The heavens declare a different story!

John G. Hartnett

The observational evidence, documented and described by Halton Arp, provides a starkly different story about the location and distribution of galaxies and quasi-galactic objects (including quasars) in the universe from what is promoted by big bang cosmologists and the popular press. Instead of uniform randomness on a large scale, it seems that the matter in the universe is arranged in enormous spiral and quasi spiral structures that are repeated on many scales in a grand hierarchy. Arp's evidence for galaxy formation by ejection of quasars from the centres of active galactic nuclei is extremely compelling. His photographs of galaxies may well be revealing direct visual evidence of the creative hand of God during Day 4 of Creation Week. In fact, his astronomical observations may well be the most significant for creationist cosmology since Galileo.

Observational evidence from the cosmos is *not* as we have been lead to believe. Have we been sold another great lie? The first one was biological evolution; this one is the 'Copernican or cosmological principle'. The general picture described in the secular newspapers and popular press is one that supports the big bang. The universe is described as an apparently infinite volume such that on the very largest scales the galaxies are distributed *randomly* throughout. After all, this is the basis of the assumption that underpins the big bang conjecture itself. That unproven and unprovable assumption is the cosmological principle. It essentially states that the universe is both homogeneous (no matter where we view it from it always looks the same) and isotropic (it looks identical in whichever direction we look) and that the laws of physics are the same everywhere. Without these assumptions, the Friedmann–Lemaître solutions of the general relativity equations are invalid. It is upon these assumptions that all big bang cosmology hangs.

Richard Feynman succinctly describes the problem of the cosmological principle on page 166 of his book:

> ' … I suspect that the assumption of uniformity of the universe reflects a prejudice born of a sequence of overthrows of geocentric ideas. … It would be embarrassing to find, after stating that we live in an ordinary planet about an ordinary star in an ordinary galaxy, that our place in the universe is extraordinary … To avoid embarrassment we cling to the hypothesis of uniformity.'[1]

Stephen Hawking seems to be giving a different impression. He says in his newer version[2] of an old book (pp. 154–155)

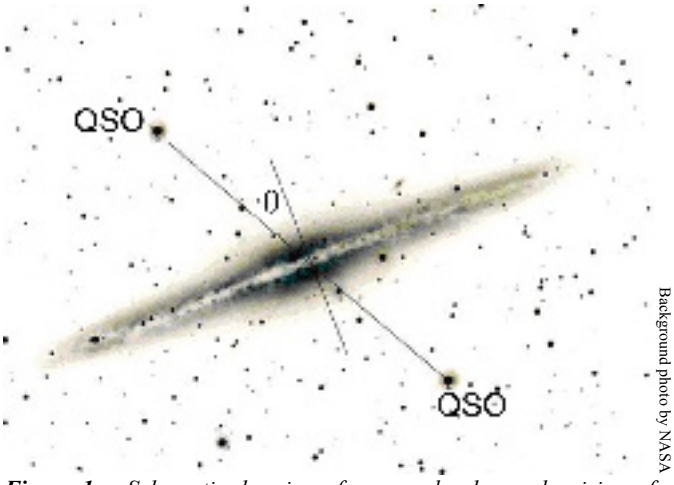
> 'This [big bang] picture of the universe that started off very hot and cooled as it expanded is in agreement with all the observational evidence we have today. Nevertheless it leaves a number of important questions unanswered … (2) Why is the universe so uniform on a large scale? Why does it look the same at all points of space and in all directions?'

He gives us the idea that the universe is uniform in all directions. Note, he adds on 'a large scale' because on every other smaller scale than large (by definition) it is not uniform. Also he uses a ploy of having the reader focus on a question that need not be answered if he knew the real state of observational astronomy.

Hawking continues with another unanswered question (p. 156)

> '(4) Despite the fact that the universe is so uniform and homogeneous on a large scale, it contains local irregularities, such as stars and galaxies. These are thought to have developed from small differences in the density of the early universe from one region to another. What was the origin of these density fluctuations?'

