'axiome de choix, et plus pr?cis?ment l'axiome d'existence d'un ultra filtre plus fin qu'un filtre donn?, // existe une extension M' de M ? A' telle que toute restriction finie de M' soit isomorphe **?** une restriction de M. l'extension des relations finies Autrement dit M et Mf auront les m?mes restrictions finies **?** l'isomorphie ***pr?s*** (voir [2] ou [3]). Deux multirelations Met M'sont dites **p-?quiv aient** es lorsque toute restriction de M **?** ^p ?l?ments est isomorphe **?** une restric tion de M', et inversement. Etant donn? la suite finie d'entiers v, et l'entier p: 1. // existe un entier s(y,p) tel que toute multirelation v-aire de cardinal ^s(v9p), admette une multirelation d?nombrable p**-?quiv alent?**. 2. Il existe un entier s'(y9p) tel que toute multirelation v-aire, de **car dinal** ^s'(y9p), admette une restriction p**-?quiv alent?**, ayant elle-m?me une extension d?nombrable p**-?quiv alent?.** Ces ?nonc?s sugg?rent l'hypoth?se suivante, que nous n'avons pu ni d?montrer ni infirmer : Etant donn? la suite finie d'entiers v et **Ventier** p9 il existe un entier t(v9p) tel que toute multirelation v-aire, de cardinal ^t(v9p), admette une extension d?nombrable p-?quivalente. | The first part of this article (paragraphs 1 to 4 inclusive) was published in English. The Theory of Models (Proceedings of the 1963 **Inter national** Symposium at Berkeley, ed. By JW Addison, L. Henkin and A. Tarski), Studies in Logic and the Foundations of Mathematics, **Amster dam** 1965, 96-106. Let us recall its definitions and its main results. An n-ary relationship, or**? Arit? n** (finite positive integer) and of base A, is a function which,**?** each element of An9 associates one of the values + or?. If B ^ A9 the restriction of the relation R k B, noted R \ B, is the basic relation B, taking the same value as R for each element of Bn. A bijective map **/** of A on A 'is an isomorphism of R on R' (***basic*** A ') when R (xl9 ..., xn) = R' (f (x1) 9 ..., f (xn) ) whatever X? 9 ..., XnGA. A v-ary multirelation, or**? Arit? v** = (nl9 ..., nh) (h finite positive integer) and of base A, is a sequence M = (Ri9 ..., Rh) of h **arit** relations nl9 ... 9nh (positive integers finite) and of common base A. When h = \, we identify M = (R1) with the relation R. The multirelation (possibly the relation) is**? itQ** finite, infinite, countable, of cardinal a, according to that its base is finite, infinite, countable, of cardinal a. The restriction **?** B ^ A of M = (R19 ..., Rh) is N = M \ B = (Ri \ B, ..., Rh \ B); we also say that M is an extension of N? A. The bijective / A application on? is a basic isomorphism of M on M '= (R'l9 ..., R'h) 9? 9 when it is an isomorphism of Ri on R't for / = 1, .... h. Let M be an infinite basic multirelation A, and let A '^ A; by means of the axiom of choice, and more precisely the axiom of existence of an ultra filter finer than a given filter, // there exists an extension M 'of M? A 'such that any finite restriction of M' is isomorphic**?** a restriction of M. the extension of the finite relations In other words M and Mf will have the same finite restrictions**?** the ***near*** isomorphy (see [2] or [3]). Two Met M multi-relationships are said to be **p-? Iv** when any restriction of M**? ^** elements is isomorphic**?** a restriction of M ', and vice versa. Given the finite sequence of integers v, and the integer p: 1. // exists an integer s (y, p) such that any v-ary multirelation of cardinal ^ s (v9p), admits a countable multirelation p- **? quiv nearby ?**. 2. There exists an integer s '(y9p) such that any v-ary multirelation, of **car dinal** ^ s' (y9p), admits a restriction p**-? Quiv around**, having itself a countable extension p**-? quiv around ?**. These statements suggest the following hypothesis, which we could neither demonstrate nor refute: Given the finite sequence of integers v and **Ventier** p9 there exists an integer t (v9p) such that any v-ary multirelation, of cardinal ^ t (v9p), admits a p-equivalent countable extension. |
| **Bourgeois, Bernard (2002) « Le XXe Siècle Philosophant: Post-Hégélien? » Synthese 130(2): 227-233** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (51%)  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (11%)  B-Arguments (22) argument; claim; say; question; make; view; reason; fact; case; point (5%) |
| **Original text** | **English translation** |
| Si la source est homog?ne ? ce qui sourd d'elle et peut donc ?tre **re vendiqu?e** commie telle, c'est-?-dire ? travers un lien positif reconnu ? elle, m?me dans l'insistance mise sur son **d?passement** et sa critique, la racine, quant ? elle, nourrit ce qui **ditf?re** ***d'elle*** et la nie ou - puisqu'il va s'agir ici du destin, dans le si?cle qui s'ach?ve, d'un h?g?lianisme qui parlait bien ainsi du rapport entre eux des divers moments de la plante! - la "r?fute". Et la r?futation elle-m?me peut ne pas r?fl?chir sa position ou positivit? premi?re, o? elle ne vit pas sa relation n?gative ? ce qu'elle r?fute en fait, dans une saisie proprement dialectique de son surgissement; elle aime m?me ? se rattacher ? un principe auto-pos? et non pas simplement pos? par la n?gation - qu'elle dit bien plut?t susciter - de son pass?. II ne suffit pourtant pas que la r?futation refuse pour ainsi dire d'h?g?lianiser en sa saisie de soi pour qu'elle ?chappe r?ellement ? la puissance de la dialectique, laquelle peut parfaitement rendre compte de sa n?gation par ce qui s'affirme comme son Autre absolu. Mais comme il est tout aussi vrai que la n?gation de la r?duction dialectique du positif au n?gatif s'entend ? restituer la "g?n?alogie" d'une telle r?duction, la question de savoir si la r?futation se nourrit, pour ?tre elle-m?me, du r?fut?, et y a donc sa racine, ne peut recevoir de r?ponse absolument contraignante par son objectivit?. Tel sera bien le lot de la pr?sente interrogation sur la relation du XXe si?cle philosophant ? l'intervention h?g?lienne: quel r?le celle-ci a-t-elle jou? dans le d?veloppement de celui-l?? C'est un fait que les courants novateurs de la pens?e au XXe si?cle ne se r?clament gu?re de l'?v?nement h?g?lien, ni comme d'une source, ni comme d'un racine. Ce fut d?j? le cas, en ve?rit?, pour le XIXe si?cle. Certes - et pour nous en tenir aux courants philosophiques devenus cul turellement pr?gnants et appel?s ainsi ? constituer le contexte stimu lant majeur de la pens?e de notre si?cle - les quatre grands rejets du h?g?lianisme, au nom du processus mat?riel (Marx), de la vie (Schopen harier, puis, in fine, Nietzsche), de l'existence (Kierkegaard) et du sens (Schleiermacher, prolong? ult?rieurement par Dilthey), furent profond? ment impliqu?s dans le renouvellement de l'engagement philosophique au cours du si?cle pr?c?dent.1 Mais force est bien de constater que toutes ^M S les nuances dans le jugement sur l'importance de l'intervention de Hegel relativisent celle-ci: de la reconnaissance qu'en fait son "disciple" Marx, elle-m?me d?j? bien temp?r?e par le r?le soulign? de ces m?diations non proprement philosophiques du marxisme que furent l'?conomie politique anglaise et le socialisme fran?ais, ? la d?nonciation absolue, par Schopen hauer, de la perversion inutile, "?picyclique", du kantisme que fut, ? ses yeux, le h?g?lianisme. Il est vrai que Hegel lui-m?me - pour qui le vrai se pr?suppose dans ce par quoi il semble compos? - s'est employ?, par ex emple, ? r?trograder Kant au sein de l'eud?monisme empiriste et ? creuser corr?lativement l'hiatus entre la fausse et la vraie r?volution copernicienne en philosophie! | If the source is homogeneous? what springs from it and can therefore be **re-sold** as such, that is to say? through a recognized positive link? it, even in the insistence put on its **overflow** and its criticism, the root, as for it nourishes what **denies** ***it*** and denies it or - since it will be a question here of destiny, in the century which ends, of a Helianism which spoke well so the relationship between them of the various moments of the plant! - the "refute". And the denial itself may not reflect its position or positivity. first, where she does not live her negative relationship? what it refutes in fact, in a properly dialectical grasp of its emergence; she even loves relate ? an auto-pos principle? and not just posed? by the negation - which it says rather rather arouse - of its past. However, it is not enough that the refusal refuses, so to speak, to make the self-grip more generalized so that it really escapes. the power of dialectics, which can perfectly account for its negation through what asserts itself as its absolute Other. But as it is equally true that the negation of the dialectical reduction from positive to negative is understood to reproduce the "genogy" of such a reduction, the question of knowing whether the restoration feeds, to be itself, of the dream, and therefore has its root there , cannot receive an absolutely binding response due to its objectivity. Such will be the lot of the present interrogation on the relation of the twentieth century philosophical? the helicopter intervention: what role did it play? in the development of this one ?? It is a fact that the innovative currents of thought in the twentieth century did not claim much from the Hegelian event, neither as a source, nor as a 'a root. It was already the case, in fact, for the nineteenth century. Certainly - and to stick to the philosophical trends that have become culturally significant and so called? constitute the major stimulating context of the thought of our century - the four great rejections of helianism, in the name of the material process (Marx), of life (Schopen harier, then, in fine , Nietzsche), existence (Kierkegaard) and meaning (Schleiermacher, later extended by Dilthey), were profound. involved in the renewal of philosophical engagement during the previous century.1 But it is clear that all ^ MS the nuances in the judgment on the importance of the intervention of Hegel put it in perspective: the recognition that her "disciple" Marx, herself already, makes of it. well tempered by the underlined role of the not properly philosophical mediations of Marxism that were the English political economy and French socialism, the absolute denunciation, by Schopen hauer, of the useless, "picyclic" perversion, of the kantism that was,? his eyes, helianism. It is true that Hegel himself - for whom the true presumes in what he seems composed by? - has been employed, for example,? downgrade Kant within empiricist eudonism and? Correctly dig the hiatus between the false and the true Copernican revolution in philosophy! |
| **Destouches, Jean-Louis (1948) « Le rôle de l'activité subjective dans l'élaboration des notions de la physique moderne » Synthese 7(1/2): 75-78** | **Top-topics**  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (40%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (18%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (11%) |
| **Original text** | **English translation** |
| E par Jean-Louis Destouches (Paris) Hier M. Piaget nous a dit que le but de cette conf?rence ?tait de ?retracer la gen?se psychologique des notions et leur formalisation logistique". Ma t?che doit ?tre d'essayer de remplir ce but pour quelques notions de la physique moderne. Quand on veut aborder l'?tude d'une discipline pour pouvoir ensuite prendre une part active dans son d?veloppement, on est amen? tout d'abord ? examiner passivement la derni?re phase de son ?volution historique. Ensuite on sera conduit ? faire une analyse de cette ?volution dans un but de compr?hension, en vue d'une action provo quant de nouveaux d?veloppements. Alors ce qu'on a compris, on est conduit ? de formaliser, et cette formalisation va permettre une action qui fera avancer d'une fa?on plus ou moins restreinte la discipline consid?r?e, suivant la valeur de ce que l'on a compris. Pour ma part, je me suis attach? ? faire progresser les th?ories de la microphysique et j'ai ?tudi? passivement l? d?veloppement de la m?canique ondulatoire. Un jour il m'est apparu que le caract?re fondamental des th?ories quantiques ?tait le calcul de pr?visions: ? partir du r?sultat d'une mesure initiale effectu?e par un observateur, on cherche ? calculer des pr?visions concernant le r?sultat de mesures ult?rieures susceptibles d'?tre effectu?es par certains observateurs. On peut alors partir uniquement de cette id?e et la traduire en formules. Cette expression formalis?e va entra?ner un certain nombre de cons?quences, et c' est leur ensemble qui constitue la th?orie g?n?rale des pr?visions\*). Par exemple on y d?montre que tout r?sultat de mesure peut ?tre traduit en un ensemble d'?l?ments abstraits dit ensemble des ?l?ments initiaux associ? au r?sultat de la mesure, et chaque ?l?ment initial Xo peut ?tre transform? ? l'instant \*) Pour plus de d?tail? voir: Jean-Louis Destouches, Corpuscules et syst?mes de corpuscules, t. I (Gauthier-Villars, Paris 1941) et Principes fondamentaux de physique th?orique} t-II (Hermann, Paris 1942). Voir aussi: Paulette Destouches F?vrier, Recherches sur la structure des th?ories physiques (Les Presses Univer sitaires, Paris 1948). Jean-Louis Destouches. Le R?le de L'Activit? subjective t en un ?l?ment abstrait dit ?l?ment de pr?vision ? Vinstant t associ? ? un ?l?ment initial Xo. La transformation est repr?sent?e par un op?ra teur U (t, to, S, ob) dit op?rateur d'?volution qui d?pend du syst?me ?tudi? S et de l'observateur consid?r? ob. On a donc: X (t) = U (t, to, S, ob) Xo. Les pr?visions, exprim?es sous formes de probabilit?s, se calculent alors par une loi ind?pendante du temps ? partir des ?l?ments de pr?vision X (t). Toute l'?volution au cours du temps se trouve contenue dans l'op?rateur d'?volution U (t, to), c'est a dire dans le passage de Xo ? X (t). La m?canique ondulatoire se montre bien un cas particulier de ce sch?ma: les Xo sont alors les fonctions d'ondes initiales i^o, les X (t) sont les fonctions d'ondes \p (t) ? l'instant t. Cette m?thode est toute diff?rente de celle de la physique clas sique, qui ?tait totalement objective en ce sens qu'on y d?crivait des objets et leurs propri?t?s intrins?ques, ind?pendamment de tout obser vateur. Ici au contraire on part d'actions effectu?es par des obser vateurs et on cherche ? pr?voir le r?sultat d'actions ult?rieures. | E by Jean-Louis Destouches (Paris) Yesterday Mr. Piaget told us that the aim of this conference was to retrace the psychological genesis of concepts and their logistical formalization ". My task must be try to fulfill this goal for a few notions of modern physics. When we want to approach the study of a discipline so that we can then take an active part in its development, we are first of all led to passively examine the last phase of its historical evolution. Then we will be led to make an analysis of this evolution with the aim of understanding, with a view to an action provoking as for new developments. understood, we are led to formalize, and this formalization will allow an action which will advance in a more or less restricted way the discipline considered, according to the value of what we understood. For my part, I set out to advance the theories of microphysics and I studied passively the development of e wave mechanics. One day it occurred to me that the fundamental character of quantum theories was the calculation of forecasts: starting from the result of an initial measurement carried out by an observer, we seek to calculate forecasts for the outcome of subsequent measurements that may be made by some observers. We can then start from this idea only and translate it into formulas. This formalized expression will lead to a certain number of consequences, and it is their whole which constitutes the general theory of forecasts \*). For example, we show that any measurement result can be translated into a set of abstract elements called a set of associated initial elements. at the result of the measurement, and each initial element Xo can be transformed ? the moment \*) For more details? see: Jean-Louis Destouches, Corpuscules et systems de corpuscules, t. I (Gauthier-Villars, Paris 1941) and Fundamental Principles of Theoretical Physics} t-II (Hermann, Paris 1942). See also: Paulette Destouches February, Research on the structure of physical theories (Les Presses Univer sitaires, Paris 1948). Jean-Louis Destouches. The Role of Activity subjective t in an abstract element called predictive element? Has it been associated? ? an initial element Xo. The transformation is represented by an operator U (t, to, S, ob) said operator of evolution which depends on the system studied. S and the observer considered? ob. We therefore have: X (t) = U (t, to, S, ob) Xo. The forecasts, expressed in the form of probabilities, are then calculated by a law independent of time. from the forecast elements X (t). All the evolution over time is contained in the evolution operator U (t, to), that is to say in the passage of Xo? X (t). The wave mechanics is clearly a special case of this scheme: the Xo are then the functions of initial waves i ^ o, the X (t) are the functions of waves \ p (t)? the instant t. This method is very different from that of classical physics, which was completely objective in the sense that it described objects and their intrinsic properties, regardless of everything observed. vateur. Here, on the contrary, we start from actions carried out by observers and we seek to predict the outcome of further actions. |
