CORNELL'S QUARTER-CENTENNIAL.

BY THEODORE STANTON.

One of the chief topics of conversation at Cornell University during the Commencement week which recently closed, was the celebration in the Autumn of the quarter-centennial of the foundation of this institution. The programme has not yet been so perfected that it may be announced. But it is safe to say that the event will be a red-letter day in the history of higher education in the Empire State. It may be timely, therefore, to glance for a moment at the growth and present condition of the University.

At the beginning of the seventies, the then president of Cornell, Mr. Andrew D. White, was accustomed, in his annual address to the students, to refer to "the wheat fields that once waved where these buildings now stand." That stereotyped phrase depicts the condition of things on this hill twenty-five years ago. But to-day one sees here over a dozen buildings of greater or less architectural merit, scores of professors' cottages, miles of gravelled roadways lined with elms which have almost reached the "stately" stage, a bevy of pretty Greek-letter society chapter-houses, nearly one hundred and fifty instructors, many of whom enjoy established reputations, and about 1,700 students. What was once a "mushroom college" is now a solid university, standing in the front rank of the leading American institutions of learning, probably the best type of the "university with scientific leanings."

In order to substantiate this statement, let us examine for a moment a few sides of the subject. Take, in the first place, the purely material side, and let me indulge in some figures. For example, the annual income of Cornell University is in the neighborhood of $600,000; its funds reach nearly $6,000,000; its real estate $1,500,000; the equipment of the various departments nearly $800,000; while the salaries paid out during a year attain the sum of $223,000. A round million dollars' worth of Western lands still remains in the possession of the University. A single building with its equipment—the Library—is valued at close upon $600,000.

This fine new Library building now houses over a hundred thousand volumes, embracing such special collections as the Anthon for the classics, the Bopp for philology, the Goldwin Smith for English history and literature, the Kelley for mathematics, the Sparks for American history, the May for works on the slavery question, and the White for history. Among the more notable purchases during the past year have been, Mr. George W. Harris, the librarian, tells me, the Bibliothèque Elzévirienne, 130 volumes; the Journals and Reports of the British Parliament, 333 volumes; the Pléiade Française, 18 volumes, costing $130; *The British Critic* (1794–1843), 102 volumes, a complete set; the British Statutes at Large, 66 volumes, etc. Among the most generous donors during the twelve months were Ex-President White, now United States Minister at St. Petersburg, who sent nearly 600 volumes, many of which relate to Russian history; and Prof. Willard Fiske, who has given nearly 100 volumes in Italian, or on Italian subjects.

But any account of books at Cornell would be incomplete without mention of the Moak collection. This valuable recent acquisition places the law library of Cornell, Professor Collins informs me, in the front rank of college law libraries in the United States. It is particularly rich in reports, and may be said to be practically complete as regards the reports of the English-speaking world, even such distant lands as Australia, New Zealand, and Hawaii being thoroughly well represented on the shelves.

The rapid development of the young Law School is among the most gratifying events in the past two or three years of Cornell's history. The Law Building is one of the newest and handsomest on the campus. The law professors are earnest and enthusiastic. The creation in the country of a successful law school was deemed a hazardous experiment. But immediate success crowned this effort. The school had over two hundred students last year and has just graduated sixty-two; more than the number graduated in any other department of the University, except that of Mechanical Engineering.

The extraordinary growth of this College of Mechanical and Electrical Engineering should also be noted. Dr. Thurston may well be proud of what he

has accomplished. Of the 1,665 students in the University last year, not less than 546, or very nearly one-third, were entered at Sibley College. The capacity of the main building, which has been enlarged already once or twice, is now to be more than doubled. Ground has already been broken, and it is expected that the structure will be under roof by the end of the Autumn. An important new departure in the instruction of advanced students will be the thoroughly original investigations in the laboratories which are already organised, but which need more room for complete development. Dr. Thurston anticipates many gains to science from this work.

This Commencement, Professor Emerson threw open to the public for the first time his admirable collection of antique casts, which have been very tastefully arranged on the lower floor of McGraw Hall. If I have not been misinformed, Boston alone, in this country, possesses a more complete archæological museum of this kind.

