

Re: Cut a point into two – topological?

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- *From:* "Hero" <Hero.van.Jindelt@xxxxxx>
 - *Date:* 24 Feb 2007 03:54:32 –0800
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Bob wrote:

How do you cut something with zero width? A point is not a set of things so you can't split the point into two non-empty sets.

A point is not a thing in a physical sense of matter necessarily, it can be a hole, it can be a center of gravity, and so forth. It is different from nothing. It has zero width, but a location of zero width can accommodate lots of points of zero width, just as zero + zero = 2 times zero = 3 times zero = zero.

Only when one denies motion at all, one can deny a lot, but then one cannot do proper math, one cannot even split a set of two elements into two of one (one can not even do a proof, as this is a movement from an assumption to a confirmation). And topology is basically about deformation, about change or movement too.

A geometrical point is denoting a location, as one of its properties. Here the reference to the other geometrical objects doesn't change. With movement, given for example with the creation of solids through rotation by Euclid or with the quadratrix of Hippias of Elis before Euclid we have moving objects with locations referred to each other, and a „space“ where they are moving. A moving point can leave a „trace“, which can be regarded with static geometry, if it is not „visiting“ the same location twice. A point moving can sweep out a line, two lines can intersect in one point, the generating points of the two lines can meet in the intersection at the same time, but they can also pass through this location–point at the same time.

$$a = 3 * x + 4,$$

$$b = 9 * x + 6,$$

when $x = -1/3$ then a and b will be equal of value but not the same.

And from this point the points a and b will move on differently, when x changes value.

With friendly greetings

Hero

PS in our universe, and there is no other, what one considers a point at rest, as an absolute location, another one will look at as a moving point. Archimedes' lever is still unused.