7. Two Time Capsules

Sharing knowledge powers innovation. To fully realise the social, economic and environmental benefits of our considerable investment in science and research, we must communicate and engage the wider community in science (Department of Industry, 2010).

A postage stamp is a time capsule, a representation of an ideal or a situation at a certain point in time. The point in time is more likely to be the date of decision as to what event, celebration or message is to be circulated than the date of issue because of the lead time for the development of the stamp issue. Nonetheless and regardless of how the representation ages or deteriorates, it is a visual memory and a marker of an idea to be celebrated at a particular time. In this chapter, I examine the stamps issued to celebrate the millennium and those that represent messages about the changing climate.

The stamp issues of 1995–2001: Celebrations of the millennium

In this study, I have been looking at the question: What does the representation of science and scientists on postage stamps convey about the political and cultural necessities of a country at the time of issue? All of my analysis has an implied time criteria, that of the date of issue of the message. This case study affords a conveniently explicit and fairly recent point at which to put down a time marker. Approaching the year 2000, the world had the opportunity for some retrospection and introspection. The millennium was celebrated by some postal authorities to reflect how the country saw its place in the world through the past endeavours of its scientists, their enterprise and effect upon the world. To a much lesser extent, future ambitions were examined through these stamp issues.

Seven of the ten countries selected for this study issued stamps for the millennium. None described the issue that seemed to most concern the world as the year 2000 loomed, the Y2K bug. Scant attention was paid on stamps to the changing climate at this time either.

Australia

Australia Post celebrated 2000 with two stamp issues: a stamp containing a 1999/2000 hologram and a miniature sheet of 25 *Faces of Australia*. The celebration has been an acknowledgement of the date, enhanced technically
through the use of the hologram (Figure 7.1). I would not describe the design as inspirational, but it is a colourful representation containing flora as the symbols of the country. The 25 portraits are a graphic illustration of the multicultural nature of the country as it entered the year 2000. The stamps are mirrors, providing no prompt for further thought or action, expect perhaps to admire the diversity of the ethnicity portrayed across all ages. None of the portraits alludes to a scientific theme in any way, although three of the portraits show a uniform.

![Figure 7.1: Australia, 1999. Millennium stamp. Rennicks catalogue # 1920.](image)
Source: Author’s collection.

**New Zealand**

New Zealand Post embarked upon its millennium celebrations in 1997 with the first issue of a series with the title of *Discoverers*, which featured six of the discoverers of the country. New Zealand Post included the Māori explorers Kupe (c.10th century), describing him as a legendary explorer, and Maui, another historically remembered figure of the Pacific, as well as four European explorers. The discoverers from Europe are Captain James Cook, Frenchmen de Surville, and d’Urville and Abel Tasman of the Dutch East India Company.

The stamps are reproduced in Figure 7.2, shown in date order rather than conventional value order. It is an interesting set, for although tied together by basic format, each explorer is named, the New Zealand symbol for its millennium issues is a constant and all have a sea-blue colour in the image. However, the story is told somewhat differently on each stamp and only four show a representation of the celebrant. Kupe, of legend, is shown carrying the paddle of the two-hulled craft on which he left Hawaii. The background shows a collapsed volcano shell, typical of a New Zealand landscape. Maui is not represented in the image. Set against an aerial view of Cape Reinga are Māori artifacts, the carved manaia and the hei matau traditional fish hook. The *discovery* of New Zealand in 1642 by Abel Tasman is rich in symbolism telling its message of the time. Tasman’s likeness and the globe are a fragment of a portrait of Abel Tasman attributed to Jacob Cuyp. A telescope is shown as is part of a drawing “Murderers’ Bay”, by Isaack Gilsemans, that illustrates when Tasman tried to land at a Māori agricultural settlement and encountering resistance (Flude, 2001). The two
stamps showing the date of 1769 highlight the fact that both the British and French were at the time seeking an expansion of land possessions to ferment additional trade opportunities. Both Jean de Surville and James Cook explored the coast of New Zealand that year. The de Surville stamp is illustrated with a map of the top of the North Island charting the route of de Surville’s ship, the St Jean Baptiste, which included sighting the coastline of New Zealand, and passing James Cook’s Endeavour, with neither ship sighting the other due to the bad weather. A wooden ship’s anchor and a New Zealand headland complete the picture. Over one third of the available surface of the Cook images is from the classic portrait by Nathaniel Dance-Holland, and is complemented by a sextant of the time overlaying a map of the North Island. Dumont d’Urville’s image is shown centrally within the image. His ship, L’Astrolabe, is shown under sail and rounding a headland, completing the symbolism is a crab. The only reference that might explain the crab is the fact that D’Urville collected biological samples on his voyages. D’Urville is also celebrated on the stamps of the French Antarctic Territory. The variety of formats and extensive use of indigenous symbols move the stamps from being simple mirrors into the lens category, for the interested viewer. The explorers featured cover the full millennium, from the years 1000 to 2000. The indigenous Māori are not again featured in this series of stamps.

In subsequent years the series of stamps to celebrate the millennium was continued, although the events celebrated are those of the past 100 years: 1998, A New Beginning, featuring past waves of immigrants, 1998, Urban Transformation, showing then and now photographs across the twentieth century, 1999, Nostalgia, a representation of the icons of New Zealand, 1999, Leading the way, significant events with New Zealand participation and 2000, First to see the new dawn. The stamps use both portrait and landscape layouts to tell their message and are consistent in size, with each set of six having a
dominant colour. The style incorporates painted and sketched images and, where appropriate, photographs to tell more modern stories. The messages are all mirrors of New Zealand’s perceived realities, including the repetition of the claim that Richard Pearse may have made the world’s first powered flight. Those realities might, however, be lenses to doubters.