The influx of students during the past few years has been so great—and the entrance examinations of last June show that the next class will be the largest ever known here—that the University has at last reluctantly turned to the State for aid. I say reluctantly, for it is evident that there exists a hesitancy, especially in the faculty, about abandoning the old policy of steering quite clear of Albany. But this past winter President Schurman went to the Legislature and returned with a $50,000 appropriation for the agricultural department and it is felt now that still greater largesses may be counted upon from the same source in the near future. Judge George B. Turner of Auburn, the Alumni Trustee, in his report read to the Alumni, came out squarely in favor of State aid. "Is it too much," he said in closing, "to ask that the great State of New York be equitable and just to the University?" And the same note was struck in the Alumni meeting when it was proposed and carried unanimously, that a grand committee be appointed to consist of Cornell graduates who had received free instruction at the University, one from each senatorial and each assembly district in this State, whose duty it should be to urge upon the Legislature a generous policy in its treatment of Cornell.

Even a cursory glance at the facts in the case shows that, morally at least, the State of New York is bound to offer Cornell financial support. I cannot demonstrate them here for reasons of brevity. The curious feature of the matter is that while the University needs the money, deserves the money and will probably get the money, more than one friend of the institution is lukewarm in support of this new line of policy. What a significant fact and what a reflection on the Legislative body of the greatest commonwealth of the Union!

Another phase of Cornell life calls for a word here. When the University was founded it was promptly pronounced by the orthodox to be "an atheistical institution." In those early years, the energies of the men engaged in placing the edifice on a solid basis were too much taxed to permit the refutation of this groundless charge. But, little by little, time and occasion enabled them to show the world that this antique accusation was simply a figment. The first strong move towards the pulling down of this scarecrow was the erection on the campus of the Sage Chapel, followed by the gift of a Preacher Fund, which made it possible for the University to invite to its pulpit the leading divines of all denominations. At the start, the clergymen came only during the fall and spring terms. But now the Sundays of the winter term are also marked by eloquent sermons. The next powerful blow which the bugaboo received came from the appointment of Dr. Schurman to the chair of ethics and the creation, through the beneficence of Mr. Henry W. Sage, of the School of Philosophy. And finally the enemy was put entirely to rout by the construction of Barnes Hall, which is devoted exclusively to religious purposes. So to-day it cannot be even whispered that Cornell is an infidel seat. Nor, on the other hand, has the University fallen into the Charybdis of sectarianism. There is no compulsory attendance on chapel and at the Woodford oratorical contest last June one of the speakers nearly won the prize by an ably written eulogy of Thomas Paine.

The co-education of the sexes also gives a special stamp to Cornell. What was once an experimental innovation has become such an inherent part of the system that all discussion of it is humdrum. The Commencement Day exercises offered one or two rather remarkable examples of the advance-stand on "the woman question" taken by this University. The brightest oration was pronounced by a woman, a graduate of the Law School let it be noted, and she was preceded by a scarcely less eloquent young man who made a strong appeal in favor of woman suffrage! President Gates, of Amherst, the guest of the University, was evidently so impressed by the spirit and juxtaposition of this portion of the programme, that he came out squarely for the new education in his speech at the Alumni dinner.

Though this account of the outlook at Cornell be brief and imperfect, it is evident that the youngest of our first-class universities may celebrate her quarter-centennial with head erect, for her progress has been remarkable, not simply when viewed from a material standpoint. If weighed in the moral and spiritual balance, Cornell University will not be found wanting.

WEISMANN AND DARWIN.

BY PROF. GEORGE J. ROMANES.

IF FOR the sake of distinctness we neglect all the far-reaching deductions from his theory of *heredity* whereby Weismann constructs his elaborate theory of *organic evolution*, and fasten our attention only upon the former, we may briefly summarise the fundamental difference between his theory of *heredity* and Darwin's theory of *heredity* thus.

Darwin's theory of heredity is the theory of *Pangenesis*: it supposes that *all* parts of the organism *generate* anew in every individual the formative material, which, when collected together in the germ-cells, constitutes the potentiality of a new organism; and that this new organism, when developed, resembles its parents simply because *all* the formative material in each of the parents has been thus *generated* by, and collected from, *all* parts of their respective bodies.

Weismann's theory of heredity, on the other hand, is the theory of the *Continuity of Germ-plasm*: it supposes that *no* part of the parent organism generates *any* of the formative material which is to constitute the new organism; but that, on the contrary, this material stands to all the rest of the body in much the same relation as a parasite to its host, showing a life independent of the body, save in so far as the body supplies to it appropriate lodgment and nutrition; that in each generation a small portion of this substance is told off to develop a new body to lodge and nourish the ever-growing and never-dying germ-plasm—this new body, therefore, resembling its so-called parent body simply because it has been developed from one and the same mass of formative material; and, lastly, that this formative material, or germ-plasm, has been continuous through all generations of successively perishing bodies, which therefore stand to it in much the same relation as annual shoots to a perennial stem: the shoots resemble one another simply because they are all grown from one and the same stock.