He is saying the origin of stars and galaxies is totally unknown. Later in this paper, we shall see from observational astronomy this is not the case; the truth is clear for all to see. But to explain their origin in the big bang conjecture, Hawking asks why did (assuming it did—i.e. begging the question) the universe have small density fluctuations that evolved into galaxies and stars. Then he goes on to say (p.



Background photo by NASA

Figure 1. *Schematic drawing of commonly observed pairing of ejected quasars (QSO) from an active galactic nucleus. The objects at the ends of the line are quasars, which are usually measured with about the same redshift and fall within $\theta = \pm 20°$ of the minor axis or the line drawn perpendicular to the plane of the galaxy.*

157) 'The general theory of relativity, on its own, cannot explain these features or answer these questions.' In other words, he doesn't know and he cannot explain how the stars and galaxies formed.

Astronomical observations

Actual observations describe a universe that is quite different indeed. There is an enormous amount of structure on all scales, in galaxies, in clusters and in superclusters (clusters of clusters). In his books[3,4] Halton Arp describes a very different universe than we have been lead to believe. The main points are reviewed in *TJ* **14**(3) 2000.[5,6] On this basis the true picture of the universe is one where galaxies are seen to give birth to (or eject) quasars that in turn transform into galaxies that in turn give birth to more quasars and so on, as the process is repeated. Usually the quasars are ejected in pairs in opposite precisely aligned directions perpendicular to the plane of an active Seyfert type galaxy (see Figure 1, also Fig. 1-1, p. 10 in 'Seeing Red'[4]).

Arp cites many examples of quasars found aligned within ± 20° of the minor axis of the active nucleus of a galaxy. The minor axis is perpendicular to the plane of rotation of the galaxy. Many examples are known of intense x-ray and gamma ray emitting material being ejected along this alignment. Usually the alignment of quasars, blue stellar objects (BSO, which are really quasars) and BL Lac objects (lower-redshift quasar-like, similar-spectrum objects) through the centre of the parent galaxy is unerringly precise. The quasar pairs often have redshifts that are very similar and also often tend to represent ejection velocities of opposite sign about ± 0.1*c*. The values of the redshifts commonly match the Karlsson[7] predicted quantized peak values z = 0.061, 0.30, 0.60, 0.96, 1.41, 1.96, etc. These are the telltale signs of the creation process by ejection from parent galaxies.

The question has never been answered as to what 'quasars' or quasi-stellar objects (QSOs) are. Big bang cosmology has always insisted that they are extremely distant, extremely luminous galactic centres. And the only reason we can't see the surrounding stars is that they are too far away.[8] This interpretation has problems with the physics because of the unprecedented magnitude of the luminosity and the luminosity variations that are observed on timescales of days or weeks.[9]

In big bang cosmology, the observed redshifts of all extragalactic objects in the sky are mostly due to the expansion of the universe causing the wavelengths of the photons to be stretched in flight through the vast distances of the cosmos. This is the basis of the Hubble redshift-distance relation. Arp shows convincing evidence that quasar redshifts represent something else. Within clusters of galaxies he also shows the existence of an excess redshift relative to the large central dominant usually elliptical galaxy. In some cases excess redshifts $cz > 36{,}000$ km/s have been measured.[10] Such data showing galaxies that are physically close to quasars or other galaxies strongly indicate that the quasars are not at enormous cosmological distances and that not all redshifts are due to the expansion of the universe, described by the Hubble relation. In some cases galaxies are physically connected by filaments of stars, gas and dust, and quasars have been observed in X-ray images with connections back to galaxies. Arp also presents a strong case for low-luminosity clusters of X-ray galaxies, e.g. Abell clusters, being born by ejection from active galactic nuclei.