The four scientific achievements depicted on the 1999 set of six stamps, Figure 7.3, and within the later miniature sheet, demonstrate where New Zealand believed it was leading the way are: Powered flight (1903), which shows Richard William Pearse (1877–1953) and the claim that he made at least two flights in 1903 before the Wright Brothers in the United States; Splitting the atom (1919) features Ernest, Baron Rutherford of Nelson (1871–1937), the father of nuclear physics; William Hamilton (1899–1978), is recognised as the inventor of the jet boat in 1953; and Sir Edmund Hillary (1919–2008), who with Sherpa Tensing conquered Mount Everest in 1953 and led the New Zealand Antarctic Expedition, 1956–1958, is honoured. The remainder of the set, although not reproduced in the figure, are Women’s suffrage, 1893, and the political implications of a Nuclear Free New Zealand 1987 (Di Somma, 1999, pp. 64–69).

New Zealand Post has used two techniques to show its science leading the way. The physical invention is shown for powered flight and the jet boat, but it is the celebrant scientist who dominates the two other science and technology images. The indices are consistent: the name of the country, the stamp value and the title of the issue. Each stamp also carries a symbol, the map of New Zealand with rays emanating from its position on the globe, with this motif carried forward to its 2000 issue, First to see the new dawn. The designer has incorporated many images to convey the full message, although the celebrant scientist is not named on any of the stamps. We can only presume that New Zealanders know the stories of Richard Pearse, Lord Rutherford, Bill Hamilton and Sir Edmund Hillary. Both of the artifact images show the engineering drawings behind the inventions, quite literally. The atomic symbol, the New Zealand flag, and the words “splitting the atom” provide a context for the Rutherford celebration. The New Zealand flag is also indicated on the Hillary stamp, with an image of Mount Everest and headlines from 1953 newspapers. The other two stamps, women’s suffrage and the declaration of New Zealand as a Nuclear Free Zone, complete the statement that the country claims to have attained the pinnacle of human endeavour for its citizens in the instances documented. The combined effect is mirror although the challenge is issued on each stamp “New Zealand leading the way”. Surely, therefore, all are lenses.
Great Britain

Royal Mail undertook a very different approach to its stamp design for the new century and millennium. Two sets of stamps were issued with the generic title of *Millennium series*. Each month in 1999, a set of four, square postage stamps were issued, described as the ‘tale’ of a featured group of people, a profession or position in society. Some categories were obvious and of interest to this study. The following year, the sets of stamps showed a particular theme. Initially the public proclaimed a dislike for the approach, thinking the stamps dull and uninspired with obtuse images, but time has gilded their reputation for being innovative and embracing the country at the time, as well as being simply different.

Three of the tales are relevant to this case study. They are discussed below with detail provided by the Royal Mail Millennium Stamps 1999 and 2000 Yearbooks (Davies, 1999, pp. 4–9, 16–21 and 48–53; Davies, 2000, pp. 26–30, 58–61 and 62–67).

Figure 7.4 reproduces the stamps from *The inventors’ tale*. The images celebrate: *The Greenwich Meridian*, including John Harrison (1693–1776), the inventor of the first reliable marine chronometer; *Steam power* is celebrated along with James Watt (1736–1819), the image described as robust, muscular and uncompromising; *Photography* is headlined through Henry Fox-Talbot (1800–1841), who initiated the calotype process, with a photographic image of three leaves backlit with rich reds and purples; *Artificial intelligence* celebrates
Alan Mathison Turing (1912–1954) through a sketch of a human head containing ideas. Turing is well known, (so well known that his image is not needed to honour his achievements), and represents computer science. These stamps are all lenses. None of the messages are simple, and all require an explanation to decipher what is being said, for although the title of each stamp is shown (in small text), it is the name of the stamp designer that is given, and not the name of the celebrant.

Figure 7.4: Great Britain, 1999. *The inventors’ tale*. Gibbons catalogue # 2069–2072.

Source: Author’s collection.

Figure 7.5 shows the stamps of *The patients’ tale*. The medical innovations and celebrants are: Vaccination, Edward Jenner (1749–1823), “the father of immunology”. The Jenner illustration is most arresting as the image of the physician vaccinating a child is shown as a pattern upon the side of the cow, an optical illusion that is not immediately apparent. Included in the image is a small phial suggesting the source of the vaccine. Once seen, it becomes an outstanding example of a lens. The image of *Modern nursing care* celebrates the impact of the nursing practices of Florence Nightingale (1820–1910). A penicillin mould illustrates the experiments of Sir Alexander Fleming (1881–1955). We know it is his work that is being acclaimed as the title of the image is given as *Fleming’s penicillin*. Similarly the title *Test-tube baby* explains the message to be one of in vitro fertilisation, examining the research of gynaecologist Patrick Steptoe (1913–1988) and physiologist Robert Edwards (born 1925). In common with all the tales being told, the stamps are all lenses.
Figure 7.5: Great Britain, 1999. *The patients’ tale*. Gibbons catalogue # 2080–2083.
Source: Author’s collection.

Figure 7.6 reproduces the stamps of *The scientists’ tale*. Artist Mark Curtis explores the divide between science and art to illustrate *Decoding DNA*, celebrating the achievement of James Watson (b 1928) and Francis Crick (1916–2004). The imagery investigating *Darwin’s theory of evolution*, counterpoints a limestone fossil of Archaeopteryx, the first known bird, with one of Darwin’s finches. A photograph of a firework sparkler on a turntable has been used to make the appropriate image for the *Rotation of polarised light by magnetism*, honouring Michael Faraday (1791–1867). The Newton stamp, *Development of astronomical telescope*, features an image of Saturn taken using the Hubble Telescope. The designer wanted to make the point that “all aspects of astronomy inextricably relate to Newton” (Davies, 1999, p. 52).

Figure 7.6: Great Britain, 1999. *The scientists’ tale*. Gibbons catalogue # 2102-2105.
Source: Author’s collection.
Science pervades every aspect of life, and there is an orphan stamp within *The travellers’ tale* set issued in February 1999. It shows Captain James Cook and a New Zealand Māori and is described as illustrating Captain James Cook’s voyages. The stamp is reproduced in Figure 6.32.