THE PROBLEM OF THE THREE DIMENSIONS OF SPACE.

OUR geometricians have always attempted to construct space from its simplest elements. They take a point which is very vaguely defined as that which has neither parts nor magnitude. The point is moved, and its path is called a line. Now, a peculiar difficulty arises, when out of moving points alone they intend to define the idea of straightness. This is impossible, and, in want of anything better, a straight line is generally defined as the shortest distance between two points. Having a straight line, the rest is easy enough. We construct a plane by moving a straight line in any direction not its own, and solids, again by moving a plane in any direction not contained in the plane.

Many attempts have been made to circumvent the difficulty of presenting an unequivocal and purely rational, i. e., rigidly formal or *a priori*, definition of a straight line. Vain as these attempts were for that purpose, they have not been futile, for they led to the startling discovery of other possible space constructions. It is strange, nevertheless, that no one as yet has called attention to the faults of the method itself. Should we succeed in satisfactorily defining or constructing a straight line, it would avail nothing. We should be in the predicament of the physician who has removed one symptom only of a disease, without curing its deeper-seated cause, and the cause continues to work evil effects in other parts of the organism.

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The fault of the geometrical method lies (so it seems to me) in its apriorism. It is the same vice as that of the ontological school of philosophy, which starts the world from nothing. Nothing is one minus one ($0 = 1 - 1$), which, when transposed, reads $0 + 1 = 1$. This at once launches us into positive statements. True philosophy, however, must not only start from facts, but also be and remain a statement of facts. Philosophy is the science of the method of dealing with facts according to their nature. The method of dealing with facts has to be derived from the facts themselves. Pure reason is nothing, unless it is the interaction of ideas. All processes of reasoning are mental operations with representations of facts. They start from known facts and proceed to unknown facts; and if the conclusions at which we arrive are not facts, our reasoning is a mere Vanity Fair.

All the formal sciences, not less than philosophy, must start with something; they must be based upon facts, and the facts of the formal sciences are the operations which are constitutional to our mind, and without which nothing would exist. Mathematics, at the same time, presupposes space, and space is the possibility of motion in all directions.

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How lame is the old method of constructing space with points!

First, notice that the definition of a point is negative. A point is something without parts and magnitude. Are there not many things without parts and magnitude, which are no points? All material things have parts and magnitude, but immaterial things have no extension and cannot always be divided into parts. Has, for instance, the color red any parts? Has a pain any parts? A desire may be great or strong, but it cannot be large. An idea may be grand, but it can possess no magnitude. Or can any one state what are the size and the parts of the idea of unity?

Second, consider that space, the thing to be constructed, is after all, tacitly or even openly, presup-

posed. To obviate the first objection an amendment is made. "A point," we are told, "is that *in space* which has neither parts nor magnitude." * If space is presupposed, why trouble at all to construct it?

Having constructed the solid as the third power of extension, we suddenly stop; for space has, so we say, three dimensions only. This seems arbitrary and our mathematicians are puzzled as to why we cannot continue constructing four, five, or *n*-dimensional bodies. That such constructions are, theoretically, quite admissible, Grassmann's, Lobatschewsky's, and Riemann's investigations have demonstrated.

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Suppose we begin at the other end and say that in mathematics (1) our *mental operations*, and (2) *space* are given. Our mathematical operations are acts that take place in space; they are motions, and space is the possibility of motion.

Points are not real objects, but mental artifices to determine a position in space. A point is *in* space, but it is not *of* space, which means, it indicates a location, but has no extension. We may use as a point, or indicator of a special spot, anything we please, our own body, our finger, the point of a pencil, a dot, the whole earth, the sun, or Sirius. But we have to bear in mind that, extension being excluded, we have, as a matter of mental abstraction, to ignore the materiality of these indicators of location, and in case they are as large as, for instance, Sirius, we have to know where to locate the point, either in its centre, or at a specially marked corner.

