tle Adams and a handful of others were waging in the U.S. House of Representa-
tives against the British-controlled, intransigent, pro-slavery South. Adams’
fight, Douglass tells us, gave him and other slaves the hope they needed that
America would reject the institution of slavery, and made Adams a folk hero in
many slave quarters. And the eloquence of Adams and other public speakers of
the day led Douglass to learn the art of polemical “speechifying.”

History ‘From the Bottom Up’

While Quarles tells Douglass’s story, he fails to convey the true nature of Dou-
glass’s intellectual powers. The reason
for that lies in his decision to tell Dou-
glass’s story “from the bottom up,” as
opposed to beginning with a concept of
what the actual fight in America, against British oligarchism, was, before,
during, and after the Civil War.

This is not Quarles’ failing alone; it is
the state of the history profession in gen-
eral. Quarles insists, for example, that in
1860, Douglass was campaigning for the
Liberty Party presidential candidate, Gerrit Smith. Factually, that may be
ture. Douglass, however, knew that
America’s best hope was Lincoln, and in
his newspaper, Douglass’ Monthly,
wrote, “The slaveholders know the day
of their power is over when a Republic-
ian President is elected.” His support
for Smith was perfunctory, to say the
least.

To “boil down” Douglass in this way
to “just the facts,” does not permit the
reader to appreciate the full scope of
Douglass’s character, or his political
integrity. This does not mean that Dou-
glass was right all the time; in fact, he
was often, from an empiricist stand-
point, wrong, until he came to an
understanding of what Lincoln stood
for, and was fighting for. However,
he chose his battles carefully, and waged
them with Entschlossenheit. Douglass
also could not be led around by the
noise, by the Garrisonians or anyone
else, which frustrated his white would-
be patrons.

As Quarles notes, Douglass used to
say that, “No man can be an enemy of
mine who loves the violin.” He was also
a great lover of the poetry of Robert
Burns. In his 70’s, he began to study
German. Such a man is well worth
knowing, in all his richness—from the

The Characteristic Truth

The publication of the first complete
English translation of Johannes
Kepler’s work, Harmonice Mundi (The
Harmony of the World), is a cause for
great joy. Although parts of this book
are difficult for the non-geometrically
trained, as Kepler says in his preface,
“They should not be frightened off by
the difficulty of the geometrical arguments,
and deprive themselves of the very great
enjoyment of harmonic studies.”

In Harmonice, Kepler presents to
mankind the method by which he had
been able to make the breakthroughs in
astronomy which resulted in the Three
Laws of planetary motion which still
bear his name. This method has been
attacked by more than the mere neglect
which left the works inaccessible to
those who could not read Latin or Ger-
man; it has been buried beneath the
weight of authority accorded to the
assertion that physical processes can be
understood without reference to Reason,
by examination of cause-and-effect rela-
tions which are fundamentally linear.
Kepler, on the other hand, knew that
this could not be true.

In fact, the greatest value of the publi-
cation of this book, is the way in which it
exemplifies Kepler’s method of using his
knowledge of the overall lawfulness of a
system, to develop the proper method of
dealing with specific information about
events within that system. Contrary to
today’s belief, such information can
never define either the appropriate
method for its own analysis, or the law-
fulness of the system from which it
comes. Thus, the most profound truth,
that the Creator must create the best and
most beautiful world, leads Kepler to the
certainty that there must be harmonic
relationships embedded in the elliptical
orbits, making them therefore more per-
fact than the circular shapes that had
been previously assumed. Only from that
standpoint does he ask from the observa-

Douglas who waged a determined 18-
month campaign in Scotland against
the Free Church of Scotland’s fundrais-
ing from American slaveowners
(“you’ve got to give the money back”),
to Douglass the violin-player and
proud grandfather of concert violinist
Joseph Douglass.

There are several correctives to the
limitations of this Quarles classic, and its
more recent counterpart, William
McFeely’s biography of Douglass, which
takes the same empirical approach, but
is more detailed, only because it, in turn,
is based on the collected writings of
Douglass currently being published seri-
ally by Yale University Press. These
original writings, along with Philip
Foner’s edition of Douglass’s writings,
which is illuminating if not complete,
are one corrective; the other, is Dou-
glass’s last autobiography, The Life and
Times of Frederick Douglass. These pri-
mary sources will be far more reward-
ing to the serious student, who is willing
to take the time to understand the true
significance of Frederick Douglass’s life
in the context of the fight for the Ameri-
can Republic.

—Denise Henderson

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tions, first, in what particular way are these harmonies expressed, and, secondarily, what are the particular harmonies so expressed.