During the months of 2000, twelve numbered themes were represented with a set of four *Millenium Project* stamps. None of the themes were specifically scientific in emphasis, but scientific images were used within three of the themes. The April 2000 *Life and Earth Project* has an image representing solar sensors. The September 2000 *Mind and Matter Project* features an x-ray of a hand holding a computer mouse. And the October 2000 *Body and Bone Project* features a magnified hen’s egg. (Davies, 2000, pp. 26, 58, 62). These stamps are shown in Figure 7.7.

![Figure 7.7: Great Britain, 2000. Three stamps from Millennium Projects. Gibbons Catalogue # 1453, 2164 and 2169. Source: Author’s collection.](image)

Criticism of the millennium issues of 1999 and 2000 was widespread and filled the letters to the editor sections of a wide range of British publications. None the less, the issues fared well in the Royal Mail its annual favourite stamps poll, conducted through its monthly *Philatelic Bulletin*. The poll invitation is made in the December issue, with results published the following April. The published results show that the 1999 issue 64p stamp from *The scientists’ tale* celebrating Isaac Newton and the Hubble telescope was the favourite. Second favourite scientist was the 26p Charles Darwin stamps showing a modern bird standing over a fossil reptile. The miniature sheet described as *Millennium timekeeper* received no votes. Possibly the symbolism was lost on the general viewing public. *The scientist’s tale* was voted the Bulletin readers favourite set of stamps, with *The settlers’ tale* coming second. *The inventors’ tale* and *The patients’ tale* did not poll favourably, receiving one-eighth the votes of the winner (Philatelic Bulletin, 2000, p. 237). In results from the 2000 poll, the *Millennium projects* elicited fewer voters than in the 1999 poll, and the three science-based images shown in Figure 7.6 made no significant impact, with the *Tree and leaf* and *Spirit and faith* sets taking the first two places (Philatelic Bulletin, 2001, p. 244).
Having looked at the millennium issues and some of the reactions to it, it is appropriate to review what Royal Mail set out to achieve with these stamp issues. In the introduction to its annual yearbook, *Royal Mail Millennium Stamps, 1999*, it is stated that:

... to mark the Millennium, Royal Mail issued its most extensive and ambitious stamp programme by far, a unique collection of 48 stamps by 48 diverse image-makers, who visually interpreted the past 1,000 years of British history (Davies, 1999, p. 28).

The rationale given for the selection of 12 representative tales was the idea of putting people first in order to make the shared past emotive and relevant. As Jeremy Black, Professor of History at Exeter University, writes:

There was method in the Millennium madness. This is an exciting account of our shared past. The experience of our history, an attempt to move beyond political history, a public project worthy of the Millennium. Let stamps show you history. After all, more people in Britain saw these stamps in 1999 than read history books (Davies, 1999, p. 28).

The designs of the 12 tales are also discussed in the yearbook (Davies, 1999, pp. 54–55), which states that the Stamp Advisory Committee (SAC) was asked to consider the concept of using 48 different artists to interpret the issue. Committee member Alan Livingstone notes that “stamps are an important indicator of national attitudes and national aspirations and the SAC is a vital testing ground” (Davies, 1999, p. 55).

One year later, the 2000 annual yearbook explained the choice of subjects and designs for the issues of 48 of the total of 96 stamps that comprise the millennium issue. The introduction to the second book is titled “How to mark the Millennium (part two)” (Davies, 2000).

The stamps in 2000 celebrate both the Millennium and the massive efforts that have taken place to create four dozen exceptional projects. Together, the two different but complementary sets of 48 stamps constitute Royal Mail’s own monument to the millennium. (Davies, 2000, p. 2)

One might surmise this self-enthusiasm to be a response to the public’s general dislike of the project. The rhetoric continues:

It’s the vision, rather than the actuality, of the multifarious projects which inspired Royal Mail’s approach. Many were still at planning stages when the stamp programme kicked in, many weren’t physical monuments so much as intangible ideas aimed at bringing communities together. An inventive, symbolic take on the spirit of the chosen projects proved to be the most viable and creating way forward. (Davies, 2000, p. 4)
Photographs were chosen for the project images on the basis “photography is immediate, vibrant and accessible” (Davies, 2000, p.7).

The millenium stamps also won a design award, with the collection granted “Millennium Product” status by the Design Council, awarded to British products and companies which show “imagination, ingenuity and inspiration” as well as “innovation, creativity and design”. Post Office Group Managing Director, Stuart Sweetman, said:

The stamps are The Post Office’s celebration of the Millennium and this award pays tribute to all the superb artists and image-makers who have contributed to this success. Britain, where the postage stamp was invented, has traditionally led the world in stamp design and has broken new ground with this collection.

France

France determined that the new millennium started on 1 January 2001 and looked forward to the event from April 2000 with the issue of the first of four miniature sheets. Like other issuing authorities, France followed a thematic approach (Yvert et Tellier, 2010). Each of these miniature sheets has additional photographic material in the background illustrating the themes. What is interesting about the French millennium issues is that the featured images of science and technology are impersonal, although two iconic space research images are shown.

Sporting Achievements, the first series of the Twentieth century issue, was followed in September 2000 by the second series, Society. French Society in 2000 is represented by images of the Declaration of Human Rights, The washing machine, First man on the moon, Women’s suffrage and Paid holidays. The third series, Forms of communication, was represented by Television, Public relations, The portable telephone, Radio and Multimedia – the compact disc. The forth series, Science, is represented by images of Penicillin, DNA, Lasers, The first man in space and Electronic banking (Yvert et Tellier, 2010, p. 393).

