

# The Big Bang Was Not So Big: It Was Merely a Cycle in an Infinite Process

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## Abstract

This theoretical note challenges the validity of the Big Bang Theory, according to which It then proposes an alternative framework in which the Big Bang is merely a moving part of a larger infinite pattern of events for the universe.

Keywords: *Big Bang Theory; Expansion; A New Perspective; Cyclical Big Bangs; Non-uniform Expansions Possibe*

## 1. Introduction

Astronomer George Lemaître (1927) hypothesized that a very long time ago, the universe started as just a *single point*. He said the universe subsequently **expanded** to get as big as it is now and that the universe would continue expanding. Two years later, an astronomer named Edwin Hubble (1920) observed that other galaxies were moving away from us. Furthermore, Hubble observed that the galaxies furthest from our own were moving *faster* than the ones close to us. The velocity of a galaxy can be expressed mathematically as:

$$V = Hxd$$

where  $v$  is galaxy outward velocity and  $H$  is the Hubble constant, i.e., the constant of proportionality.

In any case, the so-called Big Bang, has been estimated as having happened approximately 9-14 billion years ago, with new technologies (the WMAP project) depicting its age as being in the range of 13.7-13.8 billion years, very likely occurred, albeit probably further in the past than that. How did it happen? Why did it happen? Exactly what caused it? No one actually knows the answers to any of these questions.

## 2. A New Proposal

Following reflection on the nature of the Big Bang phenomenon, it is hypothesized here that it is entirely likely that it (“The Big Bang”) was simply one step in an infinite cosmic cycle of, for the human mind, unimaginable magnitude. Part of the reason for that unimaginability is the fact that infinity is not a number but rather something closer to a direction.

Pause for a moment. The universe is, we are told by astronomers and other scientists, expanding. Edwin Hubble had come to this conclusion in the 1920s. Indeed, it appears to be expanding faster and faster. How long will this continue? Again, no one knows. However, at some point the strings/superstrings that connect all of the universe will reach their maximum tolerance. Once that happens, the universe will begin to contract. This contraction will appear “slow at first;” it

may not be particularly easy to detect at first. However, with each passing nanosecond, the rate of acceleration of the universe's contraction will rise. Exponentially, to say the least. And that acceleration will manifest itself over many billions of years. This is the "Big Collapse." Interestingly, while we contemplate and study such ideas as the end of nature as we know it (McKibben, 1989), the Big Collapse will cause the utter end of nature in very sense. Except for the fact that that nature will be reborn in the ensuing Big Bang, albeit in very likely new forms across the spectrum of space and eventually life itself. We have long studied extinction rates (Lawton and May, 1995), but the Big Collapse will extinguish everything, albeit only infinitely briefly.

As the speed of contraction begins to approach the speed of light, the density of matter that remains at the infinitely brief end of this process will approach infinite density.

Then, in an unmeasurable short unit of time, it will instantly explode, with a force beyond anything our minds could possibly understand or imagine or quantify. The matter of what is our current universe, will soar once again through the space of former strings and superstrings and over billions of years expand beyond our collective imaginations' capacity to comprehend.

### 3. The "Future"

And the cycle will continue again...forever, literally. Big Bang after Big Bang will occur again and again, each time resulting in a uniquely random scenario of an incomprehensible events and outcomes. The only predictable certainty is that the Big Bang/Big Collapse will repeat itself. Over and over and over again.

However, the duration of each of these Big Bang/Big Collapse scenarios, "The Big Bang/Big Collapse Cycle," may well not be uniform. Indeed, over relative time, the duration may begin to shorten. This is a matter we may refer to as "string elasticity," a scenario in which string integrity *potentially* becomes compromised/degraded. Indeed, it is plausible that the expansion following successive Big Bangs may gradually (however minutely) compromise the integrity and thereby shorten the potential expansion of the strings of the universe. Over the course of many hundreds of billions of years in relative time, Big Bangs and Big Collapses may eventually give way to a slowing down of universes of the future and ultimately lead to a stationary pattern of change that could be described as relatively peaceful ("cosmic peace". Our quantum descendants may well witness this new world, or at least a minute piece of it. Or not.

### 4. Perspective

Hard to imagine? Something as pedestrian as "climate change" has been manifesting itself for billions of years on Earth (Kolbert, 2014, p. 188; McKibben, 1989). Indeed, since its formation. Some 10,000-15,000 years ago, our ancestors survived an ICE Age that has ushered in the background for our current climate change experience. What has caused the global warming we hear and pontificate about daily? It is quite simple, really. **We have.** We have overpopulated the planet with humans and hence with the many methane- and carbon-producing animals harvested to sustain those humans. This is easier to grasp than the "The Big Bang/Big Collapse Cycle," but no less true.

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