The process is for multiple births of galaxies in hierarchical structures, spatially and temporally; something like a fireworks display where many explosions eject small glowing centres that then explode to liberate more glowing centres.[11] On top of this, due to the forces of gravity, these galaxies of stars form whirlpools in space, some in spirals some highly distorted and peculiar. The galaxies then form into clusters and these clusters into superclusters. And the superclusters viewed from Earth appear to form into gigantic spiral structures. (Note in Figure 3, reproduced from Arps's book Fig. 6-12, p. 152, there is a general S-shaped or spiral pattern visible. The bottom part of the S is not all visible.) It is like a signature that is repeated throughout the cosmos, structure within structure and galaxies born from the dense hearts of active galaxies. Arp describes what he sees as the evolution or aging of the ejected quasars into new galaxies (see Figure 2). The ellipticals were the original (created) galaxies. They tend to be very large and often are associated with groups of spirals, like M31 (the most massive in our local group) and M81 in the next major group.

Arp mentions in particular two major clusters, Virgo and Fornax, one in the northern sky and the other in the southern. See the large spiral structure in the Fornax supercluster shown in Figure 3. He says of these,

> 'I am tempted to say that if there is a creator (and if so I would not presume to attribute anthropomorphic properties to it [shows his bias]) we might expect to hear: *"Look you dummies, I showed you the Virgo Cluster and you did not believe it so I will show you another one just like it and if you still don't believe it—well let's just forget the whole thing"*'.

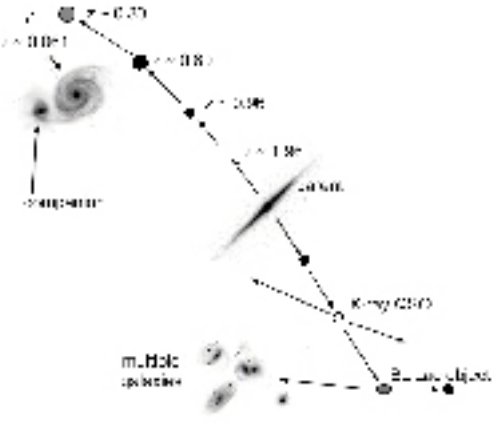


Figure 2. *Schematic of the evolution of the ejected quasars into normal galaxies after Arp (Fig.9–3 p. 239 of Ref. 4).*

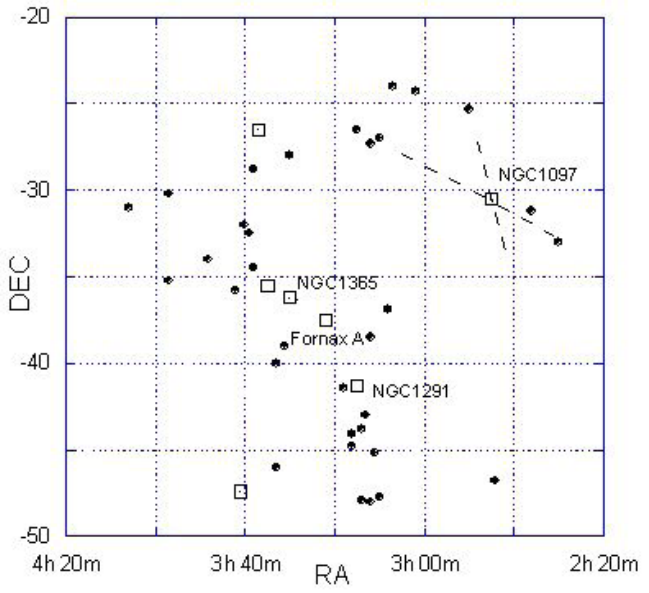


Figure 3. *Schematic of the Fornax supercluster showing spiral structure, after Arp (Fig. 6–12 on p. 152 of Ref. 4). Galaxy magnitude: • ≤ 17.0, □ < 10.9.*

It is amazing how he comes so close; the observations are pointing him to the obvious conclusion, but he turns to the New Age instead!