Figure 7.8 shows the five images used by France to represent science in 2001. The first four subjects are shared with other country’s issues, but France is the only authority to highlight Electronic banking. The representation of science is quite complex. Three medical breakthroughs from the twentieth century are featured. At the left, a generic figure, (who looks a bit like Ernst Chain, who co-developed the Penicillin manufacturing process with Howard Florey), pointing to the bloom in Fleming’s petrie dish. A generic figure is embraced by the DNA helix. The next two stamps use photographs to tell their message, the first showing the use of a Laser for eye surgery, a specific application. Three
other countries have shown lasers as a scientific achievement in general terms. Yuri Gagarin is not identified as *The first man in space*, we are expected to know who he is. A module for reentry into the earth’s atmosphere module is also shown. The final image of a hand holding an ATM card takes us into modern *Electronic banking*. The stamps are colourful and carry two service fees, the incoming Euro currency and the French currency value it replaces. All stamps are for local usage priced at the base rate for in country service. Two sets of the five stamps were contained within a miniature sheet entitled “Sciences”. These include a computer mouse, children lining up for a vaccination, a moon rocket and images of space, a medical imaging perspective of a human head, and the most unusual photograph of Einstein with his tongue out.

![Figure 7.8: France, 2001. The Twentieth Century: Science, one set of five from the miniature sheet. Gibbons catalogue # MS3756.](image)

Source: Author’s collection.

Germany and Poland did not issue any special stamps to celebrate the millennium.

**Ireland**

The Republic of Ireland, Éire, celebrated with six themed sets of six stamps with the title of *Millenium issue*, issued from the last day of 1999 to the first day of 2001 (Hamilton-Bowen, 2009).

There were no scientists included in *Issue 1, illustrated famous people* or *Issue II, historic events*. *Issue III, discoveries* recognised Reverend Nicholas Callan (1799–1864), an Irish electrical scientist and inventor of the induction coil, Albert Einstein (1879–1955), and Galileo (1564–1642). Also within the set, as it was issued as a miniature sheet containing two sets of featured discoverers, are the Birr Telescope, linked with the work of William Parsons and Thomas Grubb (1800–1878), Marie Curie (1867–1934), and Thomas Alva Edison (1847–1931) performing an early demonstration of the incandescent light bulb.

Iconic photographs have been used to illustrate Einstein and Marie Curie. A reconstruction and photographic approach has also been taken for the four
other images and all include a millennium symbol with the figure “2000”. All the stamps have been issued at the rate for internal mail within the country. The reconstructions suggest they are mirrors, stating the realities of four significant scientists whilst introducing a lens for the two less-known, (even in Ireland), contributions to science of the Reverend Callan and the Bir telescope. The latter two images shown in Figure 7.9 are quite complex.

Figure 7.9: Ireland, 2000. Three images from *Millennium Issue III, discoveries*. Hibernian catalogue # C985, C980 and C981.

Source: Author’s collection.

*Issue IV* concentrated upon *The arts, Issue V* focused on *World Events*, included the Industrial Revolution and modern communications with a science connotation. The final set, *Issue VI, Journeys*, is self-explanatory. The featured journeymen are Marco Polo, Captain James Cook, Burke and Wills, Ernest Shackleton, Charles Lindberg, and space exploration.

With its own delightful sense of self, the Irish Post Office (An Phoist) issued a sheetlet of 15 stamps picturing the *Hurling Team of the Millennium*, a game unique to the country.

**Russia**

From 1992, the Russian Federation, as might be expected, was a major user of the post to disseminate messages, issuing special stamps to celebrate the turn of the century. The five stamp issues were more conventional and direct than those from Great Britain and the United States. The Russian Federation celebrated the new millennium at the start of year 2001, rather than 2000. The listings below describing five issues are taken from the Stanley Gibbons Stamp Catalogue (Stanley Gibbons Publications, 2010, Part 10).

*Achievements of the twentieth century*, a set of six stamps that featured aviation, computers, genetics, nuclear energy, space exploration (including a portrait
of Yuri Gagarin), and television, was issued in November 1998. The next millennium celebration was issued in March 2000, *The Twentieth Century (first series)*, *Sport*, a set of 12 stamps.

The June 2000 *The Twentieth Century (second series)*, *Science*, was comprised of a set of 12 stamps issued as a miniature sheet with a border containing scientific symbols, and also as separate stamps. Nine images featuring a named scientist and his/her main accomplishment, with three remaining stamps featuring more generic achievements. The range and diversity of the scientists and their scientific achievements is large:

- **Observation of ferromagnetic resonance (1913)**, V. K. Arkadjev (1884–1953), physicist.
- **Theory on plant divergence**, Nikolai Vavilov (1887–1943), botanist and geneticist.
- **Moscow Mathematical School**, Nikolai Luzin (1883–1950), specialist in descriptive set theory.
- **Chemical chain reaction theory (1934)**, N. N. Semyonov (1896–1986), the 1956 Nobel laureate.
- **Charged particles in accelerators (1944–1945)**, Vladimer I. Veksler, nuclear physicist.
- **Deciphering of Mayan language (1930s)**, Yuriy Knorozov (1922–1999), ethnographer.
- **First photograph of the dark side of the moon (1959)**, obtained via Luna 3.
- **Development of quantum electronics (1960s)**.
- **Ethnoliguistic dictionary**, (1955), credited to N. J. Tolstoi.

Figure 7.10 shows four stamps from this issue, *Moscow Mathematical School, Phenoms Theory (1929), Discovery of pogonophora (1975–1977)*, and *First photograph of the dark side of the moon (1959)*. Russia has celebrated only its own scientists in compiling this list. Nine of the 12 images include a sketch of the scientist, given equal prominence as symbols describing his achievement (only males are named). A millennium symbol is shown on each stamp, as are the names and birth dates of the featured scientists, and a short description. The issue includes three stamps of each of four values, showing that there is the intention that the set be used for all classes of service, this is a definitive set with a long shelf-life in the post office. The example shown that does not include a portrait illustrates the mechanism for the “first photograph of the dark side of the moon”, clearly raising awareness for science. The stamps
praise Russian scientists’ ingenuity and are mirrors of the celebrity and lens for the context and a claim for Russian scientific excellence across the broad range of specialities.