| **Piaget, Jean. “Méthode axiomatique et méthode opérationnelle.” Synthese 10, no. (1956): 23-43.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (27%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (25%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (11%) |
| **Original text** | **English translation** |
| Nous examinerons les relations entre les m?thodes axiomatique et op?rationnelle selon trois cat?gories de probl?mes: un probl?me psy chologique, d'abord, car ces deux sortes de m?thodes, tout en ?tant utilis?es dans un but logique, c'est-?-dire normatif, constituent par ailleurs des d?marches de la pens?e, donc des faits psychologiques; un probl?me de relation entre la psychologie et la logique, ensuite, car les op?rations constituent le point de contact entre ces deux disciplines; un probl?me ?pist?mologique, enfin, car ces m?mes questions sont significatives du point de vue de la connaissance en g?n?ral. I. Le point de vue psychologique. Consid?r?e sous l'angle psychologique, une axiomatique est un syst?me de propositions, donc de pens?es verbales (ou significations attach?es ? un syst?me designes). Il est inutile de rappeler, en notre ?Soci?t? internationale de Signifique" que ces pens?es verbales cons tituent essentiellement des actes de communication, c'est-?-dire que les propositions (et les d?monstrations auxquelles elles donnent lieu les unes ? partir des autres) sont avant tout des actions exerc?es sur autrui de mani?re ? provoquer chez lui la formation d'un syst?me de pens?es correspondant, de fa?on bi-univoque, ? celles qui constituent la th?orie envisag?e, telle qu'elle a ?t? con?ue par son cr?ateur m?me. Les op?rations, au contraire, consistent psychologiquement en ac tions g?n?rales, exerc?es non pas seulement sur autrui, mais en premier lieu sur les objets eux-m?mes, que ces objets soient mat?riels ou sym bolis?s par des signes quelconques. Mais la plupart des op?rations ne demeurent pas ? l'?tat d'actions mat?rielles (telles une r?union d'objets r?els en une collection, ou une mesure par superposition de T deux grandeurs physiques, etc.). Les op?rations sont au contraire sus ceptibles de s'int?rioriser sous la forme d'actions mentalis?es qui con stituent donc ? leur tour des pens?es, mais sans perdre leur caract?re d'actions effectives: ce sont alors des actions simplement esquiss?es et portant sur des objets symboliques, mais conservant tous les autres caract?res psychologiques de l'action mat?rielle. Il est donc erron?, ou du moins ?quivoque, de soutenir avec Mach, Rignano, Goblot, etc., que les op?rations sont des ?exp?riences" ou des actions ?mentalement ex?cut?es": r?unir deux objects symboliques A et A' en une classe B est psychologquement la m?me action que de r?unir mat?riellement deux objets physiques en une collection, ? cette seule diff?rence pr?s que la premi?re de ces deux actions ne se d?ploie pas en gestes ext? rieurs mais demeure int?rioris?e, et cela parce qu'elle porte sur des objets symboliquement ?voqu?s et non pas des choses physiquement donn?es. Mais les op?rations ne sont pas simplement des actions int?riori s?es, car chacune de ces derni?res ne constitue pas une op?ration. Toute op?ration comporte en outre deux cacact?res, que ne poss?de pas n'importe quelle action int?rioris?e. Le propre des op?rations est d'abord de former entre elles des syst?mes d'ensemble ? propri?t?s d?finies relativement ? leur totalit?. C'est ainsi que l'action d'ordon ner deux objets (ex?cut?e mat?riellement ou int?rioris?e) ne consti tue une op?ration que dans la mesure o? elle peut ?tre coordonn?e ? d'autres actions de m?me esp?ce (ordonner un troisi?me objet par rap port aux deux premiers, etc.) et o? cette coordination ob?it ? cer taines lois de totalit? (syst?mes semi-ordonn?s, bien ordonn?s, etc.) ? | We will examine the relations between the axiomatic and operational methods according to three categories of problems: a psychological problem, first, because these two kinds of methods, while being used es with a logical aim, that is to say a normative one, constitute in addition steps of the thought, therefore psychological facts; a problem of relation between psychology and logic, then, because the operations constitute the point of contact between these two disciplines; a pistemological problem, finally, because these same questions are significant from the point of view of knowledge in general. I. The psychological point of view. Considered from the psychological angle, an axiomatic is a system of propositions, therefore of verbal thoughts (or meanings attached to a designated system). It is useless to recall, in our? Society? International Significant "that these verbal thoughts constitute essentially acts of communication, that is to say that the propositions (and the demonstrations to which they give rise one from the other) are above all actions exercised on others in such a way as to provoke in him the formation of a system of thoughts corresponding, in a bi-unequivocal manner, to those which constitute the theory envisaged, such as it was designed by its very creator. The operations, on the contrary, consist psychologically in general actions, exercised not only on others, but primarily on the objects themselves, whether these objects are material or sym bolated by any signs. But most operations do not remain in the state of material actions (such as a r union of real objects in a collection, or a measure by superposition of T two physical quantities, etc.). On the contrary, operations are likely to be improved under the f form of mental actions which therefore constitute their turn of thoughts, but without losing their character of effective actions: they are then actions simply sketched and bearing on symbolic objects, but preserving all the other psychological characteristics of the action mat? rielle. It is therefore wrong, or at least unequivocal, to argue with Mach, Rignano, Goblot, etc. that the operations are experiences "or actions mentally executed": r? to unite two symbolic objects A and A 'in a class B is psychologically the same action as to reunite two physical objects in a collection, this only difference near that the first of these two actions does not deploy in external gestures laughs but remains interiorized, and this because it relates to symbolically evoked objects and not to physically given things. But operations are not simply internal actions, because each of these is not an operation. All operations also have two characters, which do not have any internalized action. The peculiarity of operations is first of all to form whole systems between them. properties defined relatively to all of them. This is how the action of ordering two objects (executed materially or internally) only constitutes an operation insofar as it can be coordinated? other actions of the same kind (order a third object in relation to the first two, etc.) and where? this coordination obeys? certain laws of totality? (semi-ordered, well-ordered systems, etc.)? |
| **Gonseth, Ferdinand. “L'idée de la loi naturelle.” Erkenntnis 6, no. (1936): 421-430.** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (37%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (34%)  F-Explanation (16) model; explanation; explain; account; explanatory; phenomenon; use; case; system; provide (6%) |
| **Original text** | **English translation** |
| L'id?e de la loi naturelle i. Il me semble conforme aux buts g?n?raux qui sont propos?s aux travaux de ce Congr?s de rappeler ici la ?Semaine de synth?se? de Paris qui, du 29 mai au 3 juin 1933, ^ut totalement consacr?e au sujet ?Science et loi?, tout proche de celui qui nous occupe aujourd'hui. Dans l'expos?: La loi dans les sciences math?matiques, je m'attachai tout d'abord ? r?futer l'id?e de P. Boutroux, selon laquelle les math?matiques ont, au moins partiellement, pour but, d'expliciter la notion g?n?rale de loi qui se trouve, dans sa g?n?ralit?, dans notre entendement. Il est vrai que les math?matiques four? nissent le mod?le de divers types de lois, de la loi de structure, qui ?tait la seule qu'imaginait la science grecque, de la loi fonctionnelle, qui est encore ? la base de la science moderne, de la loi statistique, de la loi de corr?lation, etc. Mais il est facile de montrer que, si l'on veut pousser l'id?e de loi jusqu'? sa plus grande g?n?ralit?, dans l'une ou l'autre des voies ouvertes par les math?matiques, l'abou? tissement ne peut ?tre que la notion du hasard ou de l'arbitraire. En un mot, on ne trouve pas quelque part dans notre entende? ment, toute faite et toute pr?te, l'id?e abstraite et g?n?rale de la loi. Celle-ci doit ?tre pens?e comme un ?tre en devenir, dont l'?volution n'est pas pr?d?termin?e, limite, ce dernier n'existant pas. L'?volution de cette id?e se fait ? partir des exemples les plus simples, ol'esprit aper?oit une loi r?alis?e, que ce soit la loi arith? m?tique {n +i)2 = n2 + (m ou que ce soit la constante p?riodicit? des mouvements de certains astres. En bref, l'explicitation de la notion g?n?rale de loi ne peut se passer des exemples o? elle est r?alis?e en tant que loi naturelle, dans la sph?re du r?el physique ou dans le domaine du num?rique. Je suis revenu, au Congr?s de Paris de l'ann?e pass?e, sur la nature de ces lois soi-disant absolues, dont l'arithm?tique et la logique offrent les plus purs exemples. Et q'ai expos? que leur analyse approfondie ne peut se passer de l'id?e de loi naturelle dans la sph?re des objets qui tombent le plus imm?diatement sous notre connaissance. La logique et l'arithm?tique ?l?mentaire doivent, ? un certain niveau, ?tre regard?es comme le premier chapitre d'une science naturelle tr?s primitive, ? laquelle j'ai donn? le nom de ?Physique de l'objet quelconque?. Je ne veux pas r?p?ter ici les d?tails de cette argumentation, dont le r?sultat, pour la notion de la loi g?n?rale, pourrait ?tre formul? comme suit: L'analyse de la notion abstraite g?n?rale de loi rencontre une fois, dans une assise profonde et fondamentale, la notion de loi naturelle dans son sens ordinaire. En face de cette analyse, je place maintenant celle de l'id?e de loi naturelle. Lorsque le physicien veut en pr?ciser la d?finition, c'est vers les math?matiques qu'il se tourne, et ceci ? juste droit, puisque ce sont les math?matiques qui ont pouss? l'id?e de loi le plus loin vers l'abstrait. | The idea of natural law i. It seems to me to be in line with the general aims which are proposed for the work of this Congress to recall here the? Synthesis week? of Paris which, from May 29 to June 3, 1933, was totally devoted to the subject “Science and law”, very close to that which occupies us today. In the presentation: The law in the mathematical sciences, I focused first on? reject the idea of P. Boutroux, according to which the aim of mathematics, at least partially, is to explain the general notion of law which is found in its genesis. reality, in our understanding. It is true that the mathematics oven the model of various types of laws, of the law of structure, which was the only one imagined by Greek science, of the functional law, which is still the basis of modern science, statistical law, correlation law, etc. But it is easy to show that, if one wants to push the idea of law up to its greatest generality, in one or the other of the paths opened by mathematics, the outcome This can only be the notion of chance or the arbitrary. In a word, we do not find somewhere in our understanding? ment, ready made and ready, the abstract and general idea of the law. It must be thought of as a being in the making, whose evolution is not predetermined, limit, the latter not existing. The evolution of this idea is done From the simplest examples, the mind sees a realized law, be it the arithmic law. metric {n + i) 2 = n2 + (m or that it is the constant periodicity of the movements of certain stars. In short, the explanation of the general concept of law cannot happen examples where it is realized as natural law, in the sphere of physical reality or in the digital domain. I came back, to the Paris Congress of the year The past, on the nature of these so-called absolute laws, of which arithmetic and logic offer the purest examples. And that I explained that their in-depth analysis cannot do without the id of natural law in the sphere of objects which most immediately fall under our knowledge. Elementary logic and arithmetic must, at a certain level, be regarded as the first chapter of a very primitive natural science, to which I have given the name of "Physics of any object". I do not want to repeat here the details of this argument, whose result, for the notion of general law, could be formulated as follows me: The analysis of the general abstract concept of law meets once, in a deep and fundamental basis, the concept of natural law in its ordinary sense. In front of this analysis, I now place that of the idea of natural law. When the physicist wants to specify its definition, it is to mathematics that he turns, and this? just right, since it was mathematics that pushed the law idea furthest towards the abstract. |
| **Engel-Tiercelin, Claudine. “Logique, psychologie et métaphysique: les fondements du pragmatisme selon C. S. Peirce.” Journal for General Philosophy of Science 16, no. 2 (1985): 229-250.** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (43%)  H-History (0) work; time; man; history; new; year; make; life; century; write (16%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (15%) |
| **Original text** | **English translation** |