The ejection-of-quasars-from-galaxies interpretation is vigorously rejected by the big bang community. Obviously this is because it utterly demolishes their key assumption of the genesis of all matter at the big bang. It also calls into question many redshift-distances determined by quasar redshifts. In the section 'Alternatives to the big bang' on page 393 of his book,[12] Joseph Silk criticises the (Quasi) Steady State model of Sir Fred Hoyle, Geoffrey Burbidge and Jayant Narlikar (HBN) with some particular observations but admits, 'Only by *disputing the interpretation of quasar redshifts* as a cosmological distance indicator can this conclusion be avoided' [my emphasis added]. This is, in fact, the main thrust of Arp's observations! They cast enormous doubt on the distribution of galaxies in the universe and the interpretation of big bang expansion models.

Stephen Hawking has recently written a book[13] that apparently alleges to be the 'The theory of everything'. On page 22 he says: 'The only reasonable explanation [is] … that the galaxies were moving away from us, and the frequency of the light waves from them was being reduced, or red-shifted, by the Doppler effect'. The use of 'reasonable' implies that anyone who has good reason to believe otherwise must be one of those crackpots. Also Hawking knows that it isn't really Doppler shift in the big bang model, but space expanding causing light waves to stretch. On page 23 of this book, he speaks of Hubble's discovery writing, '… the galaxies all appeared red-shifted. Every single one was moving away from us'. Was it too much for him to tell the truth? He must know that the galaxy M31 in Andromeda and a few others in the Virgo cluster have blueshifts and are interpreted as moving towards us. Cosmologically speaking, these are in our backyard, so Hubble would have seen them in 1929. So how can you trust anything else Hawking says?[14] Such is typical of the blind adherent defending his cherished belief.

Arp's position is to call into question all so-called 'velocity related' redshifts, except for very small intrinsic motions of galaxies and up to about 0.1*c* velocities for ejected quasars. He instead assigns a large intrinsic redshift not only to quasars but also to galaxies. HBN are more conservative and though they accept Arp's interpretation on the redshift of quasars they also accept that the galaxies have a cosmological expansion component. Arp's interpretation of quasar redshifts, in any case, reduces the distance scale of the most 'distant' quasars by a factor of about 100 and their luminosities by a factor of 10,000. A lower luminosity for quasars then resolves the paradox regarding their unbelievable large luminosities.

Question?

But are we really seeing the creation of new galaxies? In my opinion, yes! But it all happened on Day 4 during creation Week. We are looking back into the past, millions or billions of years of *astronomical time*, but only thousands of years of Earth time, to Creation Week and soon after (see 'A new cosmology: solution to the starlight travel time problem' on pp. 98–102 of this volume). We are seeing the creation of the cosmos under the agency of God. 'The heaven declare the glory of God and the [night sky] shows His handiwork'. (Ps 19:1) Depending on the exact extent of the time dilation factor, we may be seeing creation as it is happening.

The process of quasars being ejected from the centre of active galactic nuclei is a creatio ex nihilo event, well beyond our physics to describe, though HBN and Arp have attempted to do so.[4,15–18] HBN describe a creation C-field, which generates matter and anti-matter, the matter being in the form of super-energetic Planck particles that split into billions of lower energy but still very energetic particles. Arp, Narlikar and Das describe a variable mass hypothesis, where new matter forms from the æther (vacuum energy) in the centre of galaxies, coming into existence with extremely high energy but zero inertial mass. This inertial mass then accumulates with time due to the gravitational attraction of all other matter in the universe (like Mach's principle). The energy levels of the newly formed atoms are dependent on this accumulating mass and therefore the wavelengths of the emitted photons appear very redshifted. *Neither of these descriptions have any basis in experimental physics.* Arp even admits ' … it is often objected that pair creation of electrons and positrons from photons in terrestrial laboratories does not produce low-mass electrons'[19] and he doesn't provide a satisfactory answer to this objection. Nor do they describe a mechanism by which stars and galaxies form from the plasma (energetic particles) formed in the quasars. To be fair though, their model offers more insight into the process than the big bang.