Points are conceived as movable; and "space" being the condition of motion, we have further to inquire into the nature of space. We can construct various kinds of mathematical space, such as planes, homaloidal (or even) as well as curved, the three-dimensional space for stereometrical constructions, and also imaginary spaces of *n* dimensions. Yet we find, as a matter of experience, that our world-space is three-dimensional, and here we ask, Could not space just as well have either more or less than three dimensions? Is tridimensionality of space purely arbitrary, or can we detect for it any assignable reason?

Certainly, considering *a priori* arguments alone, space—i. e., the real world-space—could have any number of dimensions, or no existence at all, just for the same reason as we know not why the world exists, and why there is not in its place mere nothingness.

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The dimensions of space would appear less arbitrary, and we would sooner acquiesce in their nature, if they were infinite in number. Infinitude is the absence of limits. Infinitude, accordingly, is a matter

* Most of the German text-books offer the following definition: *Ein Punkt ist ein Ding 'im Raum,' das keine Theile hat.*

of course, while the finitude of a definite limit or number is a special restriction, which calls for a special explanation.

In the same way, eternity, or infinitude of time, is a matter of course, if but existence be given, while beginning and end must have their special causes. Eternity is implied in existence.

We ought to expect space to be in possession of infinite dimensions, for such a state of things would be as plausible and as little startling as the eternity of time.

This consideration suggests the idea of how to construct a space, not as Riemann did, of *n* (viz., any number of) dimensions, but of truly infinite (viz., inexhaustibly many) dimensions.

While attempting to think a space of an infinite number of dimensions, we are struck by the fact that space actually possesses infinite—not dimensions, but —directions.

A space of infinite directions is that condition of motion in which there is no restriction whatever. It means the absence of any impediment.

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What is the difference between a dimension and a direction?

Directions are the possibilities of motion in actual space; dimensions, however, are contrivances to determine directions as well as locations in space from a given reference point. Directions, accordingly, must be considered as given by nature; they are data of experience, and, being infinite in number, they are exactly what we must expect them to be. Dimensions are artificial; dimensions, as such, are not given by nature. They are as little natural as right angles, or logarithms, or a sinus, or an integral, or an infinitesimal.

Straight lines are directions of a peculiar kind. They possess a simplicity and consistency which distinguishes them from irregular lines and from curves.

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Sir Robert Ball, Astronomer-Royal of England, speaking of the theories of some modern mathematicians, who deny the Euclidean axiom of parallel lines, and proposing the theory that a straight line, after a journey which is not infinite in its length, may return to its starting-point, says, in an article published in the *Fortnightly Review*, May, 1893, p. 632:

"If any one should think this a difficulty, I would recommend him to try to affix a legitimate definition to the word 'straight.' He will find that the strictly definable attributes of straightness are quite compatible with the fact that a particle moving along a straight line will ultimately be restored to the point from which it departed."

Sir Robert Ball does not believe in homaloidal space, such as is presupposed by Euclid, but thinks

that if he could but make space a little bit curved, all such difficulties, as infinitude, would vanish.

Now, we believe that the straightness which constitutes the homaloidality of space is not so much a quality of space, but of our methods of calculating and computing space-relations.

We can imagine a condition of things in which, through some unknown cause, a point moving with strictest consistency in one and the same direction would suffer a slight, but constant, switching off. This would make Euclidean straight lines no longer available for certain practical purposes, but would not render them theoretically impossible; nor would it involve homaloidal geometry in contradictions. The infinitude of homaloidal space would remain what it is now, a difficulty, but not an antinomy. However, the finitude of a curved space presents innumerable new problems, a satisfactory solution of which appears very improbable.

Professor Ball says that all the strictly definable attributes of straightness are compatible with curved space. While granting the difficulty of defining straightness by purely *a priori* methods from moving points only, we claim that straight lines are describable by methods of abstraction on the ground of our space-experiences.

Take two points of any line, and turn the line between the points round itself. Every line which by this operation will change its place is called curved, while that line which remains in its place is called straight; in other words, every curved line has an axis of rotation outside itself, while the straight line is its own axis of rotation. In one case, rotation makes a difference, in the other case, rotation does not involve change of position; and this latter condition is what Euclid calls "even," in describing a straight line.* We do not intend to attach any importance to this description of straightness, but it seems to us that Professor Ball could not make it compatible with his idea of finite space.

We must not forget that infinitude, being the absence of limits, is a simpler conception than finitude. While the infinitude of space involves difficulties, the finitude of space, so it seems to us, involves not only an innumerable host of undreamed of problems, but also an actual antinomy. On close inspection it will be found to be a paralogism of reason.