| Il est vain de se demander qui, de William James ou de Charles Sanders Peirce est Pauthentique representant du pragmatisme. Encore plus peut-etre de les opposer en proposant de considerer l'oeuvre de James comme la version psychologique du pragmatisme, alors que celle de Peirce en serait la version logique. Certes, la rupture parait claire entre le ?psychologue en chaise longue? declarant publiquement a la fin de sa vie qu'il a renonce a la logique, qu'il se trouve ?mathematiquement imbecile\*, ?a-logique, sinon illogique?1 et le logicien de Milford enjoignant son ami d'?essayer d'apprendre a penser avec plus d'exactitude?2. Pourtant James ne se trompera peut-etre pas tout a fait lorsque, portant un jugement sur les trois articles publies en 1868 par le Journal de Philosophie Speculative3, et tout en avouant n'y rien comprendre, il les qualifiera de ?psychologico-metaphysiques?4. Ces textes developpent, on le sait, outre une critique ?devastatrice?5 de l'intuition et de ?l'esprit du 1 Tous ces termes sont de James lui-meme et sont cites par Gallie, W.B. in Peirce and pragmatism, New York, 1966, p. 22. 2 ibid. p.23. 3 vol. 2 (1868), pp. 103-14; pp. 140-157; pp. 193-208. Il s'agit des Questions concernant certaines facultes que Von prete a l'homme, Quelques Consequences de Quatre Incapacites, et des Fondements de la validite des Lois de la Logique, tous trois reproduits dans le cinquieme volume des Collected Papers of C. S. Peirce, (vol. I a VI, edites par C. Hartshorne et P. Weiss, vol. VII et VIII edites par A. W. Burks, Cambridge, 1931-1958, que nous indiquerons selon l'usage par deux chiffres, le premier renvoyant au volume, le second au paragraphe): 5.213-263; 5.264-317; et 5.318-357. 4 Dans une lettre a Henry Bowditch de 1869, citee par Perry, The Thought and Character of William James, (2 vol.), Boston, 1936, vol. I, p. 292, James les decrit comme ?tres incisifs et originaux, extremement audacieux, subtils, incomprehensibles?, dont ?les eclarcissements qu'il (Peirce) m'en donna ne m'aiderent guere dans la comprehension? et enfin ?si hermetiquement exprimes que Ton a du mal a saisir ce qu'ils veulent dire exactement?. 5 C'est notamment l'opinion de Gallie, op. cit. p. 61. Zeitschrift fiir allgemeine Wissenschaftstheorie XVI/2 (1985) ? Franz Steiner Verlag Wiesbaden GmbH, Stuttgart cartesianisme?6, la theorie selon laquelle ?toute pensee est un signe?7, que Peirce retiendra comme l'une des deux idees-force du pragmatisme8. En verite, Invocation par W. James de la psychologie et de la metaphysique est moins le fait d'une mecomprehension radicale de la pensee de Peirce que la mise en lumiere d'une ambiguite reelle qui existe des cette epoque entre logique, psychologie et metaphysique: tel est en effet le projet ambitieux que Peirce elabore tres tot sous l'influence de Kant, de Boole et des Scolastiques, d'une Logique qui serait plus formelle certes, mais qui pourrait s'etendre, par un certain usage logique du signe, a une Semiotique generalisee congue sur le modele scotiste d'une Grammaire Speculative. Des 1867, Peirce declare ouvertement qu'aucune etude ?ne parait aussi triviale que la logique formelle?, et ce, ?non seulement a premiere vue, mais meme apres de longues recherches. | It is pointless to wonder who, of William James or Charles Sanders Peirce is the authentic representative of pragmatism. Even more perhaps to oppose them by proposing to consider James' work as the psychological version of pragmatism, while that of Peirce would be the logical version. Certainly, the break seems clear between the? Psychologist in a lounge chair? publicly declaring at the end of his life that he has renounced logic, that he finds himself mathematically imbecile \*, "logical, if not illogical" 1 and Milford's logician enjoining his friend to try to learn to think more accurately? 2. Yet James may not be entirely wrong when, judging the three articles published in 1868 by the Journal of Speculative Philosophy3, and admitting to understanding nothing, he called them "psychologico-metaphysics"? 4. These texts develop, as we know, in addition to a devastating criticism 5 of the intuition and the spirit of the 1 All these terms are from James himself and are quoted by Gallie, WB in Peirce and pragmatism, New York , 1966, p. 22. 2 ibid. p.23. 3 vol. 2 (1868), pp. 103-14; pp. 140-157; pp. 193-208. These are the Questions concerning certain faculties that Von lends to man, Some Consequences of Four Disabilities, and the Foundations of the validity of the Laws of Logic, all three reproduced in the fifth volume of the Collected Papers of CS Peirce, ( vol. I to VI, edited by C. Hartshorne and P. Weiss, vol. VII and VIII edited by AW Burks, Cambridge, 1931-1958, which we indicate according to usage with two digits, the first referring to the volume, the second in paragraph): 5.213-263; 5,264-317; and 5.318-357. 4 In a letter to Henry Bowditch of 1869, quoted by Perry, The Thought and Character of William James, (2 vol.), Boston, 1936, vol. I, p. 292, James describes them as very incisive and original, extremely daring, subtle, incomprehensible?, Which in the clarifications which he (Peirce) gave me did not help me much in understanding? and finally? so tightly expressed that it’s hard to understand exactly what they mean ?. 5 This is notably the opinion of Gallie, op. cit. p. 61. Zeitschrift fiir allgemeine Wissenschaftstheorie XVI / 2 (1985)? Franz Steiner Verlag Wiesbaden GmbH, Stuttgart Cartesianism at 6, the theory that any thought is a sign at 7, which Peirce will retain as one of the two main ideas of pragmatism 8. In truth, W. James' invocation of psychology and metaphysics is less the result of a radical misunderstanding of Peirce's thought than the highlighting of a real ambiguity that existed at that time between logic, psychology and metaphysics : this is indeed the ambitious project that Peirce very early developed under the influence of Kant, Boole and Scholastics, a Logic which would be more formal certainly, but which could be extended, by a certain logical use of the sign , to a Generalized Semiotics conceived on the Scottish model of a Speculative Grammar. From 1867, Peirce openly declares that no study seems as trivial as formal logic, not only at first glance, but even after long research. |
| **Rougier, Louis. “La relativite de la logique.” Erkenntnis 8, no. 4 (1939): 193-217.** | **Top-topics**  A-Truth (23) logic; truth; true; proposition; sentence; logical; formula; follow; rule; world (33%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (23%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (12%) |
| **Original text** | **English translation** |
| La logique est d?finie comme l'art de bien conduire sa pens?e, Fart de raisonner avec justesse. Raisonner c'est montrer que cer? taines propositions sont n?cessairement vraies ? supposer que d'autres propositions, appel?es pr?misses, soient tenues pour telles. C'est dans les sciences du raisonnement, c'est-?-dire en math?ma thiques, que la logique, pour la premi?re fois, est entr?e en action. S'il faut en croire Proclus, c'est au Vie si?cle avant notre ?re que les math?matiques intuitives et empiriques des Orientaux se seraient transform?es en une discipline abstraite, deductive, et cette transformation serait due ? Pythagore : ?Vint Pythagore qui transforma la g?om?trie en un enseignement lib?ral, car il remonta aux principes premiers et rechercha les th?or?mes abstraitement et par l'intelligence pure". Cette transformation consiste essentiellement dans la substitution ? l'?vidence sensible, qui ne porte que sur la constatation de cas concrets particuliers, de l'?vidence intelligible qui repose sur le raisonnement et qui atteint l'universel. Aristote, dans les Seconds Analytiques, a analys? la proc?dure lo? gique de la science deductive appel?e par lui Apodictique, telle que la concevaient les math?maticiens grecs de son temps. Son analyse s'est impos?e aux logiciens jusqu'? la fin du XIXe si?cle. Selon lui, une science deductive, telle que la g?om?trie pythagoricienne, repose sur des principes ?vidents par eux-m?mes, qu'il appelle ses principes propres, et la d?monstration a pour but de transf?rer cette ?vidence de proche en proche des principes propres ? leurs cons?quences les plus ?loign?es. C'est l'?vidence des principes propres qui fonde l'?vidence des th?or?mes et les principes propres sont plus ?vidents que les th?or?mes qu'on en d?duit, en vertu d'un principe qu'on peut appeler principe de Veminence de la cause, d'apr?s lequel une qualit? manifest?e par un effet doit se trouver ? un degr? plus eminent dans la cause de cet effet : ?Par exemple, la raison qui fait aimer un objet est encore plus aim?e que lui. Puis donc que nous connaissons et que nous croyons en vertu des principes, nous devons les conna?tre et les croire mieux que les conclusions qu'on en tire 1)." Par suite, ?si nous avons bien ?tabli ce que c'est que savoir, il s'en? suit n?cessairement que la science d?monstrative part de propositions vraies, premi?res et imm?diates, et, relativement ? la conclusion, plus notoires et ant?rieures. Tels sont les principes propres des d?monstrations; car, sans eux, il n'y a pas de syllogisme, d'o? pas de d?monstration, d'o? pas de science 2)". La n?cessit? des th?or?mes d?rive de celle des principes propres'. ?On appelle n?cessaire la d?monstration qui tire sa n?cessit? de celle des pr?misses". La th?orie aristot?licienne de la d?monstration peut se d?composer en quatre propositions: Io) Il existe des principes qui sont ind?montrables par nature, ?tant, par nature, premiers et imm?diats. Ce sont les principes pro? pres des diff?rentes sciences d?monstratives. 2?) La n?cessit? des principes propres proc?de de leur ?vidence. 3?) L'?vidence des principes propres est propag?e aux th?or?mes par le moyen de la d?monstration. A ces trois affirmations, nous pouvons en ajouter une quatri?me, qu'Aristote ne formule pas explicitement, mais qui r?sulte des pr?? c?dentes. 4?) Quand la d?monstration a propag? l'?vidence des principes propres ? un th?or?me, l'?nonc? de ce th?or?me peut ?tre d?tach? de sa d?monstration. Il constitue une proposition vraie en soi, pourvu qu'on se souvienne de l'avoir correctement d?duit des principes propres. | Logic is defined as the art of properly conducting one's thinking, the art of reasoning with accuracy. To reason is to show that cer? some propositions are necessarily true? assume that other proposals, called presumptions, are held to be such. It is in the sciences of reasoning, that is to say in mathematics, that logic, for the first time, came into action. If Proclus is to be believed, it was in Life so ancient before our era that the intuitive and empirical mathematics of the Orientals would have been transformed into an abstract, deductive discipline, and this transformation would be due to Pythagoras:? Came Pythagoras who transformed geometry into a liberal teaching, because he went back to the first principles and sought the theories abstractly and by pure intelligence ". This transformation consists essentially in substitution Obviously sensitive, which relates only to the observation of specific concrete cases, of intelligible evidence which rests on reasoning and which reaches the universal. Aristotle, in the Seconds Analytiques, analyzed the process. hard logic of deductive science called by him Apodictic, as conceived by the Greek mathematicians of his time.His analysis was imposed on logicians until the end of the XIXth century. he, a deductive science, such as Pythagorean geometry, is based on principles evident by themselves, which he calls his own principles, and the purpose of the demonstration is to transfer this Obviously, step by step, principles specific to their most distant consequences. is the evidence of proper principles that underpins the evidence of theories and the principles are more obvious than theories that we deduce from it, by virtue of a principle which one can call the principle of the eminence of the cause, according to which a quality? manifested by an effect must be found a degree more prominent in the cause of this effect: For example, the reason that makes an object love is even more loved than it. Then therefore that we know and that we believe by virtue of the principles, we must know them and believe them better than the conclusions which one draws from it 1). "Consequently, if we have well established what it is that knowing, it necessarily follows that the demonstrative science starts from true propositions, first and immediate, and, relatively to the conclusion, more notorious and earlier. These are the principles of the demonstrations, because without them there is no syllogism, hence no demonstration, no science 2) ". The need of theories derived from that of own principles'. ? Demonstration which draws its necessity is called necessary? of that of the premisses ". The Aristotelian theory of demonstration can be composed of four propositions: Io) There are principles which are not demonstrable by nature, being, by nature, first These are the main principles of the different demonstrative sciences. 2?) The need for own principles is due to their obviousness. 3?) The obviousness for proper principles is propagated to theories by means of demonstration. To these three statements, we can add a fourth, which Aristotle does not formulate explicitly, but which results from the predictions. 4?) When the demonstration has propagated the evidence of the principles specific to a theorem, the statement of this theorem can be detached from It is a true proposition in itself, as long as one remembers having correctly deduced it from its own principles. |
| **Bernier, Réjane. “Origine et rôles de l'hypothèse en biologie.” Journal for General Philosophy of Science 14, no. 2 (1983): 213-233.** | **Top-topics**  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (25%)  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (13%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (16%) |
| **Original text** | **English translation** |
| La notion d'hypothese merite de faire l'objet d'une analyse approfondie car on la retrouve a toutes les etapes de la formation de la connaissance. En effet, des que l'on depasse le niveau de la description du phenomene singulier (ou collectif) et que l'on veut atteindre une connaissance intellectuelle de la realite, on est force de faire appel a Phypothese, que ce soit au niveau du concept et de la definition, de la loi ou de Pexplication. II est done difficile de definir des maintenant, de hqon precise, Phypothese. On peut simplement la caracteriser comme une supposition relative a la nature des choses, a leurs proprietes ou a leurs causes, qui est forcement un depassement des donnees objectives, brutes. Evidemment, cette supposition n'a pas les memes fondements lorsqu'elle est relative a une definition et lorsqu'elle est relative a une explication. Mais il faut se demander si, pour autant, la nature meme de la supposition est differente et je suis tentee de repondre negativement. Dans un cas, elle porte sur la nature de Petre, dans Pautre sur sa cause. Mais ce qui en fait une supposition au lieu d'un enonce descriptif, e'est, dans les deux cas, le fait que la relation entre les termes depasse Pobservation (cas de la definition et de la loi) ou meme n'est pas observee mais imaginee (cas de Pexplication) et qu'il faut chercher un moyen de controler si elle existe ou non et construire une experience permettant ce controle, qu'il s'agisse de connaitre quel est le poids moleculaire d'une proteine en vue de sa definition ou de savoir quels noyaux du cerveau servent de relais aux nerfs optiques ou auditifs en vue d'elaborer des lois structurales ou physiologiques. Le controle est different mais le caractere hypothetique de la demarche epistemologique est identique. C'est pourquoi il m'apparait possible de traiter de la question de Porigine de Phypothese de fa^on generate. \* Le present travail a ete rendu possible grace a l'aide du Conseil des Arts du Canada (aujourd'hui Conseil de Recherches en Sciences Humaines du Canada). 