Conclusion

The universe is significantly different to what we are led to believe, not isotropic and not smooth in terms of the distribution of galaxies. The physical processes outside our galaxy are significantly different to what we see inside. Certainly it appears that our galaxy is special[20] and that the laws of physics operating at creation[21] were different in the cosmos than they are today on Earth. These processes may describe the mechanism whereby God 'stretched out the heavens' during Day 4 of Creation Week, while creating the heavenly bodies.

Other explanations for the intrinsic redshifts may need to be sought. Arp[22] and many others[23] have observed large quantised redshifts in quasars, particularly those where a link could be shown to active galactic nuclei. Arp applies the variable mass hypothesis to describe the intrinsic redshift of these objects but fails to find a model to provide a mechanism for quantisation. However the quantization of redshifts of these QSOs and the field galaxies in general[24] strongly suggests explanations other than those of the big bang conjecture.

Another important point that should be made here is that we are all observers viewing the same light from the cosmos. We can only interpret it within the available science we have at our disposal, but we must not lose sight of what we may *really* be looking at. The account in Genesis gives us the clues and with biblical glasses we can see more clearly. The astronomical observations published by Arp, aside from any interpretations he may present,[25] look like clear evidence of the creation of galaxies from the active nuclei of other galaxies. Matter is clearly being ejected. Based of an enormous accumulation of observational astronomical data collected over thirty years, the distribution of the galaxies in the universe appears to be anything but random. The very process by which the galaxies were created on Day 4 of Creation Week may be visible in these observations. This is potentially the most exciting discovery for creationist cosmology since Galileo discovered the moons of Jupiter, which began the re-emergence of reason over dogma.

References

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6. Worraker, B.J. and McIntosh, A.C., A different view of the universe, *TJ* **14**(3):46–50, 2000.
7. Karlsson, K.G., On the existence of significant peaks in the quasar redshift distribution, *Astron. Astrophys.* **58**:237–240, 1977.
8. In many cases the surrounding stars can be seen and this is a problem for the big bang cosmologist who expects the QSOs to be so distant that the surrounding stars could not be seen. A good example is 3C48, which is pictured on p. 56 of Ref. 4.
9. Hartnett, J.G., Different but still the same, *TJ* **16**(1):29–35, 2002.
10. Redshifts (z) are often described in terms of a velocity by taking the product with the speed of light (c). This is true for redshift values z << 1. For higher redshift values we must use the relativistic relation v = c {(1+z)^2 -1}/{(1+z)^2+1}.
11. The actual process of the creation in this model may be the direct creative power of God. Arp assigns to it a natural process as he believes in the Quasi-Steady State model of Hoyle, Burbidge and Narlikar.
12. Silk, J., *The Big Bang*, W.H. Freeman and Co., New York, 2000.
13. Hawking, S.W., *The Theory of Everything: The Origin and Fate of the Universe*, New Millenium Press, Beverly Hill, 2002.
14. In another very recent book (*The Universe in a Nutshell,* Bantam Press, 2001) Hawking says on p. 75: 'To their great surprise, they had found that nearly all galaxies are moving away.' Here he implicitly recognises the existence of a few blueshifted galaxies, though he still explains redshifts in terms of recession velocities rather than the expansion of space—the two effects are of course observationally indistinguishable at modest distances.
15. Hoyle, F., Burbidge, G. and Narlikar, J.V., *A Different Approach to Cosmology: From a Static Universe Through the Big Bang Towards Reality*, Cambridge University Press, Cambridge, 2000.
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18. Narlikar, J. and Arp, H., Flat spacetime cosmology: a unified framework for extragalactic redshifts, *Astrophys. J.* **405**:51–56, 1 March 1993.
19. Arp, Ref. 4, p. 234.
20. It was created with a divine purpose, to house Earth and living created beings. It is not a violently disrupted galaxy.
21. God had to suspend the usual natural law in order to create.
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25. I reject his Quasi-Steady State Creation model as unphysical and mostly conjecture.

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