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Straight lines, as peculiar paths of motion, remind us of the rays of light. Light is the quickest motion we know of; and the problem has often been proposed, Why do the rays of light travel in straight lines, i. e., on paths of shortest time?

* Euclid says: "A straight line is that which lies evenly between its extreme points."

Physicists of former ages found in this condition of things an argument for the Creator's wisdom; and at present there is a tendency to regard the path of a ray of light as the prototype of straight lines in geometry. The fact, however, is that light does not travel in straight lines or on paths of shortest time, but in all directions and on an infinite number of paths. On the paths of shortest time the action of light is so intensified as to produce that peculiar result which we call rays.

Similarly, if we consider a point as a permanent source of a homogeneous motion, which simultaneously takes place in all its infinite directions, the continuous summation of the results in the paths of shortest time would mark the geometrical straight line. This should assist us in looking upon the nature of a straight line as the accumulated sum of motion in one and the same direction. Suppose that motion pours forth in all directions, and that every point to which the motion is transferred is again a source of motion in all directions: Among the infinite number of directions there is always one which continues the direction from which the motion is received, so as to connect it directly, i. e., on the shortest path, with the original source. Thus the straight line represents the maximum of action in a minimum of absolutely unimpeded motion, and must as such be taken as a *Grenzbegriff*, i. e., a conception which denotes the utmost limit to be reached by a certain operation.

The homaloidality (or evenness) of space is not a positive but a negative quality, being due to the non-existence of any impediment of motion, it means the absence of positive qualities.

Suppose a ray of light did not travel in a straight line, we should not have to infer that space is curved but that there is an impediment to the action of light, preventing it from reaching the limit of a maximum of action in a minimum of time. Part of the action being absorbed by the resistance of the medium through which it travels the ray is no longer straight, but curved.

Suppose that a rotating line could not be made identical with its axis of rotation, we must assign a cause for our inability to reach the limit of its shortest size.

If the straight line is viewed as a *Grenzbegriff*, the mystery which surrounds it disappears. We need no longer marvel either at the wisdom of the Creator that the rays of light travel in paths of shortest time, or at the arbitrariness of nature that space is homaloidal.

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The problem accordingly is not, why is a straight line not curved, but what is a straight line? And concerning the extension of space, we must not ask why is space three-dimensional, but why can the infinite directions of space be reduced for purposes of space-deter-

mination or for the location of points to three orthogonal directions.

This problem is not a problem of philosophy proper, but of the algebra of formal thought, and we are not as yet prepared to solve it. We must be satisfied at present to have formulated it. Suffice it here to indicate that we are inclined to believe that any infinitude may be reduced for practical measurements to always three fundamental elements, the first one of which may be selected arbitrarily, while the second is to be constructed with reference to the first, and the third with reference to the first and second.*

Suppose we have a system of infinite various interrelations. We represent them graphically as an infinite number of points in all possible positions, all of which are combined among themselves by lines. It is inevitable that the elements of these interconnections will be triplet relations. Suppose that all points are interconnected, the diagram will consist of triangles only. Every elementary interrelation will be of a threefold nature and is determinable by three magnitudes.

We can always, with triads, or, so to speak, with logical triangles, compute any relation in any universe of infinite possibilities. Those interrelations which are more complex (we might call them polyads or polygonal relations) can always be resolved into or reduced to triads or triplet-relations.

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Those who have studied Hegel are familiar with the importance of the trinity-relation. The logical necessity of the triad is inevitable, for every simple relation is inevitably triune in its nature. The relation A and B is not a duality, but a trinity, for besides A and B we have that which combines them or constitutes their peculiar connection. Thus it is a logicial necessity that all dualism leads to triism or rather triunism, and triunism is again monism.

We cannot even conceive of God without attributing trinity to him. An absolute unity would be non-existence. God, if thought of as real and active, involves an antithesis, which may be formulated as God and World, or *natura naturans* and *natura naturata*, or in some other way. This antithesis implies already the trinity-conception. When we think of God not only as that which is eternal and immutable in existence, but also as that which changes, grows, and evolves, we cannot escape the result and we must progress to a triune God-idea. The conception of a God-Man, of a Saviour, of God revealed in evolution, brings out the antithesis of God Father and God Son, and the very conception of this relation implies God the Spirit that proceeds from both.

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* In this connection we call attention to the fact that the innumerable varieties of color-tints can be reduced to, and determined by, three fundamental colors.