15 Zeitschrift fur allgemeine Wissenschaftstheorie XIV/2 (1983) ? Franz Steiner Verlag GmbH, D-6200 Wiesbaden HtSE II existe au sujet de Porigine de Phypothese scientifique des conceptions variees qui peuvent s'opposer parfois les unes aux autres. Au debut de Pemploi de la methode experimentale, la mefiance a Pegard de toute intervention subjective etait telle qu'on est venu a considerer Phypothese comme produite directement a partir des faits, comme une sorte de decalque de la realite objective, Pesprit humain n'etant alors que passif devant Pobjet. {Hypotheses nonfingo, declarait Newton). Mais cette position a suscite de vives reactions de la part des philosophes qui ont considere, au contraire, Phypothese comme un produit de Pesprit createur du savant, une sorte d'invention pratiquement independante des faits. Examinons cette derniere these et les difficultes qu'elle souleve. Popper et Hempel, tous deux defenseurs de Pindependance genetique de Phypothese par rapport aux faits, ont aborde cette question selon des perspectives differentes qui ont cependant en commun le fait de rejeter la these inductiviste. | The notion of hypothesis deserves to be the subject of an in-depth analysis because it is found at all stages of the formation of knowledge. Indeed, as soon as we go beyond the level of the description of the singular (or collective) phenomenon and we want to reach an intellectual knowledge of reality, we are forced to appeal to the hypothesis, whether at the level of concept and definition, law or explanation. It is therefore difficult to define now, precisely, the hypothesis. We can simply characterize it as a supposition relative to the nature of things, their properties or their causes, which is necessarily a surpassing of objective, raw data. Obviously, this supposition does not have the same foundations when it relates to a definition and when it relates to an explanation. But one must ask oneself whether, however, the very nature of the supposition is different and I am tempted to answer negatively. In one case it relates to the nature of Petre, in the other to his cause. But what makes it a supposition instead of a descriptive statement is, in both cases, the fact that the relation between the terms exceeds observation (case of definition and law) or even is not observed but imagined (case of the explanation) and that it is necessary to seek a means of controlling if it exists or not and to build an experiment allowing this control, that it is a question of knowing what is the molecular weight of a protein in sight of its definition or of knowing which nuclei of the brain serve as relays to the optic or auditory nerves in order to develop structural or physiological laws. The control is different but the hypothetical character of the epistemological approach is identical. This is why it seems to me possible to deal with the question of the origin of the hypothesis in a general way. \* This work has been made possible with the help of the Canada Council for the Arts (now the Social Sciences and Humanities Research Council of Canada). 15 Zeitschrift fur allgemeine Wissenschaftstheorie XIV / 2 (1983)? Franz Steiner Verlag GmbH, D-6200 Wiesbaden HtSE There are various conceptions about the origin of the scientific hypothesis which can sometimes oppose each other. At the beginning of the use of the experimental method, the distrust of all subjective intervention was such that we came to consider the hypothesis as produced directly from the facts, as a kind of transfer from objective reality, the human mind not being while passive in front of the object. {Nonfingo hypotheses, Newton said). But this position has aroused strong reactions from philosophers who have, on the contrary, considered the hypothesis as a product of the creative mind of the scientist, a kind of invention practically independent of the facts. Let us examine this last thesis and the difficulties it raises. Popper and Hempel, both defenders of the genetic independence of the hypothesis from the facts, approached this question from different perspectives which, however, have in common the rejection of the inductivist thesis. |
| **Suppes, Patrick. “L'argument probabiliste pour une logique non classique de la mécanique quantique.” Synthese 16, no. 1 (1966): 74-85.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (33%0  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (29%)  A-Truth (23) logic; truth; true; proposition; sentence; logical; formula; follow; rule; world (11%) |
| **Original text** | **English translation** |
| l'argument Le but de cet article est simple. Je d?sire ?noncer aussi clairement que possible, sans une longue digression dans des questions techniques, ce que je consid?re ?tre l'argument unique le plus puissant en faveur de l'emploi d'une logique non classique en m?canique quantique. Il y a une tr?s grande litt?rature math?matique et philosophique sur la logique de la m?canique quantique, mais ? quelques exceptions pr?s, cette litt?rature fournit une tr?s pauvre justification intuitive du fait qu'on consid?re une logique non classique pour commencer. Le fameux article de Birkhoff et von Neumann (1936) constitue un exemple classique dans la litt?rature math?matique. Bien que Birkhoff et von Neumann aient examin? exhaus tivement le d?veloppement des propri?t?s des geometries projectives et des geometries de lattices qui sont li?es ? la logique de la m?canique quan tique, ils consacrent moins d'un tiers de page (p. 831) aux raisons physi ques qui entra?nent la consid?ration de telles lattices. Qui plus est, les quel ques lignes qu'ils y consacrent sont loin d'?tre claires. La litt?rature philoso phique est toute aussi mauvaise ? ce sujet. Une des discussions philo sophiques les mieux connues l?-dessus est celle qui est expos?e dans le dernier chapitre du livre de Reichenbach (1944) sur les fondations de la m?canique quantique. Reichenbach offre une logique fonctionnelle de v?rit? ? trois valeurs qui semble avoir peu de rapport avec les proposi tions de la m?canique quantique, qu'elles soient de nature exp?rimentale ou th?orique. Ce que Reichenbach n'arrive pas ? montrer, c'est comment la logique ? trois valeurs qu'il propose poss?de un r?le fonctionnel quelconque dans le d?veloppement th?orique de la m?canique quantique. Il est en effet facile de montrer que la logique qu'il propose ne pourrait certainement pas ?tre ad?quate pour un ?nonc? syst?matique et th?orique \* Je d?sire remercier Jean et Claudine Donio pour la traduction de cet article ? partir du manuscrit anglais. E de la th?orie telle qu'on la con?oit d'habitude. Les raisons pour cela de viendront claires plus tard dans le pr?sent article. Les pr?misses princi pales que je discute dans cet article sont peu nombreuses. Je vais les ?noncer sans justification d?taill?e, de fa?on ? ce que la structure g?n?rale de l'argument ?merge de la fa?on la plus simple possible. Pr?misse 1. Dans les contextes physiques ou empiriques comportant Vapplication de la th?orie de la probabilit? en tant que discipline math?ma tique, la logique fonctionnelle qui est importante est la logique des ?v?ne ments ou propositions auxquels on assigne des probabilit?s, et non pas la logique des ?nonc?s qualitatifs ou intuitifs que Von fait sur la th?orie formu l?e math?matiquement. (Dans les applications classiques de la th?orie de la probabilit?, cette logique des ?v?nements est une alg?bre d'ensembles de Boole; pour des raisons techniques, qui n'ont aucune importance ici, cette alg?bre de Boole est g?n?ralement suppos?e additive d?nombrable c.?.d., une cx-alg?bre.) Pr?misse 2. U alg?bre des ?v?nements devrait satisfaire la condition qu'une probabilit? est assign?e ? chaque ?v?nement ou ?l?ment de Valg?bre. Pr?misse 3. Dans le cas de la m?canique quantique, des probabilit?s peuvent ?tre assign?es aux ?v?nements tels que position dans une certaine r?gion ou moment dans des limites donn?es, mais la probabilit? de la conjonction de deux ?v?nements de ce type n'existe pas n?cessairement. Conclusion: La logique fonctionnelle de la m?canique quantique n'est pas classique. | the argument The purpose of this article is simple. I wish to state as clearly as possible, without a long digression in technical questions, what I consider to be the single most powerful argument in favor of the use of unconventional logic in memory. quantum quantum. There is a very large mathematical and philosophical literature on the logic of quantum mechanics, but at with a few exceptions, this literature provides very poor intuitive justification for considering unconventional logic to begin with. The famous article by Birkhoff and von Neumann (1936) is a classic example in mathematical literature. Although Birkhoff and von Neumann have examined? exhaus tively the development of the properties of projective geometries and geometries of lattices which are related to using the logic of quantum mechanics, they devote less than a third of a page (p. 831) to the physical reasons which lead to the consideration of such lattices. What is more, whatever lines they devote to it are far from clear. Philosophical literature is just as bad? this subject. One of the best known philosophical discussions above is that which is set out in the last chapter of Reichenbach's (1944) book on the foundations of quantum mechanics. Reichenbach offers a functional logic of truth ? three values which seem to have little relation to the propositions of quantum mechanics, whether of an experimental or theoretical nature. What Reichenbach does not happen? show, how is logic? three values which he proposes possesses any functional role in the theoretical development of quantum mechanics. It is indeed easy to show that the logic which he proposes could certainly not be adequate for a statement. systematic and theoretical \* I would like to thank Jean and Claudine Donio for the translation of this article. from the English manuscript. E theory as we usually see it. The reasons for this will come clear later in this article. The main assumptions that I discuss in this article are few. I will speak them out without detailed justification, so what the general structure of the argument emerges in the simplest way possible. Premise 1. In physical or empirical contexts involving the application of the theory of probability as a mathematical discipline, the functional logic that is important is the logic of events or propositions to which we assign probabilities, and not the logic of qualitative or intuitive statements that we make on the theory formulated mathematically. (In classical applications of the theory of probability, this logic of events is an algebra of Boole sets; for technical reasons, which have no importance here, this algebra de Boole is generally assumed to be a countable additive i.e., a cx-algebra.) Premise 2. An algebra of events should satisfy the condition that a probability? is assigned? each event or element of Valg? bre. Premise 3. In the case of quantum mechanics, probabilities can be assigned to events such as position in a certain region or moment within given limits, but the probability? of the conjunction of two events of this type does not necessarily exist. Conclusion: The functional logic of quantum mechanics is not classical. |

**[Encoder 3]**

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| **Bourgin, Georges (1956) « Neutralité ». Synthese 10 : 265-269.** | **Top 3 topics**  H-History (0) work; time; man; history; new; year; make; life; century; write (57%)  D-Agent-decision (8) agent; action; decision; game; choice; act; utility; strategy; moral; preference (14%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (6%) |
| **Original text** | **English translation** |
| Qui peut et **n'enpesche p?che"** (Loysel) La Soci?t? Internationale de ***Signifique*** se pr?occupe? juste titre de la s?mantique des mots et de la valeur des concepts em ploy?s en mati?re de politique nationale et internationale. Elle trouvera des ?l?ments utiles d'enqu?te et d'information aupr?s des VAssociation fran?aise des Sciences politiques qui a d?sormais son organe dans la ***Revue*** fran?aise de Science politique (no 1-2 janv., juin 1951, Presses universitaires), ainsi que dans le vocabulaire philosophique d? ? l'?minent professeur **Andr?** Lalande et dans le Vocabulaire historique du Centre de **Synth?se** dirig? par le non moins eminent Henri Berr. Le mot et le concept de neutralit? doit aux circonstances actu elles de la politique internationale qu'on s'arr?te sur sa **significa tion**. Et d'abord, sans ?laborer une ?tude vraiment s?mantique du terme, **il** convient d'indiquer tout de suite qu'il se rattache au pronom ind?fini latin ?neuter", ?ni l'un ni l'autre".  C'est **?** la m?me origine qu'est d? le mot neutralisme, dont nous examinerons rapidement aussi le sens. Je viens de dire que la neutralit? a sa place dans la politique internationale, sa place essentielle, mais le mot est employ? aussi dans la politique int?rieure de certains pays, **?** l'occasion des probl?mes scolaires qui ***mettent aux prises*** les partisans de l'enseignement d'?tat **?** ceux de l'enseignement confessionnel, dit ?libre" **?** appli cation particuli?re d'un adjectif ***?quivoque***: la ?neutralit? scolaire" consiste dans la doctrine et la pratique politiques en vertu de laquelle l'?tat organisateur de l'enseignement national, ne se pr?oc cupe pas et ne doit point se pr?occuper de la confession religieuse ni de la doctrine philosophique des parents qui confient leurs enfants aux ?coles et ?tablissements officiels d'enseignement.  Sur le plan de la politique internationale, la neutralit? signifie l'engagement bilat?ral et parfois pluraliste que tel?tat ou tels ?tats ne prendront pas part aux conflits arm?s, aux guerres dans lesquels seront impliqu?s le ou les ?tats **avec lesquels ils ont pass?** des conventions. Deux types de neutralit? se pr?sentent dans l'histoi re: la neutralit? conventionnelle **indiqu?es** r?sultant de trait?s pass?s, d'ordinaire, temporairement dans les conditions qui viennent d'?tre; la neutralit? perp?tuelle, r?sultant d'accords internationaux et d'actes finals de congr?s, qui d?munit, en quelque sorte, l'?tat b?n?ficiaire du droit d'intervenir par la force dans les conflits internationaux, mais surtout le **met ? l'abri** des cons?quences destructives des con flits internationaux. Ces ?tats de chose ont exist? dans l'antiquit?, mais ce n'est qu'au cours des guerres internationales du XVI?me et du XVIIe si?cle que le droit de neutralit? a ?t? mis au point par les juristes, pr?cis?ment dans les pays les plus menac?s par les conflits interna tionaux, les Pays-Bas et la Suisse. La Belgique, form?e en 1830 **?** la suite de sa s?paration d'avec les Pays-Bas, a **b?n?fici?** d'un r?gime de neutralit? auquel elle n'a renonc**?** qu'aux approches de la seconde guerre mondiale. La Suisse est le seul ?tat soumis ? un pareil **r?gime0**. Dans la pratique, le r?gime de neutralit? a d'ailleurs ?t? plus ou moins **tourn?** par certains usages: internation alement par le ?droit de passage" en vertu duquel le territoire d'un ?tat neutre pouvait ?tre utilit? par les arm?es des ?tats en guerre; par des groupes d'individus ou des individus isol?s qui, faisant fi des interdictions sp?cifi?es par les trait?s, continuaient de commercer avec les ?tats en guerre ou certains de leurs organis mes. | Who can and **does not fish "**(Loysel) The International ***Significant*** Society is rightly concerned with the semantics of words and the value of the concepts used in matters of national and international policy. She will find useful elements of inquiry and information near the FrenchAssociation of Political Sciences which henceforth its organ in the French ***Review*** of Political Science (no 1-2 Jan, June 1951, University Press), as well as in the philosophical vocabulary of the eminent professor **Andr?** Lalande and in the historic Vocabulary of the Center of **Synth?** Directed by the no less eminent Henri Berr. The word and the concept of neutrality owes to the current circumstances of international politics that we stop on its **significance**. And first, without developing a really semantic study of the term, should immediately indicate that it is related to the indefinite Latin pronoun neuter ", neither neither".  It is the same origin that is he word neutralism, whose meaning we will also quickly examine. I just said that neutrality**?** has its place in international politics, its essential place, but the word is used**?** also in the internal politics of certain countries,? the occasion of the school problems which ***put in*** the supporters of the education of state**?** those of denominational education, said to be "free" ***with a*** particular application of an ***unambiguous*** adjective: "school neutrality" consists of political doctrine and practice by virtue of which the organizing state of national education, is not concerned and should not concern itself with the religious confession or the philosophical doctrine of parents who entrust their children to schools and official educational establishments.  In terms of international policy, neutrality**?** signifies the bilateral and sometimes pluralist commitment that a state or states will not take part in armed conflicts, wars in which the state (s) with which they will have been involved **will be involved** conventions. Two types of neutrality? present themselves in history: neutrality**?** conventional **indicated** resulting from past treaties, ordinarily, temporarily under the conditions which have just been; neutrality**?** perpetual, resulting from international agreements and final acts of congresses, which, in a way, deprives the beneficiary state of the right to intervene by force in conflicts international, but above all **the food? sheltered** from the destructive consequences of international conflicts. These states of affairs have existed. in antiquity, but it was only during the international wars of the sixteenth and seventeenth centuries that the right of neutrality was developed by jurists, precisely in the countries most threatened by international conflicts, the Netherlands and Switzerland. Belgium, formed in 1830**?** following its separation from the Netherlands, which **benefits?** of a neutral regime which she has not given up**?** only near the Second World War. Switzerland is the only state subject to such a **regime0**. In practice, the neutral regime was by the way more or less **turned?** by certain uses: internationally by the "right of way" under which the territory of a neutral state could be used by the armies of states at war; by groups of individuals or isolated individuals who, ignoring the prohibitions specified by the treaties, continued to trade with states at war or certain of their organizations. |