Figure 7.10: Russia, 2000. Four stamps from the Twentieth century (second series), Science. Gibbons catalogue # 6928–6929 and 6934 and 6935.
Source: Author’s collection.

The Twentieth Century (third series), Culture was another set of 12 stamps. The next set, number four in the series, featured Technology. This was another set of 12 stamps, issued as a miniature sheet with a border containing appropriate symbols of technology. Similar to the science series, the millennium symbol is shown on each stamp, as is a short description of the technology. The issue includes three stamps of each of four values, again showing that there is the intention that the set be used for all classes of service, another definitive set with a long shelf-life in the post office. The theme and images represent:

- **Medicine**, doctors operating and medical equipment.
- **Construction**, represented by a city skyline.
- **Transport**, with an image of a bus, car and truck.
- **Engineering**, showing a dam, electric pylon and generator.
- **Communication**, telephones, television, rocket and satellite.
- **Space technology**, illustrated by space stations and rocket.
- **Aviation**, with images of civil and military airplanes.
- **Rail transport**, showing steam, diesel and electric trains.
- **Sea transport**, with images of a container ship, sailing ship and a cruise liner.
- **Metallurgy**, represented by a furnace.
- **Oil refining industry**, defined by an oil refinery and truck.
• Mineral extraction, with a montage of a truck, conveyor and drill.

Similar to the science series, the technology theme embraces a diverse range of topics and is a reflection of changes over the immediate past century. Older technologies have been ignored.

Figure 7.11 shows four examples of the issue — Medicine, Engineering, Communication, and Space technology — that show the impact of technology, as a mirror of the effect of more recent technology on everyday life.

Figure 7.11: Russia, 2000. four stamps from The Twentieth Century (4th series) Technology. Gibbons catalogue # 6964 and 6967–6969.
Source: Author’s collection.

China

Of all the countries looked at for this study, China issued the subllest set of “wishful thinking” images for its acknowledgement of the western world’s New Millennium (Scott Publishing Company, 2009). It is worth noting that China continues to use its lunisolar calendar to determine significant event dates. The Kuomintang reconstituted the Republic of China on 10 October 1928, and the Gregorian calendar was officially adopted on 1 January 1929. The People’s Republic of China has continued to use the Gregorian calendar since 1949. The millennium message is here developed through combination of five stamps including the following images:

• The sun, moon, date, time and futuristic buildings.
• The earth and a dove (symbol of peace).
• A map, leaf and an infant’s hands.
• An electronic circuit board, a human head and the earth.
• The moon, stars and a sun dial.

Figure 7.12 illustrates the only technically-oriented image. The background is a printed circuit board. The main picture is a profile of a human head, and a brain is shown that merges into a representation of the earth highlighted by a star image, perhaps representing artificial intelligence. Two horizontal bands of
colour (laser beams, perhaps) cross the profile at the level of the mouth and the throat. This is definitely a hard-edged lens, requiring the viewer to think about the message.

Figure 7.12: China, 2001. Single image from the *New millennium* issue. Gibbons catalogue # 3081.
Source: Author’s collection.

**United States of America**

The United States Postal Services issued 150 special stamps within 10 miniature sheets to celebrate the millennium. Each miniature sheet has a short description of the decade it represents and a background image reflecting the decade. The 150 stamps each have a textual explanation on the back of the stamp of the particular celebration. The images are a mixture of styles, more diverse than was used by Great Britain. My understanding is that this diversity represents a postmodern approach and indeed it has been described as such by critics. If I am to use the expression I need a definition. I offer the following:

One compact definition is that postmodernism eradicates the boundaries between high and low forms of art, and disrupts the genre's conventions with collision, collage, and fragmentation. Postmodern art holds that all stances are unstable and insincere, and therefore irony, parody, and humor are the only positions that cannot be overturned by critique or revision (Wood, Cole and Gealt, 1989, p. 323).

The significant achievements of science and technology start with the Wright Brothers first controlled air flight, with a stamp and a photograph of the event providing the background of the miniature sheet *The 1900s — The dawn of the twentieth century*. As might be expected, the events celebrated included more science examples as the century progresses. The four achievements of the 1990s are reproduced in Figure 7.13 as examples of the postmodern approach to design (Haskins, 2003) used to celebrate the millennium. The four stamps show to *Computer arts and graphics, Return to space, The World Wide Web* and *Cellular phones*. It is not until one turns *The return to space* stamp over to read on the back that one realises that it celebrates John Glenn’s return to space at age 77 on board the shuttle Discovery. The *Cellular phones* stamp shows an African-
American male in a business suit, suggesting that racial inequality in the United States has been overcome by the 1990s. The messages from the 150 stamps are mostly mirrors, with an acknowledgment of scientific advances in each decade.

![Image of stamps from the 1990s]

*Figure 7.13: United States, 2000. Four images from *The 1990s — Cold War ends, economy booms*. Each of these stamps has a textual description on is back, gummed side. Scott catalogue # MS3191. Source: Author’s collection.*

Evaluating the *Celebrate the century* issues, Associate Professor E. V. Haskins of Boston College presented a paper and later published an article looking at the process behind the United States Postal Service millennium issues. As we have seen, the United States Postal Service issued a total of 150 stamps over a two-year period within ten miniature sheets, each containing 15 images reflecting each decade of the twentieth century. The images for the first five decades were chosen by members of the Citizens’ Stamp Advisory Committee appointed by the Postmaster-General. Members of the general public interested enough to pay the postage in order to vote in an open ballot chose the images to represent the second half of the century. A great deal of effort and money was expended to stimulate and sustain public interest in the project, including post offices being turned into mini-museums where mechanical devices counting down to the year 2000 were installed. This was a strong programme of public engagement, including with science, generated through the issue of postage stamps. “*Celebrate the century* was as much about remembering and celebrating as it was about reminding adults and children about what to remember” (Haskins, 2003, p. 1).