Mathematics is a constructive science and we expect to find only *a priori* constructions in it. But this is a mistake. Although mathematics is a constructive science, it starts from certain data, and the data of mathematics are not the products of *a priori* constructions, but the results of abstraction. Our mental operations, as we use them in logic and in mathematics, are the same operations which are constitutional in our very existence with the omission of all sense-elements or knowledge derived by sense-experience. And mathematical space, too, is rather an abstraction than a construction. We first drop in our thoughts the materiality as well as the dynamical reality of relations and retain the mere form of interrelations—viz., positions and directions. These positions and directions are then taken to be infinite and continuous ; and for purposes of determination they are reduced to the three coördinates, called dimensions.

Our explanations must not attempt to bridge the gap from non-existence to existence. We must not attempt to elucidate the qualities of that which exists from that which does not exist. Our explanations must aspire to be systematic descriptions of that which is, and comprehension consists in recognising the consistency of being. That existence exists, and that it is not non-existence will always impress us as arbitrary, but the qualities of existence will cease to appear arbitrary when we find that one fact agrees with all the other facts. The quality α which we find in the configuration A appears different from β which we find in the configuration B. But when we find that R or Reality under the peculiar conditions given in A appears as α and under the peculiar conditions given in B appears as β, so that $\alpha = RA$ and $\beta = RB$, we cease to consider α and β as arbitrary.

The tridimensionality of space strikes us as arbitrary, but its main arbitrariness is the arbitrariness of reality itself. Otherwise there is hope that we can conceive it as a consistent corollary to the infinitude of space-relations. We can regard it as due to the same reason that a syllogism, consisting of two premises and one conclusion, presents a triad relation. In that case the tridimensionality of space is in the same predicament as other facts which can be explained by the usual methods. It is neither more nor less arbitrary than, for instance, the value of π as $3.314589\ldots$ and of logarithm 3 as 0.4771213.   P. C.

CURRENT TOPICS.

THE loss of a battle would hardly have cast as much gloom over England as the loss of the battle-ship Victoria, wounded so severely while on drill, as to go down in twelve minutes, carrying with her an admiral and four or five hundred men. Genuine as was the sorrow of the people for the loss of the ship and crew, they grieved still more because the calamity was due to bad seamanship, a timidity in obeying orders, indicating loose discipline

in the navy. That might be corrected, but more alarming still was the revelation that the most gigantic ships in the fleet, invulnerable to shot and shell, are doomed if struck by a ram. Of what avail is the strongest armament on deck, if a smaller ship, without any guns at all, may deliver a fatal blow beneath the water-line? To be sure, expert naval officers declare that a big ship, if skilfully handled, can easily beat off a smaller vessel, or sink her before she can approach near enough to ram, but this does not at all relieve the uncomfortable feeling, that if the big ship does get rammed, she topples over and goes down. This dread certainty has a depressing influence on the spirit of the boldest crew. Sailors are brave in battle, and they are brave on deck in a wrestle with a tempest, but no courage is proof against the danger of being drowned between decks in a moment and without a chance to fight. The easy manner in which the Camperdown sunk the Victoria must have a demoralising effect on the sailors of Great Britain and of all nations.

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I see by this morning's paper that there was a cabinet-meeting yesterday to consider the "silver question," and after discussing it for two hours without any very clear idea of the matter in hand, the meeting broke up, every member knowing a little less about silver than he did before. Disappointed at the failure of the cabinet, I found some comfort in the assurance that "the two conferences yesterday afternoon and evening between the President and Secretary Carlisle simplified matters to some extent"; and when I sought for the "extent," I found that "although the discussion took a wide range, it was necessarily brought back to one important and unmanageable point—that the executive had no power in the premises, Congress alone being able to deal with the measures for relief." There is an amusing resemblance in all this to the strategy of Mr. Micawber, who, overwhelmed with financial difficulties, after discussing twenty impossible expedients, confesses that he has "no power in the premises." The result of the cabinet-meeting is thus expressed: "That the best way to deal with the question was to *await the course of events* was generally agreed to, and it was with this view dominant that the meeting adjourned." This again reminds us of Mr. Micawber, when that serene philosopher was at the end of his resources and "waiting for something to turn up."