| **Fraïssé, Roland (1966) « Une hypothèse sur l'extension des relations finies et sa vérification dans certaines classes particulières (Deuxième Partie) », Synthese 16(1): 34-46.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (91%)  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (2%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (1%) |
| **Original text** | **English translation** |
| La premi?re partie de cet article (Paragraphes 1 ? 4 inclus) est parue en traduction anglaise ? The Theory of Models (Proceedings of the 1963 **Inter national** Symposium at Berkeley, ed. by J. W. Addison, L. Henkin and A. Tarski), Studies in Logic and the Foundations of Mathematics, **Amster dam** 1965, 96-106. Rappelons ses d?finitions et ses principaux r?sultats. Une relation n-aire, ou **?'arit? n** (entier positif fini) et de base A, est une fonction qui, **?** chaque ?l?ment de An9 associe l'une des valeurs + ou ?. Si B^A9 la restriction de la relation R k B, not?e R\B, est la relation de base B, prenant la m?me valeur que R pour chaque ?l?ment de Bn. Une application bijective/de A sur A' est un isomorphisme de R sur R' (***de base*** A') lorsque R(xl9 ..., xn) = R'(f(x1)9 ...,f(xn)) quels que soient X?9 ..., XnGA. Une multirelation v-aire, ou **?'arit?** v = (nl9 ..., nh) (h entier positif fini) et de base A, est une suite M=(Ri9 ..., Rh) de h relations **d'arit?s** nl9...9nh (entiers positifs finis) et de base commune A. Lorsque h = \, on identifie M=(R1) avec la relation R. La multirelation (?ventuellement la relation) est **?itQ** finie, infinie, d?nombrable, de cardinal a, selon que sa base est finie, infinie, d?nombrable, de cardinal a. La, restriction **?** B^A de M=(Rl9 ..., Rh) est N=M\B=(Ri\B, ..., Rh\B); on dit aussi que M est une extension de N ? A. L'application bijective / de A sur ? est un isomorphisme de M sur M' = (R'l9 ..., R'h)9 de base ?9 lorsqu'elle est un isomorphisme de Ri sur R't pour /=1, .... h. Soit M une multirelation de base infinie A, et soit A'^A; moyennant l'axiome de choix, et plus pr?cis?ment l'axiome d'existence d'un ultra filtre plus fin qu'un filtre donn?, // existe une extension M' de M ? A' telle que toute restriction finie de M' soit isomorphe **?** une restriction de M. l'extension des relations finies Autrement dit M et Mf auront les m?mes restrictions finies **?** l'isomorphie ***pr?s*** (voir [2] ou [3]). Deux multirelations Met M'sont dites **p-?quiv aient** es lorsque toute restriction de M **?** ^p ?l?ments est isomorphe **?** une restric tion de M', et inversement. Etant donn? la suite finie d'entiers v, et l'entier p: 1. // existe un entier s(y,p) tel que toute multirelation v-aire de cardinal ^s(v9p), admette une multirelation d?nombrable p**-?quiv alent?**. 2. Il existe un entier s'(y9p) tel que toute multirelation v-aire, de **car dinal** ^s'(y9p), admette une restriction p**-?quiv alent?**, ayant elle-m?me une extension d?nombrable p**-?quiv alent?.** Ces ?nonc?s sugg?rent l'hypoth?se suivante, que nous n'avons pu ni d?montrer ni infirmer : Etant donn? la suite finie d'entiers v et **Ventier** p9 il existe un entier t(v9p) tel que toute multirelation v-aire, de cardinal ^t(v9p), admette une extension d?nombrable p-?quivalente. | The first part of this article (paragraphs 1 to 4 inclusive) was published in English. The Theory of Models (Proceedings of the 1963 **Inter national** Symposium at Berkeley, ed. By JW Addison, L. Henkin and A. Tarski), Studies in Logic and the Foundations of Mathematics, **Amster dam** 1965, 96-106. Let us recall its definitions and its main results. An n-ary relationship, or**? Arit? n** (finite positive integer) and of base A, is a function which,**?** each element of An9 associates one of the values + or?. If B ^ A9 the restriction of the relation R k B, noted R \ B, is the basic relation B, taking the same value as R for each element of Bn. A bijective map **/** of A on A 'is an isomorphism of R on R' (***basic*** A ') when R (xl9 ..., xn) = R' (f (x1) 9 ..., f (xn) ) whatever X? 9 ..., XnGA. A v-ary multirelation, or**? Arit? v** = (nl9 ..., nh) (h finite positive integer) and of base A, is a sequence M = (Ri9 ..., Rh) of h **arit** relations nl9 ... 9nh (positive integers finite) and of common base A. When h = \, we identify M = (R1) with the relation R. The multirelation (possibly the relation) is**? itQ** finite, infinite, countable, of cardinal a, according to that its base is finite, infinite, countable, of cardinal a. The restriction **?** B ^ A of M = (R19 ..., Rh) is N = M \ B = (Ri \ B, ..., Rh \ B); we also say that M is an extension of N? A. The bijective / A application on? is a basic isomorphism of M on M '= (R'l9 ..., R'h) 9? 9 when it is an isomorphism of Ri on R't for / = 1, .... h. Let M be an infinite basic multirelation A, and let A '^ A; by means of the axiom of choice, and more precisely the axiom of existence of an ultra filter finer than a given filter, // there exists an extension M 'of M? A 'such that any finite restriction of M' is isomorphic**?** a restriction of M. the extension of the finite relations In other words M and Mf will have the same finite restrictions**?** the ***near*** isomorphy (see [2] or [3]). Two Met M multi-relationships are said to be **p-? Iv** when any restriction of M**? ^** elements is isomorphic**?** a restriction of M ', and vice versa. Given the finite sequence of integers v, and the integer p: 1. // exists an integer s (y, p) such that any v-ary multirelation of cardinal ^ s (v9p), admits a countable multirelation p- **? quiv nearby ?**. 2. There exists an integer s '(y9p) such that any v-ary multirelation, of **car dinal** ^ s' (y9p), admits a restriction p**-? Quiv around**, having itself a countable extension p**-? quiv around ?**. These statements suggest the following hypothesis, which we could neither demonstrate nor refute: Given the finite sequence of integers v and **Ventier** p9 there exists an integer t (v9p) such that any v-ary multirelation, of cardinal ^ t (v9p), admits a p-equivalent countable extension. |
| **Bourgeois, Bernard (2002) « Le XXe Siècle Philosophant: Post-Hégélien? » Synthese 130(2): 227-233** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (51%)  H-Social (18) science; scientific; social; research; scientist; philosophy; knowledge; problem; history; practice (11%)  B-Arguments (22) argument; claim; say; question; make; view; reason; fact; case; point (5%) |
| **Original text** | **English translation** |
| Si la source est homog?ne **?** ce qui sourd d'elle et peut donc ?tre **re vendiqu?e** commie telle, c'est-?-dire **?** travers un lien positif reconnu **?** **elle, m?me** dans l'insistance mise sur son d?passement et sa critique, la racine, quant ? elle, nourrit ce qui **ditf?re** d'elle et la nie ou - puisqu'il va s'agir ici du destin, dans le si?cle qui s'ach?ve, d'un **h?g?lianisme** qui parlait bien ainsi ***du*** rapport entre eux des divers moments de la plante! - **la "r?fute"**. Et la r?futation elle-m?me peut ne pas r?fl?chir sa position ou positivit? **premi?re**, o? elle ne vit pas sa relation n?gative **?** ce qu'elle r?fute en fait, dans une saisie proprement dialectique de son surgissement; elle aime m?me ? **se rattacher** **?** un principe **auto-pos?** et non pas simplement **pos?** par la n?gation - qu'elle dit **bien plut?t** susciter - de son pass?. II ne suffit pourtant pas que la r?futation refuse pour ainsi dire **d'h?g?lianiser** en sa saisie de soi pour qu'elle ?chappe r?ellement **?** la puissance de la dialectique, laquelle peut parfaitement rendre compte de sa n?gation par ce qui s'affirme comme son Autre absolu. Mais comme il est tout aussi vrai que la n?gation de la r?duction dialectique du positif au n?gatif s'entend ? restituer la "**g?n?alogie**" d'une telle r?duction, la question de savoir si la **r?futation** se nourrit, pour ?tre elle-m?me, du **r?fut?**, et y a donc sa racine, ne peut recevoir de r?ponse absolument contraignante ***par*** son objectivit?. Tel sera bien le lot de la pr?sente interrogation sur la relation du XXe si?cle **philosophant ?** l'intervention **h?g?lienne**: quel r?le celle-ci a-t-elle **jou?** dans le d?veloppement de **celui-l?**? C'est un fait que les courants novateurs de la pens?e au XXe si?cle ne se r?clament gu?re de l'?v?nement h?g?lien, ni comme d'une source, ni comme ***d'un*** racine. Ce fut d?j? le cas, en ve?rit?, pour le XIXe si?cle. Certes - et pour nous en tenir aux courants philosophiques devenus cul turellement pr?gnants et appel?s ainsi **?** constituer le contexte stimu lant majeur de la pens?e de notre si?cle - les quatre grands rejets du **h?g?lianisme**, au nom du processus mat?riel (Marx), de la vie (**Schopen harier**, puis, in fine, Nietzsche), de l'existence (Kierkegaard) et du sens (Schleiermacher, prolong? ult?rieurement par Dilthey), furent **profond? ment** impliqu?s dans le renouvellement de l'engagement philosophique au cours du si?cle pr?c?dent.**1** Mais force est bien de constater que toutes **^M S** les nuances dans le jugement sur l'importance de l'intervention de Hegel relativisent celle-ci: de la reconnaissance qu'en fait son "disciple" Marx, elle-m?me d?j? ***[makes of it.]*** bien temp?r?e par le r?le soulign? de ces m?diations non proprement philosophiques du marxisme que furent l'?conomie politique anglaise et le socialisme fran?ais, ? la d?nonciation absolue, par Schopen hauer, de la perversion inutile, **"?picyclique"**, du kantisme que fut, **?** ses yeux, le **h?g?lianisme**. Il est vrai que Hegel lui-m?me - pour qui le vrai se pr?suppose dans ce par quoi il semble **compos?** - s'est employ?, par ex emple, **?** **r?trograder** Kant au sein de l'eud?monisme empiriste et **?** creuser **corr?lativement** l'hiatus entre la fausse et la vraie r?volution copernicienne en philosophie! | If the source is homogeneous**?** what springs from it and can therefore be **re-sold** as such, that is to say**?** through a recognized positive link**?** **it, even** in the insistence put on its overflow and its criticism, the root, as for it nourishes what **denies** it and denies it or - since it will be a question here of destiny, in the century which ends, of a **Helianism** which spoke well so ***[of]*** the relationship between them of the various moments of the plant! - **the "refute"**. And the denial itself may not reflect its position or positivity. **first**, where she does not live her negative relationship**?** what it refutes in fact, in a properly dialectical grasp of its emergence; she even loves [?] **relate** **?** an **auto-pos** principle**?** and not just **posed?** by the negation - which it says **rather rather** arouse - of its past. However, it is not enough that the refusal refuses, so to speak, to **make** the self-grip **more generalized** so that it really escapes**.** the power of dialectics, which can perfectly account for its negation through what asserts itself as its absolute Other. But as it is equally true that the negation of the dialectical reduction from positive to negative is understood to reproduce the "**genogy**" of such a reduction, the question of knowing whether the **restoration** feeds, to be itself, of the **dream**, and therefore has its root there , cannot receive an absolutely binding response ***due to*** its objectivity. Such will be the lot of the present interrogation on the relation of the twentieth *century* **philosophical?** the **helicopter** intervention: what role did it **play?** in the development of **this one ?**? It is a fact that the innovative currents of thought in the twentieth century did not claim much from the Hegelian event, neither as a source, nor as ***a 'a*** root. It was already the case, in fact, for the nineteenth century. Certainly - and to stick to the philosophical trends that have become culturally significant and so called**?** constitute the major stimulating context of the thought of our century - the four great rejections of **helianism**, in the name of the material process (Marx), of life (**Schopen harier**, then, in fine , Nietzsche), existence (Kierkegaard) and meaning (Schleiermacher, later extended by Dilthey), were **profound.** involved in the renewal of philosophical engagement during the previous century.**1** But it is clear that all **^ MS** the nuances in the judgment on the importance of the intervention of Hegel put it in perspective: the recognition that her "disciple" Marx, herself already, ***makes of it.*** well tempered by the underlined role of the not properly philosophical mediations of Marxism that were the English political economy and French socialism, the absolute denunciation, by Schopen hauer, of the useless, **"picyclic"** perversion, of the kantism that was,**?** his eyes, **helianism**. It is true that Hegel himself - for whom the true presumes in what he seems **composed by?** - has been employed, for example,**?** **downgrade** Kant within empiricist eudonism and**?** **Correctly** dig the hiatus between the false and the true Copernican revolution in philosophy! |
| **Destouches, Jean-Louis (1948) « Le rôle de l'activité subjective dans l'élaboration des notions de la physique moderne » Synthese 7(1/2): 75-78** | **Top-topics**  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (40%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (18%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (11%) |
| **Original text** | **English translation** |