**Consistency in the messages told through millennium stamps**

There is a degree of consistency in the subject matter chosen for the millennium celebrations by the six of the ten countries analysed in this study. Perhaps the most surprising thing is that it has been the twentieth century that has been the focus of the messages. Great Britain and Ireland recognised Captain James Cook and his rediscovery of New Zealand in looking to earlier achievements. Ireland
featured the industrial revolution as a world event, along with the Internet, in addition to the explorations of Marco Polo in Asia and the Irish-born Burke crossing of Australia. Germany, Poland did not produce specific issues. China’s issue has had an abstract approach. Australia chose to celebrate the diversity of its people. A table listing the general themes contained in the issued millennium stamps is shown in Table 7.1.

Science and technology were strong themes followed by Russia and New Zealand, with attention paid to local celebrities. Great Britain and France looked at social issues, Ireland looked back beyond the twentieth century to remind us of the contribution of Galileo to world knowledge and the United States celebrated, somewhat belatedly, their space successes.

Table 7.1: Themes contained within the six millennium issues.

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<tr>
<th>Theme</th>
<th>NZ</th>
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</table>

Non-science themes:

| World politics          | ✓  |      |        |      |        | ✓  |
| Womens’ vote            | ✓  | ✓  | ✓      |      |        |    |
| Entertainment           | ✓  | ✓  |        |      |        | ✓  |
| Millennium symbol       | ✓  |      |        |      |        | ✓  |

Source: Author’s research.

Science and scientists are well represented, with all countries identifying science as significant in their review of the twentieth century. France does not identify any particular scientist, and who can explain the image of Albert Einstein sticking his tongue out in the background of the *Twentieth century – third series* miniature sheet? Russia’s set entitled *Science* celebrates both the person and the achievement.

Simple millennium symbols have been adopted by three countries on theirs stamp issued to celebrate the occasion. Russia had two such symbols, shown in Figure 7.14.
World politics are largely ignored in these issues. New Zealand proclaimed its Nuclear Free stance, and the United States issued 15 stamps under each of the general headings of *The 1940s — World War II transforms America* and *The 1990s — Cold War ends, economy booms*. Evidence, I believe, that postal authorities have not used the millennium celebration to send messages of bad news.

Where a country has produced a series of issues to celebrate the change of millennium, they have generally reviewed the twentieth century and its achievements and discoveries. It is an historical theme that has been adopted by six of the ten countries of my study. These countries have chosen to feature science achievements, which provide a framework for my analysis. The science featured has emphasised current pursuits, implying a look to the future, although the United States did divide the twentieth century into a review by decade. Scientists of international fame are featured but the Russian Federation, for one, has managed to find local personalities to illustrate their twentieth-century achievements. It has been a surprise that the changing climate and environmental sustainability do not feature, except in one case, discussed below. Culture seems to have been ignored; perhaps it was too hard to visualise? Great Britain, France and the United States adopted a postmodern approach to design and mixed representation to suit the subject matter.

Only Great Britain seems to have set out to highlight the changing climate and the need for sustainability. The *Project* stamps of the year 2000 “celebrated both the millennium and the massive efforts that have taken place to create four dozen exceptional projects” (Davies, 2000, p. 2). The overall categories of the projects “educate; connect communities or ideas; renew (landscape or spirit); or sustain (environment or culture)” (Davies, 2000, p. 7). I have made the judgement that four of the set of 48 stamps directly reflect a changing climate concern (see Table 7.1) against the theme of environment. A few stamps have been issued prior to

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**Figure 7.14: Millennium symbols used as part of this particular issue of stamps.**

Source: Author’s collection.
2000 that are relevant to the changing climate. These are shown in Figure 7.18 and are described in the associated narrative. The changing climate story is taken up in the next section of this chapter.

Could the British 2000 millennium projects provide a marker for a different approach to the scientific messages conveyed on British postage stamps? It does seem appropriate to ask the question, as the science messages on stamps today increasingly show the context of achievement in addition to showing the celebrant, although the transition from portrait to context has been earlier in other countries.

The use of creative, innovative designs, including postmodern elements and sophisticated production techniques, also suggest that the millennium is being celebrated as a point in time in a modern society looking to the future, rather than as a historical reflection of the past 1,000 years. I do not believe the millennium issues provide a strong evidence of political and cultural awareness. Perhaps the postal administrations, in trying to involve the general public in determining the messages to be told at the time, have lost perspective. The science that is featured is the science of the time with little regard to the future.

Messages about the changing climate

Scientists have warned about the “greenhouse effect” for years. Now it is no longer a scientific nightmare. It has arrived. (Sydney Morning Herald, 1988, cited in Taylor, 2012)

Climate Change is one of the issues of the day. The issues of the changing climate are current today and, in reality, have been so for 30 years. One might expect that the message of the changing climate, sustainability and environmental conservation would be a constant theme on postage stamps. It is not. Berglez, as detailed in in this section, contends that the changing climate is being recognised as an international problem rather than as a localised situation that any one country can solve. This contention will be tested by looking at the stamps of the countries in this study.

Reviewing the data, I am struck by the various titles given to the messages through stamps that draw attention to the environmental situation, such as conservation, pollution and protection of animal and plant species. This section concentrates on the messages that express concern about the changing climate and environmental protection. My hypothesis is that conjecture and challenge on the stamps shown within this section will be lenses. The postal authority has issued these stamps to change public perception and behaviour.
Taylor has studied the subject of framing within a science communication context and has used the *Sydney Morning Herald* citation above as an introduction to her description of her PhD thesis (Taylor, 2012). Her focus is on public knowledge, the ensuing public dialogue, and government action with regard to climate change from the late-1980s to 2001. She has shown that the actual science available, published by the Intergovernmental Panel on Climate Change (IPCC), since 1988 has been consistent, but that the public rhetoric of the Australian Government has varied with the politics of the day. It has been political necessity that has driven (or not driven) government action with regard to the changing climate.