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Certainly, the law-making power is in Congress, but what seems to be needed is the law-breaking power; at least, that is the opinion of those Doctors of Money who are prescribing remedies now. They want the new Congress to break the Sherman Law to pieces, in order that silver may find its trade level, the same as wheat or cotton. No doubt, a great deal of reform lies in the repeal of laws, and the value of the new Congress lies in this, that it can repeal the legislation of its predecessors; but the danger of it is, that it may attempt constructive statesmanship of its own, and in that case it will very likely repeal the Sherman Bill to make way for something worse. By the law of commercial gravitation, silver seeks its level according to its value in the markets, and any artificial value given to it by legislation must be taken from something else, or from the resources of the whole community. We cannot overcome this law until we learn how to create something out of nothing; but in the vanity of legislators the natural principles of business are easily overcome. Nature has made the Ohio and the Mississippi rivers unequal, yet if the Ohio could send a big lobby delegation to Washington, Congress would immediately pass an act establishing a "parity" between the two streams.

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The most exciting topic of the week is the action of Governor Altgeld in pardoning the so-called anarchists, after they had been imprisoned for six years in the Joliet penitentiary, for the alleged murder of Matthias Degan, one of the policemen who was killed by the bomb thrown during the meeting at the Haymarket, in Chicago, May 4th, 1886. The pardon itself was dramatic enough, but the reasons given for it will make a profound impression on the consciences of men. All considerations of mercy, magnanimity, and clemency are discarded as below the solemn dignity of the occasion, and the Governor liberates the prisoners as an act of supreme justice, which he was compelled to do in vindication of the law. The grounds of his pardon are, that the prisoners were not guilty of the crime for which they were condemned, and that their trial was unfair. According to the Governor's argument, the conviction was a triumph of judicial anarchy, wherein the constitution was set aside and the right of trial by jury overthrown.

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While censuring the Governor for pardoning the reputed anarchists, even his enemies admit that he is no timid soul. Facing the storm of denunciation which he knew must come upon him he showed a degree of moral strength not usual in governors of late. Any little "executive" could keep the prisoners in, but it required a great man to let them out. A public man in the prime of life, with boundless political ambition, Governor Altgeld put all his future prospects in peril, by an act of simple justice to three poor men who had neither influence, power, nor popularity. To do that and "face a frowning world" required courage of high quality. Apart from the merits of the case, when we think of the order of invertebrates from whom our governors have been chosen in these latter days, it is really refreshing, and even stimulating to look at a chief magistrate who has a Jacksonian backbone, a man with nerve in him, like John Hay's hero.

> "Who seen his duty, a dead sure thing,
> And went for it there and then."

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The Governor's message in justification of the pardon is a State paper morally and intellectually strong, and it will surely become historic. It is not so polite as a diplomatic letter, but it is more sincere. It is a spirited attack upon judicial anarchy, and in due time it may restore the constitution to the people of Illinois. Jeffreys will not always have a seat upon the bench, nor will Jonathan Wild command the police forever. The most dangerous form of anarchy that threatens the people now is the anarchy of judges, and there is timely warning in this bit of wisdom from Governor Altgeld, "No matter what the defendants were charged with, they were entitled to a fair trial, and no greater danger could possibly threaten our institutions than to have the courts of justice run wild, or give way to popular clamor." Governor Altgeld was himself a judge in Chicago, and he remembers that in the trial of the anarchists the courts "ran wild" while "popular clamor" made the rulings and gave judgment. There were men at the time who said in writing and in speech that the trial was unfair, but they were obscure citizens and their words were drowned in the "popular clamor"; but the Governor of Illinois cannot be disposed of in that way. His words will be read and studied by thoughtful men in every part of the world. They will provoke debate, and out of the debate will come to us again the writ of habeas corpus, freedom of speech, and the right of trial by jury.

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The loud and vehement censure that now beats upon Governor Altgeld is but an echo of the "popular clamor" that seven years ago overawed the judges of Illinois. It may sweep the Governor out of political existence at the end of his official term, but it cannot obliterate his message of June 26. That is a State paper, firm and solid as the State House itself, and it will remain a landmark of liberty when the Capitol has crumbled away. Whether or not the form of it was in good taste and according to etiquette is a trifling matter; the substance of it must be considered, and it must be examined in that calm, rational temper that will come when this whirlwind of denunciation has gone by. So, it may be con-

ceded for the sake of the argument that Judge Gary, in conducting the trial as he did, believed that he was honestly performing a public duty in a great emergency, but that, also, is a personal matter of little moment in the presence of a greater theme. The critics of Governor Altgeld assume that he pardoned guilty men, but he gives as a reason for the pardon that the men were innocent, or at least that there was no evidence to connect them with the throwing of the bomb. His critics also assume that the trial was fair, and they offer the judgment as evidence of that, but the Governor has put the judgment itself on trial, and he has brought columns of evidence to show that the jury was packed by the prosecution, and that the rulings of the court were not impartial as between the prisoners and the State. These are the issues raised by the Governor, and appeals to prejudice and passion on either side will only obscure them for a time. In the end they will get a fair trial.