| **E** par Jean-Louis Destouches (Paris) Hier M. Piaget nous a dit que le but de cette conf?rence ?tait de ?retracer la gen?se psychologique des notions et leur formalisation logistique". Ma t?che doit ?tre ***d'***essayer de remplir ce but pour quelques notions de la physique moderne. Quand on veut aborder l'?tude d'une discipline pour pouvoir ensuite prendre une part active dans son d?veloppement, on est amen? tout d'abord ? examiner passivement la derni?re phase de son ?volution historique. Ensuite on sera conduit ? faire une analyse de cette ?volution dans un but de compr?hension, en vue d'une action provo quant ***de*** nouveaux d?veloppements. ***Alors ce qu'on a*** compris, on est conduit ? de formaliser, et cette formalisation va permettre une action qui fera avancer d'une fa?on plus ou moins restreinte la discipline consid?r?e, suivant la valeur de ce que l'on a compris. Pour ma part, je me suis attach? ? faire progresser les th?ories de la microphysique et j'ai ?tudi? passivement l? d?veloppement de ***la*** m?canique ondulatoire. Un jour il m'est apparu que le caract?re fondamental des th?ories quantiques ?tait le calcul de pr?visions: ? partir du r?sultat d'une mesure initiale effectu?e par un observateur, on cherche ? calculer des pr?visions concernant le r?sultat de mesures ult?rieures susceptibles d'?tre effectu?es par certains observateurs. On peut alors partir uniquement de cette id?e et la traduire en formules. Cette expression formalis?e va entra?ner un certain nombre de cons?quences, et c' est leur ensemble qui constitue la th?orie g?n?rale des pr?visions\*). Par exemple on y d?montre que tout r?sultat de mesure peut ?tre traduit en un ensemble d'?l?ments abstraits dit ensemble des ?l?ments initiaux associ? **au** r?sultat de la mesure, et chaque ?l?ment initial Xo peut ?tre transform? **?** l'instant \*) Pour plus de **d?tail?** voir: Jean-Louis Destouches, Corpuscules et syst?mes **de** corpuscules, t. I (Gauthier-Villars, Paris 1941) et Principes fondamentaux de physique th?orique} t-II (Hermann, Paris 1942). Voir aussi: Paulette Destouches F?vrier, Recherches sur la structure des th?ories physiques (Les Presses **Univer sitaires**, Paris 1948). Jean-Louis Destouches. Le R?le de L'Activit? subjective t en un ?l?ment abstrait dit ?l?ment de pr?vision **?** **Vinstant t** **associ?** **?** un ?l?ment initial Xo. La transformation est repr?sent?e par un op?ra teur U (t, to, S, ob) dit op?rateur d'?volution qui d?pend du syst?me ?tudi? S et de l'observateur **consid?r?** ob. On a donc: X (t) = U (t, to, S, ob) Xo. Les pr?visions, exprim?es sous formes de probabilit?s, se calculent alors par une loi ind?pendante du temps **?** partir des ?l?ments de pr?vision X (t). Toute l'?volution au cours du temps se trouve contenue dans l'op?rateur d'?volution U (t, to), c'est a dire dans le passage de Xo ? X (t). La m?canique ondulatoire se montre bien un cas particulier de ce sch?ma: les Xo sont alors les fonctions d'ondes initiales i^o, les X (t) sont les fonctions d'ondes \p (t) **?** l'instant t. Cette m?thode est toute diff?rente de celle de la physique clas sique, qui ?tait totalement objective en ce sens qu'on y d?crivait des objets et leurs propri?t?s intrins?ques, ind?pendamment de tout **obser vateur**. Ici au contraire on part d'actions effectu?es par des obser vateurs et on cherche ? pr?voir le r?sultat d'actions ult?rieures. | **E** by Jean-Louis Destouches (Paris) Yesterday Mr. Piaget told us that the aim of this conference was to retrace the psychological genesis of concepts and their logistical formalization ". My task must be ***[to]*** try to fulfill this goal for a few notions of modern physics. When we want to approach the study of a discipline so that we can then take an active part in its development, we are first of all led to passively examine the last phase of its historical evolution. Then we will be led to make an analysis of this evolution with the aim of understanding, with a view to an action provoking ***as for*** new developments. ***[Then, what we have]*** understood, we are led to formalize, and this formalization will allow an action which will advance in a more or less restricted way the discipline considered, according to the value of what we understood. For my part, I set out to advance the theories of microphysics and I studied passively the development of ***e*** wave mechanics. One day it occurred to me that the fundamental character of quantum theories was the calculation of forecasts: starting from the result of an initial measurement carried out by an observer, we seek to calculate forecasts for the outcome of subsequent measurements that may be made by some observers. We can then start from this idea only and translate it into formulas. This formalized expression will lead to a certain number of consequences, and it is their whole which constitutes the general theory of forecasts \*). For example, we show that any measurement result can be translated into a set of abstract elements called a set of associated initial elements. **at** **the** result of the measurement, and each initial element Xo can be transformed **?** the moment \*) For more **details?** see: Jean-Louis Destouches, Corpuscules et systems **de** corpuscules, t. I (Gauthier-Villars, Paris 1941) and Fundamental Principles of Theoretical Physics} t-II (Hermann, Paris 1942). See also: Paulette Destouches February, Research on the structure of physical theories (Les Presses **Univer sitaires**, Paris 1948). Jean-Louis Destouches. The Role of Activity subjective t in an abstract element called predictive element**?** **Has it been** **associated?** **?** an initial element Xo. The transformation is represented by an operator U (t, to, S, ob) said operator of evolution which depends on the system studied. S and the observer **considered?** ob. We therefore have: X (t) = U (t, to, S, ob) Xo. The forecasts, expressed in the form of probabilities, are then calculated by a law independent of time**.** from the forecast elements X (t). All the evolution over time is contained in the evolution operator U (t, to), that is to say in the passage of Xo? X (t). The wave mechanics is clearly a special case of this scheme: the Xo are then the functions of initial waves i ^ o, the X (t) are the functions of waves \ p (t)**?** theinstant t. This method is very different from that of classical physics, which was completely objective in the sense that it described objects and their intrinsic properties, regardless of everything **observed. vateur.** Here, on the contrary, we start from actions carried out by observers and we seek to predict the outcome of further actions. |
| **Piaget, Jean. “Méthode axiomatique et méthode opérationnelle.” Synthese 10, no. (1956): 23-43.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (27%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (25%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (11%) |
| **Original text** | **English translation** |
| Nous examinerons les relations entre les m?thodes axiomatique et op?rationnelle selon trois cat?gories de probl?mes: un probl?me psy chologique, d'abord, car ces deux sortes de m?thodes, tout en ?tant **utilis?es** dans un but logique, c'est-?-dire normatif, constituent par ailleurs des d?marches de la pens?e, donc des faits psychologiques; un probl?me de relation entre la psychologie et la logique, ensuite, car les op?rations constituent le point de contact entre ces deux disciplines; un probl?me **?pist?mologique**, enfin, car ces m?mes questions sont significatives du point de vue de la connaissance en g?n?ral. I. Le point de vue psychologique. Consid?r?e sous l'angle psychologique, une axiomatique est un syst?me de propositions, donc de pens?es verbales (ou significations attach?es ? un syst?me designes). Il est inutile de rappeler, en notre **?Soci?t?** internationale de ***Signifique***" que ces pens?es verbales cons tituent essentiellement des actes de communication, c'est-?-dire que les propositions (et les d?monstrations auxquelles elles donnent lieu les unes ? partir des autres) sont avant tout des actions exerc?es sur autrui de mani?re ? provoquer chez lui la formation d'un syst?me de pens?es correspondant, de fa?on bi-univoque, ? celles qui constituent la th?orie envisag?e, telle qu'elle a ?t? con?ue par son cr?ateur m?me. Les op?rations, au contraire, consistent psychologiquement en ac tions g?n?rales, exerc?es non pas seulement sur autrui, mais en premier lieu sur les objets eux-m?mes, que ces objets soient mat?riels ou **sym bolis?s** par des signes quelconques. Mais la plupart des op?rations ne demeurent pas ? l'?tat d'actions mat?rielles (telles une **r?union** d'objets r?els en une collection, ou une mesure par superposition de **T** deux grandeurs physiques, etc.). Les op?rations sont au contraire sus ceptibles de **s'int?rioriser** sous la ***forme*** d'actions mentalis?es qui con stituent donc **?** leur tour ***des*** pens?es, mais sans perdre leur caract?re d'actions effectives: ce sont alors des actions simplement esquiss?es et portant sur des objets symboliques, mais conservant tous les autres caract?res psychologiques de l'action **mat?rielle**. Il est donc erron?, ou du moins ?quivoque, de soutenir avec Mach, Rignano, Goblot, etc., que les op?rations sont des ?exp?riences" ou des actions **?**mentalement ex?cut?es": **r?unir** deux objects symboliques A et ***A'*** en une classe B est psychologquement la m?me action que de r?unir **mat?riellement** deux objets physiques en une collection, **?** cette seule diff?rence **pr?s** que la premi?re de ces deux actions ne se d?ploie pas en gestes **ext? rieurs** mais demeure int?rioris?e, et cela parce qu'elle porte sur des objets symboliquement ?voqu?s et non pas des choses physiquement donn?es. Mais les op?rations ne sont pas simplement des actions int?riori s?es, car chacune de ces derni?res ne constitue pas une op?ration. Toute op?ration comporte en outre deux cacact?res, que ne poss?de pas n'importe quelle action int?rioris?e. Le propre des op?rations est d'abord de former entre elles des syst?mes d'ensemble **?** propri?t?s d?finies relativement **?** leur totalit?. C'est ainsi que l'action d'ordon ner deux objets (ex?cut?e mat?riellement ou int?rioris?e) ne consti tue une op?ration que dans la mesure o? elle peut ?tre coordonn?e **?** d'autres actions de m?me esp?ce (ordonner un troisi?me objet par rap port aux deux premiers, etc.) et **o?** cette coordination **ob?it ?** cer taines lois de totalit? (syst?mes semi-ordonn?s, bien ordonn?s, etc.) ? | We will examine the relations between the axiomatic and operational methods according to three categories of problems: a psychological problem, first, because these two kinds of methods, while being **used es** with a logical aim, that is to say a normative one, constitute in addition steps of the thought, therefore psychological facts; a problem of relation between psychology and logic, then, because the operations constitute the point of contact between these two disciplines; a **pistemological** problem, finally, because these same questions are significant from the point of view of knowledge in general. I. The psychological point of view. Considered from the psychological angle, an axiomatic is a system of propositions, therefore of verbal thoughts (or meanings attached to a designated system). It is useless to recall, in our**?** **Society?** International ***Significant*** "that these verbal thoughts constitute essentially acts of communication, that is to say that the propositions (and the demonstrations to which they give rise one from the other) are above all actions exercised on others in such a way as to provoke in him the formation of a system of thoughts corresponding, in a bi-unequivocal manner, to those which constitute the theory envisaged, such as it was designed by its very creator. The operations, on the contrary, consist psychologically in general actions, exercised not only on others, but primarily on the objects themselves, whether these objects are material or **sym bolated** by any signs. But most operations do not remain in the state of material actions (such as a **r union** of real objects in a collection, or a measure by superposition of **T** two physical quantities, etc.). On the contrary, operations are likely to be **improved** under the ***f form*** of mental actions which therefore constitute **[in]** their turn ***of*** thoughts, but without losing their character of effective actions: they are then actions simply sketched and bearing on symbolic objects, but preserving all the other psychological characteristics of the action **mat? rielle**. It is therefore wrong, or at least unequivocal, to argue with Mach, Rignano, Goblot, etc. that the operations are experiences **"**or actions mentally executed": **r? to unite** two symbolic objects A and ***A '***in a class B is psychologically the same action as to reunite **[materially]** two physical objects in a collection, this only difference **near** that the first of these two actions does not deploy in **external** gestures **laughs** but remains interiorized, and this because it relates to symbolically evoked objects and not to physically given things. But operations are not simply internal actions, because each of these is not an operation. All operations also have two characters, which do not have any internalized action. The peculiarity of operations is first of all to form whole systems between them**.** properties defined relatively **to** all of them. This is how the action of ordering two objects (executed materially or internally) only constitutes an operation insofar as it can be coordinated**?** other actions of the same kind (order a third object in relation to the first two, etc.) and **where?** this coordination **obeys?** certain laws of totality? (semi-ordered, well-ordered systems, etc.)? |
| **Gonseth, Ferdinand. “L'idée de la loi naturelle.” Erkenntnis 6, no. (1936): 421-430.** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (37%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (34%)  F-Explanation (16) model; explanation; explain; account; explanatory; phenomenon; use; case; system; provide (6%) |
| **Original text** | **English translation** |
| L'id?e de la loi naturelle **i**. Il me semble conforme aux buts g?n?raux qui sont propos?s aux travaux de ce Congr?s de rappeler ici la **?**Semaine de synth?se**?** de Paris qui, du 29 mai au 3 juin 1933, ^ut totalement consacr?e au sujet ?Science et loi?, tout proche de celui qui nous occupe aujourd'hui. Dans l'expos?: La loi dans les sciences math?matiques, je m'attachai tout d'abord **?** **r?futer** l'id?e de P. Boutroux, selon laquelle les math?matiques ont, au moins partiellement, pour but, d'expliciter la notion g?n?rale de loi qui se trouve, dans sa **g?n?ralit?**, dans notre entendement. Il est vrai que les math?matiques **four? nissent** le mod?le de divers types de lois, de la loi de structure, qui ?tait la seule qu'imaginait la science grecque, de la loi fonctionnelle, qui est encore ? la base de la science moderne, de la loi statistique, de la loi de corr?lation, etc. Mais il est facile de montrer que, si l'on veut pousser l'id?e de loi jusqu'? sa plus grande g?n?ralit?, dans l'une ou l'autre des voies ouvertes par les math?matiques, l'abou? tissement ***[This]*** ne peut ?tre que la notion du hasard ou de l'arbitraire. En un mot, on ne trouve pas quelque part dans notre **entende? ment**, toute faite et toute pr?te, l'id?e abstraite et g?n?rale de la loi. Celle-ci doit ?tre pens?e comme un ?tre en devenir, dont l'?volution n'est pas pr?d?termin?e, **limite**, ce dernier n'existant pas. L'?volution de cette id?e se fait ? partir des exemples les plus simples, ol'esprit aper?oit une loi r?alis?e, que ce soit la loi **arith? m?tique** {n +i)2 = n2 + (m ou que ce soit la constante p?riodicit? des mouvements de certains astres. En bref, l'explicitation de la notion g?n?rale de loi ne peut ***se passer des*** exemples o? elle est r?alis?e en tant que loi naturelle, dans la sph?re du r?el physique ou dans le domaine du num?rique. Je suis revenu, au Congr?s de Paris de l'ann?e **pass?e**, sur la nature de ces lois soi-disant absolues, dont l'arithm?tique et la logique offrent les plus purs exemples. Et ***[that]*** q'ai expos? que leur analyse approfondie ne peut se passer de **l'id?e** de loi naturelle dans la sph?re des objets qui tombent le plus imm?diatement sous notre connaissance. La logique et l'arithm?tique ?l?mentaire doivent, ? un certain niveau, ?tre regard?es comme le premier chapitre d'une science naturelle tr?s primitive, ? laquelle j'ai donn? le nom de ?Physique de l'objet quelconque?. Je ne veux pas r?p?ter ici les d?tails de cette argumentation, dont le r?sultat, pour la notion de la loi g?n?rale, pourrait ?tre formul? comme suit ***[me]***: L'analyse de la notion abstraite g?n?rale de loi rencontre une fois, dans une assise profonde et fondamentale, la notion de loi naturelle dans son sens ordinaire. En face de cette analyse, je place maintenant celle de l'id?e de loi naturelle. Lorsque le physicien veut en pr?ciser la d?finition, c'est vers les math?matiques qu'il se tourne, et ceci **?