In the late 1980s, Australian Prime Minister Bob Hawke called for action on global warming, as reflected in the Australia Post stamp issue shown in Figure 7.15. The four images and text cover the spectrum of the ongoing concern: *Conserve our soil, Precious pure air, Water is precious and Conserve energy*. The stamp design and format are consistent and form a cohesive whole, although the pre-payment of mail service is from local to international mail. These stamps are strong lenses to promote public changes of behaviour prompted by sophisticated images evoking curiosity in understanding the messages.

![Figure 7.15: Australia, 1985. Conservation of soil, air, water and energy. Renniks catalogue # 887–900. Source: Author’s collection.](image)

In keeping with Taylor’s conclusions about a long gap, between the 1980s and 2000s, in public concern regarding climate change, it would be 19 years before Australia Post again reviewed the changing climate situation, highlighting the importance of renewable energy. The communication from two other Prime Ministers, Paul Keating and John Howard, changed dramatically “from expressing good understanding and a will to take action, to a confused and conflicted debate with clear correlations to the national response” (Taylor, 2012). The four stamps shown in Figure 7.16 illustrate four possible sources of renewable energy but with less of a call for action than the earlier set. The *Renewable energies: solar, wind, hydro and biomass* stamps are named in the
foreground but the theme is shown in a very small font. The images are mirrors of the technologies, with an element of lens, although the environmental message is diluted. The emphasis for the action for change has been lost because of the change in political motivation.

Figure 7.16: Australia, 2004. Renewable energy: solar, wind, hydro and biomass. Renniks catalogue # 2333–2337.
Source: Author’s collection.

After Howard’s 11-year term in office, in 2007, Kevin Rudd’s Labor Government was elected to power. Rudd had previously declared that the resolution of climate change was the “world’s greatest moral challenge”, and one of his first actions was to ratify, on behalf of Australia, the Kyoto Protocol which was adopted by the United Nations ten years in 1997. Australia Post responded to that challenge with the stamp set entitled Living green which was also issued as a prestige stamp booklet with background information text. During 2007–2008, Australia was in drought control mode and the first stamp, Save water, shown in Figure 7.17, was particularly pertinent. All the stamps in the issue were for local service, with the three other prompts being Reduce waste, Travel smart and (again) Save energy. As Ericken et al. assert: “Climate change and its alleviation is the underlying subject of this issue” (Ericksen et al., 2008, p. 32). 2008 was also important in Australian terms as the Garnaut Climate Change Review was published, stressing the urgency and expense of the primary challenge “to end the linkage between economic growth and emissions of greenhouse gases” (Ericksen et al., 2008, p. 32). The images are strong and simple lenses sending a very clear message.
The fourth set in the series (Figure 7.18) celebrates Earth Hour, an Australian initiative in 2007 and now a worldwide event organised by the World Wildlife Fund (WWF). Earth Hour is held annually on the last Saturday of March encouraging households and businesses to turn off non-essential lights for an hour to raise awareness about the need to take action on the changing climate. Australia Post has chosen three animals to represent the fact that all life on earth is threatened by a change in the climate, with design driven by the concept of protection. The leadbeaters possum, shown on the green 55 cent image, is an endangered species in its natural habitat in Victoria. The orangutan, whose image is on the international stamp, is in danger due to the deforestation of Indonesia and Borneo. The third image carries the main semiotic message in that in the context of the three stamps the “owl represents the wisdom of taking timely action against global warming” (Ericksen et al., 2009). This fourth set is the first from Australia Post that embraces Berglez’s concept of space in taking a worldview to tell its Australian message (Berglez, 2012). These Australian stamps confirm Taylor’s basic thesis that changes in political motivation determine priorities in the narrative supporting, or denying, the need for public policy.
New Zealand has yet to issue a stamp with a changing climate message. The most obvious reason for this is the New Zealand Post policy of promoting tourism. It would not be appropriate to associate New Zealand with problems of sustainability through its stamp issues.

Having looked at two countries, one that has featured stamps on the subject of climate change, and one that has not, I now wish to discuss two papers in the public arena to help with understanding the changing climate story.

Berglez, of Örebro University, Sweden is investigating climate change, questioning the ways that politics and political action are represented in media and citizen discourses. One media characteristic he reviews is the multi-level appearances of spaces, political actors, powers and identities in news texts. By “space” he refers to the multi-faceted geography in which changing climate stories tend to look at concerns on a worldwide basis, simultaneously occurring in separate places worldwide (Berglez, 2012).

Schroeder, Boykoff and Spiers (2012) have studied representations in climate negotiations, stating:

Over the past five decades, multilateral institutions and global governance mechanisms have emerged to address these environmental challenges but with mixed success. To avert irreversible global change, fundamental and radical transformations of existing governance practices are now needed. Indeed, state function has shifted from “a role based in constitutional powers toward a role of coordination and fusion of public and private resources” where states have become “increasingly dependent on other social actors” (Schroeder Boykoff and Spiers, 2012).

In the next section I build upon the Australian experience to trace how the postal authority has represented the changing climate and environmental protection through its stamp issues and show that changing climate messages on stamps tend to be universal and not specific to a particular country.
Great Britain

Figure 7.19 shows a set of four stamps issued by Royal Mail in 1992. Children’s competition paintings, sponsored through a well-known BBC Childrens’ Television programme, have been used as the images with the subject representation explained in text. The four issues raised are Acid rain, Ozone layer, Greenhouse effect and Bird of hope. The Berglez international dimension, space, is apparent. A review of the issue includes the observations that:

Green issues ignored geographical and national boundaries … Children were as aware of — and concerned about — environmental problems affecting far-away countries as they were about issues close to home. The message to their elders was unmistakable — do something about it now, because by the time we are old enough it may be too late (Shackleton, 1992, p. 30).

In 2000, Royal Mail issued 48 stamps, of which one billion were printed, with the theme of “Projects”, which covered the UK at the time of the Millennium.