*   *   *

A great deal of mock reverence is claimed for the decisions of the courts, although there is no sanctity about them. They are binding as between the parties to the suit, but in this free country it always was the privilege of the defeated party to go down to the tavern and swear at the decision. Thirty-five years ago a citizen was disloyal who did not proclaim his allegiance to the decision in the Dred Scott case, and yet that famous judgment was freely criticised and condemned. So, in the anarchist case, it seems to be forgotten that the very first man of authority to contradict the Supreme Court was Judge Gary himself. According to the opinion of the Supreme Court there was abundant evidence to connect Fielden with the bomb throwing and with previous knowledge that the bomb was to be thrown; yet, in defiance of the Supreme Court, Judge Gary on the 8th of November, 1887, wrote thus to Governor Oglesby, "*There is no evidence* that Fielden knew of any preparation to do the specific act of throwing the bomb that killed Degan." That is what Governor Altgeld says, and for saying it he is assailed with a malevolence that reminds us of the attacks on Abraham Lincoln. The difference between Judge Gary and Governor Altgeld is very slight. Judge Gary said in substance, this: "There is no evidence to connect Fielden with the bomb throwing, and therefore he should not be hanged"; and six years afterwards Governor Altgeld adds the following amendment, "And therefore he should not be kept in the penitentiary."

M. M. TRUMBULL.

CORRESPONDENCE.

CAN THE SUPERPERSONAL BE CALLED HE?

To the Editor of The Open Court :

Can that which is *not* a personality be represented by the *personal pronouns he, his,* or *him* ? I frequently read your definitions and descriptions of what you call God, as being *impersonal*: and yet you use *he, his,* or *him* to represent God. For instance in No. 296, in your Catechism you say : "The God of the religion of science is not a *person.* However, *he* is not less than a person but infinitely *more* than a person." If what you call God is *more* than a person, how can it be *represented* by a *personal pronoun* ? This seems to me to be inconsistent and contradictory. It seems to me that only the orthodox conception of God can be represented by "he," "his," or "him": while the scientific, monistic, entheistic, conceptions have no *use,* or *place* for those *pronouns.* It seems to me that the all-pervading and boundless, the Universe or Great All, can have no *he, his,* or *him,* which only represent *living* forms of length, breadth, and thickness : or *measured dimensions.*

Again, in No. 300, you say : "The religion of science finds God in all things." Very well. If God is in *all* things : if "God is *everywhere,*" as the orthodox say, then God *must* be *everything,* i. e., the Great All : and as you say in No. 299, "*superpersonal,*"

etc. Now how can you as a *scientist* and *logician* say of the "*superpersonal*": the *boundless* All, he, his, him ? In a letter to me you say, "I simply follow the old tradition, as we speak of the sun as *he,* and the moon as *she.*" But the sun and moon have limits, dimensions, and are but *small parts* of God, or the boundless All : and to me, you might as well call an *atom* in man's or woman's organism *he* or *she.* Therefore, I think the Great All or God, cannot be *scientifically* represented by *he, his,* or *him.* Again, if the "*traditional*" use of *he* for God is consistent with *your* conception of "*him,*" then why not use *she, hers,* and *her,* for God, since to my "mind," Nature : the All : God is just *as much feminine* as *masculine.* The earth is kept in its orbit by *two* forces : masculine and feminine. All nature is pervaded and sustained, etc., by these two forces from atoms to worlds and systems. "Invasive *heism*" pervades, controls, and dominates all *man*-made laws, customs, constitutions, and institutions : and that is *why,* to a great extent, they have been and now are, so devoid of love, justice, equal liberty and humanity. So I say, let both *he* and *she* be scientifically *used* and *mean* something, *practically* for human progress and amelioration.   J. H. COOK.

[We fully grant the inadequacy of speaking of God as a human being, but we must not forget that to speak of God as a thing in the neuter "it," would be not less inappropriate. Until our linguists invent a special pronoun for God, we shall have to stick to the traditional usage.—ED.]

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