** juste droit, puisque ce sont les math?matiques qui ont pouss? l'id?e de loi le plus loin vers l'abstrait. | The idea of natural law **i**. It seems to me to be in line with the general aims which are proposed for the work of this Congress to recall here the**?** Synthesis week**?** of Paris which, from May 29 to June 3, 1933, was totally devoted to the subject “Science and law”, very close to that which occupies us today. In the presentation: The law in the mathematical sciences, I focused first **on?** **reject** the idea of P. Boutroux, according to which the aim of mathematics, at least partially, is to explain the general notion of law which is found in its **genesis. reality,** in our understanding. It is true that the mathematics **oven** the model of various types of laws, of the law of structure, which was the only one imagined by Greek science, of the functional law, which is still the basis of modern science, statistical law, correlation law, etc. But it is easy to show that, if one wants to push the idea of law up to its greatest generality, in one or the other of the paths opened by mathematics, the outcome ***This*** can only be the notion of chance or the arbitrary. In a word, we do not find somewhere in our **understanding? ment**, ready made and ready, the abstract and general idea of the law. It must be thought of as a being in the making, whose evolution is not predetermined, **limit**, the latter not existing. The evolution of this idea is done From the simplest examples, the mind sees a realized law, be it the **arithmic** law**. metric** {n + i) 2 = n2 + (m or that it is the constant periodicity of the movements of certain stars. In short, the explanation of the general concept of law cannot happen ***[without]*** examples where it is realized as natural law, in the sphere of physical reality or in the digital domain. I came back, to the Paris Congress of the year **The past**, on the nature of these so-called absolute laws, of which arithmetic and logic offer the purest examples. And ***that*** I explained that their in-depth analysis cannot do without the **id** of natural law in the sphere of objects which most immediately fall under our knowledge. Elementary logic and arithmetic must, at a certain level, be regarded as the first chapter of a very primitive natural science, to which I have given the name of "Physics of any object". I do not want to repeat here the details of this argument, whose result, for the notion of general law, could be formulated as follows ***me***: The analysis of the general abstract concept of law meets once, in a deep and fundamental basis, the concept of natural law in its ordinary sense. In front of this analysis, I now place that of the idea of natural law. When the physicist wants to specify its definition, it is to mathematics that he turns, and this**?** just right, since it was mathematics that pushed the law idea furthest towards the abstract. |
| **Engel-Tiercelin, Claudine. “Logique, psychologie et métaphysique: les fondements du pragmatisme selon C. S. Peirce.” Journal for General Philosophy of Science 16, no. 2 (1985): 229-250.** | **Top-topics**  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (43%)  H-History (0) work; time; man; history; new; year; make; life; century; write (16%)  A-Language (17) language; sentence; term; meaning; concept; use; statement; logical; mean; word (15%) |
| **Original text** | **English translation** |
| Il est vain de se demander qui, de William James ou de Charles Sanders Peirce est Pauthentique representant du pragmatisme. Encore plus peut-etre de les opposer en proposant de considerer l'oeuvre de James comme la version psychologique du pragmatisme, alors que celle de Peirce en serait la version logique. Certes, la rupture parait claire entre le **?**psychologue en chaise longue**?** declarant publiquement a la fin de sa vie qu'il a renonce a la logique, qu'il se trouve **?**mathematiquement imbecile**\***, **?a-logique**, sinon illogique?**1** et le logicien de Milford enjoignant son ami d'?essayer d'apprendre a penser avec plus d'exactitude?**2.** Pourtant James ne se trompera peut-etre pas tout a fait lorsque, portant un jugement sur les trois articles publies en 1868 par le Journal de Philosophie Speculative**3**, et tout en avouant n'y rien comprendre, il les qualifiera de ?psychologico-metaphysiques?**4.** Ces textes developpent, on le sait, outre une critique ?devastatrice?**5** de l'intuition et de **?**l'esprit du **1** Tous ces termes sont de James lui-meme et sont cites par Gallie, W.B. in Peirce and pragmatism, New York, 1966, p. 22. 2 ibid. p.23. 3 vol. 2 (1868), pp. 103-14; pp. 140-157; pp. 193-208. Il s'agit des Questions concernant certaines facultes que **Von** prete a l'homme, Quelques Consequences de Quatre Incapacites, et des Fondements de la validite des Lois de la Logique, tous trois reproduits dans le cinquieme volume des Collected Papers of C. S. Peirce, (vol. I a VI, edites par C. Hartshorne et P. Weiss, vol. VII et VIII edites par A. W.Burks, Cambridge, 1931-1958, que nous indiquerons selon l'usage par deux chiffres, le premier renvoyant au volume, le second au paragraphe): 5.213-263; 5.264-317; et 5.318-357. **4** Dans une lettre a Henry Bowditch de 1869, citee par Perry, The Thought and Character of William James, (2 vol.), Boston, 1936, vol. I, p. 292, James les decrit comme **?**tres incisifs et originaux, extremement audacieux, subtils, incomprehensibles**?**, dont ?les eclarcissements qu'il (Peirce) m'en donna ne m'aiderent guere dans la comprehension**?** et enfin **?**si hermetiquement exprimes que Ton a du mal a saisir ce qu'ils veulent dire exactement**?**. **5** C'est notamment l'opinion de Gallie, op. cit. p. 61. **Zeitschrift fiir allgemeine Wissenschaftstheorie XVI/2 (1985) ? Franz Steiner Verlag Wiesbaden GmbH, Stuttgart** cartesianisme**?6**, la theorie selon laquelle ?toute pensee est un signe**?7**, que Peirce retiendra comme l'une des deux idees-force du pragmatisme**8**. En verite, Invocation par W. James de la psychologie et de la metaphysique est moins le fait d'une mecomprehension radicale de la pensee de Peirce que la mise en lumiere d'une ambiguite reelle qui existe des cette epoque entre logique, psychologie et metaphysique: tel est en effet le projet ambitieux que Peirce elabore tres tot sous l'influence de Kant, de Boole et des Scolastiques, d'une Logique qui serait plus formelle certes, mais qui pourrait s'etendre, par un certain usage logique du signe, a une Semiotique generalisee congue sur le modele scotiste d'une Grammaire Speculative. Des 1867, Peirce declare ouvertement qu'aucune etude ?ne parait aussi triviale que la logique formelle?, et ce, ?non seulement a premiere vue, mais meme apres de longues recherches. | It is pointless to wonder who, of William James or Charles Sanders Peirce is the authentic representative of pragmatism. Even more perhaps to oppose them by proposing to consider James' work as the psychological version of pragmatism, while that of Peirce would be the logical version. Certainly, the break seems clear between the**?** Psychologist in a lounge chair**?** publicly declaring at the end of his life that he has renounced logic, that he finds himself mathematically imbecile **\***, **"logical**, if not illogical" **1** and Milford's logician enjoining his friend to try to learn to think more accurately? **2.** Yet James may not be entirely wrong when, judging the three articles published in 1868 by the Journal of Speculative Philosophy**3**, and admitting to understanding nothing, he called them "psychologico-metaphysics"? **4.** These texts develop, as we know, in addition to a devastating criticism **5** of the intuition and the spirit of the **1** All these terms are from James himself and are quoted by Gallie, WB in Peirce and pragmatism, New York , 1966, p. 22. 2 ibid. p.23. 3 vol. 2 (1868), pp. 103-14; pp. 140-157; pp. 193-208. These are the Questions concerning certain faculties that **Von** lends to man, Some Consequences of Four Disabilities, and the Foundations of the validity of the Laws of Logic, all three reproduced in the fifth volume of the Collected Papers of CS Peirce, ( vol. I to VI, edited by C. Hartshorne and P. Weiss, vol. VII and VIII edited by AW Burks, Cambridge, 1931-1958, which we indicate according to usage with two digits, the first referring to the volume, the second in paragraph): 5.213-263; 5,264-317; and 5.318-357. **4** In a letter to Henry Bowditch of 1869, quoted by Perry, The Thought and Character of William James, (2 vol.), Boston, 1936, vol. I, p. 292, James describes them as very incisive and original, extremely daring, subtle, incomprehensible**?**, Which in the clarifications which he (Peirce) gave me did not help me much in understanding**?** and finally**?** so tightly expressed that it’s hard to understand exactly what they mean **?**. **5** This is notably the opinion of Gallie, op. cit. p. 61. **Zeitschrift fiir allgemeine Wissenschaftstheorie XVI / 2 (1985)? Franz Steiner Verlag Wiesbaden GmbH, Stuttgart** Cartesianism **at 6**, the theory that any thought is a sign **at** 7, which Peirce will retain as one of the two main ideas of pragmatism **8**. In truth, W. James' invocation of psychology and metaphysics is less the result of a radical misunderstanding of Peirce's thought than the highlighting of a real ambiguity that existed at that time between logic, psychology and metaphysics : this is indeed the ambitious project that Peirce very early developed under the influence of Kant, Boole and Scholastics, a Logic which would be more formal certainly, but which could be extended, by a certain logical use of the sign , to a Generalized Semiotics conceived on the Scottish model of a Speculative Grammar. From 1867, Peirce openly declares that no study seems as trivial as formal logic, not only at first glance, but even after long research. |
| **Rougier, Louis. “La relativite de la logique.” Erkenntnis 8, no. 4 (1939): 193-217.** | **Top-topics**  A-Truth (23) logic; truth; true; proposition; sentence; logical; formula; follow; rule; world (33%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (23%)  A-Mathematical (15) mathematical; mathematics; number; proof; axiom; geometry; theory; object; point; line (12%) |
| **Original text** | **English translation** |
| La logique est d?finie comme l'art de bien conduire sa pens?e, Fart de raisonner avec justesse. Raisonner c'est montrer que **cer? taines** propositions sont n?cessairement vraies **?** supposer que d'autres propositions, appel?es pr?misses, soient tenues pour telles. C'est dans les sciences du raisonnement, c'est-?-dire en math?ma thiques, que la logique, pour la premi?re fois, est entr?e en action. S'il faut en croire Proclus, c'est au **Vie si?cle** avant notre ?re que les math?matiques intuitives et empiriques des Orientaux se seraient transform?es en une discipline abstraite, deductive, et cette transformation serait due ? Pythagore : **?**Vint Pythagore qui transforma la g?om?trie en un enseignement lib?ral, car il remonta aux principes premiers et rechercha les th?or?mes abstraitement et par l'intelligence pure". Cette transformation consiste essentiellement dans la substitution **?** **l'?vidence** sensible, qui ne porte que sur la constatation de cas concrets particuliers, de l'?vidence intelligible qui repose sur le raisonnement et qui atteint l'universel. Aristote, dans les ***Seconds*** Analytiques, a analys? la **proc?dure** lo? gique de la science deductive appel?e par lui Apodictique, telle que la concevaient les math?maticiens grecs de son temps. Son analyse s'est impos?e aux logiciens jusqu'? la fin du XIXe si?cle. **Selon lui**, une science deductive, telle que la g?om?trie pythagoricienne, repose sur des principes ?vidents par eux-m?mes, qu'il appelle ses principes propres, et la d?monstration a pour but de transf?rer cette **?vidence** de proche en proche ***des*** principes ***propres*** ? leurs cons?quences les plus ?loign?es. ***C'***est l'?vidence des principes propres qui fonde l'?vidence des th?or?mes et les principes propres sont plus ?vidents que les th?or?mes qu'on en d?duit, en vertu d'un principe qu'on peut appeler principe de Veminence de la cause, d'apr?s lequel une **qualit?** manifest?e par un effet doit se trouver **?** un degr? plus eminent dans la cause de cet effet : ?Par exemple, la raison qui fait ***aimer*** un objet est encore plus aim?e que lui. Puis donc que nous connaissons et que nous croyons en vertu des principes, nous devons les conna?tre et les croire mieux que les conclusions qu'on en tire **1)**." Par suite, ?si nous avons bien ?tabli ce que c'est que savoir, il s'en? suit n?cessairement que la science d?monstrative part de propositions vraies, premi?res et imm?diates, et, relativement ? la conclusion, plus notoires et ant?rieures. Tels sont les principes propres des d?monstrations; car, sans eux, il n'y a pas de syllogisme, d'o? pas de d?monstration, d'o? pas de science **2)**". La n?cessit? des th?or?mes d?rive de celle des principes propres'. ?On appelle n?cessaire la d?monstration qui tire sa n?cessit? de celle des pr?misses". La th?orie aristot?licienne de la d?monstration peut se d?composer en quatre propositions: Io) Il existe des principes qui sont ind?montrables par nature, ?tant, par nature, premiers **et imm?diats**. Ce sont les principes **pro? pres** des diff?rentes sciences d?monstratives. 2?) La n?cessit? des principes propres proc?de de leur ?vidence. 3?) L'?vidence des principes propres est propag?e aux th?or?mes par le moyen de la d?monstration. A ces trois affirmations, nous pouvons en ajouter une quatri?me, qu'Aristote ne formule pas explicitement, mais qui r?sulte des **pr?? c?dentes**. 4?) Quand la d?monstration a propag? l'?vidence des principes propres ? un th?or?me, l'?nonc? de ce th?or?me peut ?tre d?tach? de **sa d?monstration**. Il constitue une proposition vraie en soi, pourvu qu'on se souvienne de l'avoir correctement d?duit des principes propres. | Logic is defined as the art of properly conducting one's thinking, the art of reasoning with accuracy. To reason is to show that **cer?** some propositions are necessarily true**?** assume that other proposals, called presumptions, are held to be such. It is in the sciences of reasoning, that is to say in mathematics, that logic, for the first time, came into action. If Proclus is to be believed, it was in **Life** **so ancient** before our era that the intuitive and empirical mathematics of the Orientals would have been transformed into an abstract, deductive discipline, and this transformation would be due to Pythagoras:**?** Came Pythagoras who transformed geometry into a liberal teaching, because he went back to the first principles and sought the theories abstractly and by pure intelligence ". This transformation consists essentially in substitution **[of] Obviously** sensitive, which relates only to the observation of specific concrete cases, of intelligible evidence which rests on reasoning and which reaches the universal. Aristotle, in the ***Seconds*** Analytiques, analyzed the **process. hard** logic of deductive science called by him Apodictic, as conceived by the Greek mathematicians of his time.His analysis was imposed on logicians until the end of the XIXth century. **[According to] he**, a deductive science, such as Pythagorean geometry, is based on principles evident by themselves, which he calls his own principles, and the purpose of the demonstration is to transfer this **Obviously**, step by step, ***[from]*** principles ***specific*** to their most distant consequences. ***[It]*** is the evidence of proper principles that underpins the evidence of theories and the principles are more obvious than theories that we deduce from it, by virtue of a principle which one can call the principle of the eminence of the cause, according to which a **quality?** manifested by an effect must be found **[at]** a degree more prominent in the cause of this effect: For example, the reason that makes an object ***love*** is even more loved than it. Then therefore that we know and that we believe by virtue of the principles, we must know them and believe them better than the conclusions which one draws from it **1)**. "Consequently, if we have well established what it is that knowing, it necessarily follows that the demonstrative science starts from true propositions, first and immediate, and, relatively to the conclusion, more notorious and earlier. These are the principles of the demonstrations, because without them there is no syllogism, hence no demonstration, no science **2)** ". The need of theories derived from that of own principles'. ? Demonstration which draws its necessity is called necessary? of that of the premisses ". The Aristotelian theory of demonstration can be composed of four propositions: Io) There are principles which are not demonstrable by nature, being, by nature, first **[and immediate].** These are the **main** principles of the different demonstrative sciences. 2?) The need for own principles is due to their obviousness. 3?) The obviousness for proper principles is propagated to theories by means of demonstration. To these three statements, we can add a fourth, which Aristotle does not formulate explicitly, but which results from the **predictions**. 4?) When the demonstration has propagated the evidence of the principles specific to a theorem, the statement of this theorem can be detached from **[its demonstration].** It is a true proposition in itself, as long as one remembers having correctly deduced it from its own principles. |