The Languages of Science

As Kepler came to understand more and more deeply the lawfulness of the solar system, he also demanded a richer and more differentiated language than the then-available mathematics, to express his insights. It is for that reason, that he named his greatest work The Harmony of the World, and spent so much of it discussing the bases of music.

Kepler himself was not a composer, but he understood that the harmonic relations have some of the characteristics which he required for understanding the lawfulness of the physical universe. Harmonic relations, like the planetary orbits, are specific—there is a very narrow band of variation in the relation which is called a fifth, as opposed to the relations which can occur that are “somewhere between” a fifth and the next larger interval, a minor sixth. Further, the orbits of the planets can only occur at specific distances from the sun, at any point at which a modern-day computer model might locate them. In the same way, there is an ordering principle in the musical domain, in which not every interval occurs lawfully in connection with every other interval (compare, for example, the consonant sound of the two successive fifths, C-G and G-d, with the dissonance resulting from their combination to produce C-d).

In the same way, the planets do not simply have lawful individual distances from the sun, but the characteristics of the orbits, including their size, their periodic times, and their deviation from circularity, are ordered by an overall system, which is partially reflected in Kepler’s Third Law, first announced in Harmonice Mundi, which relates the radius of each orbit to its corresponding periodic time (or “year,” in Earth terms), in a way which is constant for the entire solar system. The high point of Harmonice is Kepler’s realization that the harmonic relations of the planets are actually those of the human creation, polyphonic music.

The musical harmonies alone do not provide the precise language needed for the continued development of astrono-

my, and physical science generally, so Kepler called for the development of a new level of mathematics. A specific instance occurs in New Astronomy, an earlier work, in which he announced the discovery that the planets move in ellipses, and that their speeds vary such that the imaginary ray from the sun to any particular planetary body sweeps out an equal area over any equal time period. As he is developing this concept, he analyzes the related question of a body moving around a circle, but sweeping out an area with a ray from a point that is not its center. He writes, “I exhort the geometers to solve me this problem: Given the area of a part of a semicircle, and a point on the diameter, to find the arc and the angle at that point, the sides of which angle, and which arc, encloses the given area [defined by the line from the given point, the sun, to the end of the arc, the approximate position of a planet—SB].”

The problem, as Kepler conceived of it, implies a pair of relationships, one of which governs the circular motion around the given point, and the other the change in the distance of the end of the arc on the semicircle from the given point. However, the planet is not progressing by fits and starts, moving along a particular circle around the sun only to have its course disrupted by the intervention of a linear attractive or repulsive force between it and the sun. Rather, its path reflects in every shortest interval as well as overall, the interconnected dimensionality of the entire system, in this case circular and radial forces, conceived of by Kepler as a set of magnetic-like interactions, which express the character of the system by limiting the possibility of movement to those paths which manifest certain particular forms of constantly changing curvature.

Gauss Builds on Kepler

As Lyndon LaRouche has stressed,* this way of thinking—that the characteristic curvature, or species nature, must be present no matter how infinitesimal the portion under examination—, which was embodied in the development of the calculus by Gottfried Leibniz, was also what allowed Carl Gauss to discover the orbit of the asteroid Ceres, a previously unknown body in the solar system, from a mere three observations. Gauss, like Kepler, worked from the ordering principle of a system, to its expression—as opposed to the Newtonians such as Leonhard Euler, who championed a calculus based upon the assumption of “linearity in the small.” From the foundation of Kepler’s laws, Gauss developed a unified concept of the possible motion of any bodies in the solar system. Every orbit must be along a path traced out by the intersection of a cone and a plane, whether an ellipse, a parabola, or an hyperbola, but always with the sun at the point where the plane cuts the axis of the cone; a ray from the sun to the body sweeps out, in any time period, a section of that figure with an area proportional to that time and to its characteristic distance from the sun. Based on this, Gauss was able to use the very limited data on a newly observed body, the asteroid Ceres, and the calculus as Leibniz had developed it, to discover how that lawfulness was being manifested by that particular body—both what particular type of curve the orbit followed, and its size and shape within the general type—all in a way which was not dependent on fitting a curve to an extended number of data points.

LaRouche has emphasized the stunning success of Gauss’s use of this method, in order to warn against the self-consoling habits of mind that lead too many today to believe in linear extrapolation, whether of voting trends, stock prices, or the response of living tissues to radiation. Here, in this great pedagogical work which Kepler left us, we can educate ourselves to grasp the lawfulness of an entire system, as it must be expressed in the smallest detail, and to reflect on the quality of the universe and its Creator which allows this coherence to be comprehensible to our minds.


—Sylvia Brewda