| **Bernier, Réjane. “Origine et rôles de l'hypothèse en biologie.” Journal for General Philosophy of Science 14, no. 2 (1983): 213-233.** | **Top-topics**  E-Mind (11) behavior; state; mental; action; psychological; human; function; psychology; person; child (25%)  C-Confirmation (20) law; hypothesis; statement; evidence; theory; condition; inductive; problem; confirmation; fact (13%)  H-Philosophy (6) world; nature; knowledge; concept; experience; kant; sense; thing; idea; reality (16%) |
| **Original text** | **English translation** |
| La notion d'hypothese merite de faire l'objet d'une analyse approfondie car on la retrouve a toutes les etapes de la formation de la connaissance. En effet, des que l'on depasse le niveau de la description du phenomene singulier (ou collectif) et que l'on veut atteindre une connaissance intellectuelle de la realite, on est force de faire appel a Phypothese, que ce soit au niveau du concept et de la definition, de la loi ou de Pexplication. II est done difficile de definir des maintenant, de hqon precise, Phypothese. On peut simplement la caracteriser comme une supposition relative a la nature des choses, a leurs proprietes ou a leurs causes, qui est forcement un depassement des donnees objectives, brutes. Evidemment, cette supposition n'a pas les memes fondements lorsqu'elle est relative a une definition et lorsqu'elle est relative a une explication. Mais il faut se demander si, pour autant, la nature meme de la supposition est differente et je suis tentee de repondre negativement. Dans un cas, elle porte sur la nature de **Petre**, dans Pautre sur sa cause. Mais ce qui en fait une supposition au lieu d'un enonce descriptif, e'est, dans les deux cas, le fait que la relation entre les termes depasse Pobservation (cas de la definition et de la loi) ou meme n'est pas observee mais imaginee (cas de Pexplication) et qu'il faut chercher un moyen de controler si elle existe ou non et construire une experience permettant ce controle, qu'il s'agisse de connaitre quel est le poids moleculaire d'une proteine en vue de sa definition ou de savoir quels ***noyaux*** du cerveau servent de relais aux nerfs optiques ou auditifs en vue d'elaborer des lois structurales ou physiologiques. Le controle est different mais le caractere hypothetique de la demarche epistemologique est identique. C'est pourquoi il m'apparait possible de traiter de la question de Porigine de Phypothese de fa^on generate. **\*** Le present travail a ete rendu possible grace a l'aide du Conseil des Arts du Canada (aujourd'hui Conseil de Recherches en Sciences Humaines du Canada). **15 Zeitschrift fur allgemeine Wissenschaftstheorie XIV/2 (1983) ? Franz Steiner Verlag GmbH, D-6200 Wiesbaden HtSE** II existe au sujet de Porigine de Phypothese scientifique des conceptions variees qui peuvent s'opposer parfois les unes aux autres. Au debut de Pemploi de la methode experimentale, la mefiance a Pegard de toute intervention subjective etait telle qu'on est venu a considerer Phypothese comme produite directement a partir des faits, comme une sorte de decalque de la realite objective, Pesprit humain ***n'etant alors que*** passif devant Pobjet. {Hypotheses **nonfingo**, declarait Newton). Mais cette position a suscite de vives reactions de la part des philosophes qui ont considere, au contraire, Phypothese comme un produit de Pesprit createur du savant, une sorte d'invention pratiquement independante des faits. Examinons cette derniere these et les difficultes qu'elle souleve. Popper et Hempel, tous deux defenseurs de Pindependance genetique de Phypothese par rapport aux faits, ont aborde cette question selon des perspectives differentes qui ont cependant en commun le fait de rejeter la these inductiviste. | The notion of hypothesis deserves to be the subject of an in-depth analysis because it is found at all stages of the formation of knowledge. Indeed, as soon as we go beyond the level of the description of the singular (or collective) phenomenon and we want to reach an intellectual knowledge of reality, we are forced to appeal to the hypothesis, whether at the level of concept and definition, law or explanation. It is therefore difficult to define now, precisely, the hypothesis. We can simply characterize it as a supposition relative to the nature of things, their properties or their causes, which is necessarily a surpassing of objective, raw data. Obviously, this supposition does not have the same foundations when it relates to a definition and when it relates to an explanation. But one must ask oneself whether, however, the very nature of the supposition is different and I am tempted to answer negatively. In one case it relates to the nature of **Petre**, in the other to his cause. But what makes it a supposition instead of a descriptive statement is, in both cases, the fact that the relation between the terms exceeds observation (case of definition and law) or even is not observed but imagined (case of the explanation) and that it is necessary to seek a means of controlling if it exists or not and to build an experiment allowing this control, that it is a question of knowing what is the molecular weight of a protein in sight of its definition or of knowing which ***nuclei*** of the brain serve as relays to the optic or auditory nerves in order to develop structural or physiological laws. The control is different but the hypothetical character of the epistemological approach is identical. This is why it seems to me possible to deal with the question of the origin of the hypothesis in a general way. **\*** This work has been made possible with the help of the Canada Council for the Arts (now the Social Sciences and Humanities Research Council of Canada). **15 Zeitschrift fur allgemeine Wissenschaftstheorie XIV / 2 (1983)? Franz Steiner Verlag GmbH, D-6200 Wiesbaden HtSE** There are various conceptions about the origin of the scientific hypothesis which can sometimes oppose each other. At the beginning of the use of the experimental method, the distrust of all subjective intervention was such that we came to consider the hypothesis as produced directly from the facts, as a kind of transfer from objective reality, the human mind ***not being while*** passive in front of the object. {**Nonfingo** hypotheses, Newton said). But this position has aroused strong reactions from philosophers who have, on the contrary, considered the hypothesis as a product of the creative mind of the scientist, a kind of invention practically independent of the facts. Let us examine this last thesis and the difficulties it raises. Popper and Hempel, both defenders of the genetic independence of the hypothesis from the facts, approached this question from different perspectives which, however, have in common the rejection of the inductivist thesis. |
| **Suppes, Patrick. “L'argument probabiliste pour une logique non classique de la mécanique quantique.” Synthese 16, no. 1 (1966): 74-85.** | **Top-topics**  A-Formal (4) set; function; relation; define; definition; structure; order; model; theory; class (33%0  G-Quantum (14) time; state; space; quantum; system; theory; particle; physical; field; point (29%)  A-Truth (23) logic; truth; true; proposition; sentence; logical; formula; follow; rule; world (11%) |
| **Original text** | **English translation** |
| **l'argument** Le but de cet article est simple. Je d?sire ?noncer aussi clairement que possible, sans une longue digression dans des questions techniques, ce que je consid?re ?tre l'argument unique le plus puissant en faveur de l'emploi d'une logique non classique en **m?canique** ***quantique***. Il y a une tr?s grande litt?rature math?matique et philosophique sur la logique de la m?canique quantique, mais **?** quelques exceptions **pr?s**, cette litt?rature fournit une tr?s pauvre justification intuitive du fait qu'on consid?re une logique non classique pour commencer. Le fameux article de Birkhoff et von Neumann (1936) constitue un exemple classique dans la litt?rature math?matique. Bien que Birkhoff et von Neumann aient **examin?** **exhaus tivement** le d?veloppement des propri?t?s des geometries projectives et des geometries de lattices qui sont li?es **?** la logique de la m?canique quan tique, ils consacrent moins d'un tiers de page (p. 831) aux raisons physi ques qui entra?nent la consid?ration de telles lattices. Qui plus est, les quel ques lignes qu'ils y consacrent sont loin d'?tre claires. La litt?rature philoso phique est toute aussi mauvaise **?** ce sujet. Une des discussions philo sophiques les mieux connues **l?-dessus** est celle qui est expos?e dans le dernier chapitre du livre de Reichenbach (1944) sur les fondations de la m?canique quantique. Reichenbach offre une logique fonctionnelle de v?rit? **?** trois valeurs qui semble avoir peu de rapport avec les proposi tions de la m?canique quantique, qu'elles soient de nature exp?rimentale ou th?orique. Ce que Reichenbach n'arrive pas **?** montrer, c'est comment la logique **?** trois valeurs qu'il propose poss?de un r?le fonctionnel quelconque dans le d?veloppement th?orique de la m?canique quantique. Il est en effet facile de montrer que la logique qu'il propose ne pourrait certainement pas ?tre ad?quate pour un ?nonc? syst?matique et th?orique **\*** Je d?sire remercier Jean et Claudine Donio pour la traduction de cet article ? partir du manuscrit anglais. **E** **de la** th?orie telle qu'on la con?oit d'habitude. Les raisons pour cela **de viendront** claires plus tard dans le pr?sent article. Les pr?misses princi pales que je discute dans cet article sont peu nombreuses. Je vais les ?noncer sans justification d?taill?e, **de fa?on ? ce que** la structure g?n?rale de l'argument ?merge de la fa?on la plus simple possible. Pr?misse 1. Dans les contextes physiques ou empiriques comportant Vapplication de la th?orie de la probabilit? en tant que discipline math?ma tique, la logique fonctionnelle qui est importante est la logique des ?v?ne ments ou propositions auxquels on assigne des probabilit?s, et non pas la logique des ?nonc?s qualitatifs ou intuitifs que Von fait sur la th?orie formu l?e math?matiquement. (Dans les applications classiques de la th?orie de la probabilit?, cette logique des ?v?nements est une alg?bre d'ensembles de Boole; pour des raisons techniques, qui n'ont aucune importance ici, cette alg?bre ***de*** Boole est g?n?ralement suppos?e additive d?nombrable c.?.d., une **cx-alg?bre**.) Pr?misse 2. U alg?bre des ?v?nements devrait satisfaire la condition qu'une **probabilit?** est assign?e **?** chaque ?v?nement ou ?l?ment de **Valg?bre**. Pr?misse 3. Dans le cas de la m?canique quantique, des probabilit?s peuvent ?tre assign?es aux ?v?nements tels que position dans une certaine r?gion ou moment dans des limites donn?es, mais la **probabilit?** de la conjonction de deux ?v?nements de ce type n'existe pas n?cessairement. Conclusion: La logique fonctionnelle de la m?canique quantique n'est pas classique. | **the argument** The purpose of this article is simple. I wish to state as clearly as possible, without a long digression in technical questions, what I consider to be the single most powerful argument in favor of the use of unconventional logic in **memory.** ***quantum quantum***. There is a very large mathematical and philosophical literature on the logic of quantum mechanics, but **at with** a few exceptions, this literature provides very poor intuitive justification for considering unconventional logic to begin with. The famous article by Birkhoff and von Neumann (1936) is a classic example in mathematical literature. Although Birkhoff and von Neumann have **examined?** **exhaus tively** the development of the properties of projective geometries and geometries of lattices which are related **to using** the logic of quantum mechanics, they devote less than a third of a page (p. 831) to the physical reasons which lead to the consideration of such lattices. What is more, whatever lines they devote to it are far from clear. Philosophical literature is just as bad**?** this subject. One of the best known philosophical discussions **above** is that which is set out in the last chapter of Reichenbach's (1944) book on the foundations of quantum mechanics. Reichenbach offers a functional logic of truth **?** three values which seem to have little relation to the propositions of quantum mechanics, whether of an experimental or theoretical nature. What Reichenbach does not happen**?** show, how is logic**?** three values which he proposes possesses any functional role in the theoretical development of quantum mechanics. It is indeed easy to show that the logic which he proposes could certainly not be adequate for a statement. systematic and theoretical **\*** I would like to thank Jean and Claudine Donio for the translation of this article. from the English manuscript. **E** theory as we usually see it. The reasons for this will **come** clear later in this article. The main assumptions that I discuss in this article are few. I will speak them out without detailed justification, **so what** the general structure of the argument emerges in the simplest way possible. Premise 1. In physical or empirical contexts involving the application of the theory of probability as a mathematical discipline, the functional logic that is important is the logic of events or propositions to which we assign probabilities, and not the logic of qualitative or intuitive statements that we make on the theory formulated mathematically. (In classical applications of the theory of probability, this logic of events is an algebra of Boole sets; for technical reasons, which have no importance here, this algebra ***de*** Boole is generally assumed to be a countable additive i.e., a **cx-algebra**.) Premise 2. An algebra of events should satisfy the condition that a **probability?** is assigned**?** each event or element of **Valg? bre**. Premise 3. In the case of quantum mechanics, probabilities can be assigned to events such as position in a certain region or moment within given limits, but the **probability?** of the conjunction of two events of this type does not necessarily exist. Conclusion: The functional logic of quantum mechanics is not classical. |