Projects were ordered into four broad categories according to whether they primarily: educate; connect communities or ideas; renew, (landscape or spirit); or sustain (environment and culture) (Davies, 2000, p. 4).
The Great Britain millennium issues, two years each of 48 stamps embracing a wide spectrum of issues, is examined separately above. Not since 1992, (Figure 7.18), had Great Britain sent so many themed messages that embraced such a wide spectrum of issues, some of which directly and indirectly send a message about protection of the environment. Figure 7.20 shows the complete set of 48 stamps for 2000, four stamps in each theme were issued every month of the year.

![Image of Great Britain Millennium Project stamps](image)

**Figure 7.20: Great Britain, 2000. The complete set of *Millennium Project*. Gibbons catalogue # 2125–2132, 2134–2145, 2148–2159 and 2162–2177.**

*Source: Author’s collection.*

**France**

France recognised the need for conservation of natural resources quite early, using a worldwide perspective with a stamp issued in 1978. But, similar to other
countries, France had a 21-year gap before returning to the subject. The 2005 *Environmental Charter*, an initiative of President Jacques Chirac is celebrated on the second image in Figure 7.21. The charter explains:

In their battles against climate change, genetically modified organisms, and nuclear reprocessing, the French now enjoy the support of an “environment charter” amended to the country’s constitution. “Decisions made responding to today’s needs should not compromise the capacity of future generations and other populations to satisfy their own needs,” the document’s preamble proclaims. In 10 articles, it then outlines a series of environmental rights and responsibilities incumbent on the French people, ranging from the right to access information about the environment to an obligation upon political leaders to promote sustainable development (grist.org, 2005).

The 2010 issue incorporates the image of Marianne, the iconic mother-figure of France, supporting the need for *Water protection*.

![Figure 7.21: France, 1978, 2005 and 2010. Energy conservation; Environmental charter and Water protection. Gibbons catalogue # 2269, 4110 and WNS # FR021.10. Source: Author's collection.](image)

With an initial set issued in 2008 entitled *Sustainable ideas*, the French postal administration has embraced the preservation theme. Examples of three of the set of ten stamps are shown in Figure 7.22. Not all the images are science stamps by my definition, but they do show thoroughness in pursing the concept. A world map is included with the admonition that the whole world is a site worth preserving, although the text suggests the world should be preserved for tourism. The stamps have been produced as self-adhesive items. This set shows the service level to be provided, priority letter up to 20 grams, as France Poste follows other authorities in defining the service, for which Poste take a responsibility in perpetuity, at today’s price.
The 2010 issue, *Water protection: Environment and conservation* is a long set of 12 stamps, again in the self-adhesive format and lettre prioritaire, three of which are shown in Figure 7.23. The design for each image has a three-dimensional icon emerging from a two-dimensional surface, emphasising a thought-provoking strong impression. All are excellent examples of a lens seeking to influence water conservation.

**Figure 7.23:** France, 2010. *Water protection: Environment and conservation.* WNS catalogue # FR022-033.10.
Source: Author’s collection.

### Germany

West Germany, has been the most consistent country in producing stamps with the message of conservation, and have issued the earliest message on the theme (Schroeder, Boykoff and Spiers, 2012). The images in Figure 7.24 show the German Environmental Conference emblem and highlight concerns with *Waste, Water, Noise* and *Air.*
During the 1980s, West Germany issued, almost annually, a stamp related to a conservation theme. The United Nations’ Intergovernmental Panel on Climate Change issued its first report in 1990. In 1995 West Germany proclaimed the *First Conference of Signatories to the General Convention on Climate, Berlin*, as shown in Figure 7.25. The other images contained within Figure 7.25 are examples of strongly contrasted styles from the period of West Germany and reunified Germany from 1991.

**Figure 7.24**: West Germany, 1973. *Protection of the environment.* Gibbons catalogue # 1666–1669.  
Source: Author’s collection.

**Figure 7.25**: West Germany 1980, Germany 1996 and 1995. *Nature conservation; Environmental protection: preservation of tropical habitats; First Conference of Signatories to the General Convention on Climate, Berlin.* Gibbons catalogue # 1951, 2626 and 2729.  
Source: Author’s collection.
Figure 7.26 contains an image that links environmental protection with renewable energy.

Figure 7.26: Germany, 2004. Environmental protection and renewable energy. Gibbons catalogue # 3252.
Source: Author’s collection.

Reunified Germany issued another distinctive set in 2004, shown in Figure 7.27, which features five climate zones. What makes this set distinctive is the fact that the complete set of images is included on each stamp, the main climate zone being considered and the four others in a much smaller scale on the side that incorporates the service price. The stamps also incorporate a premium upon the postal rate. The locations (climatic zones) are worldwide, emphasising Berglez’s notion of universal imperatives for the environment. The locations are: Greenland (arctic), Tibet (mountain), Mecklenburg-vorpommern in the German Baltic (temperate), Sahara (Desert) and Galapagos Islands (tropics).

Figure 7.27: Germany, 2004. The environment: 5 climate zones. Gibbons catalogue # 3293–3297.
Source: Author’s collection.
Ireland

The Irish stamp issues of the 1970s were highly stylised. The 1970 issue shown in Figure 7.28 uniquely celebrates *European Conservation Year*. No other European authority has chosen to represent this early acknowledgement of the need for conservation.

![Figure 7.28: Ireland, 1970 and 1979. European Conservation Year and Energy conservation. Hibernian catalogue # C143–144 and C282. Source: Author’s collection.](image)

Again we witness, through the Irish Post Office, the acknowledgement of a problem brought to the public attention that is then ignored for 32 years. Renewable energy is the theme of the 2011 set shown in Figure 7.29. The images feature the technologies of solar, wind, wave, hydro and biomass on self-adhesive stamps.

![Figure 7.29: Ireland, 2011. Renewable energy technologies. Hibernian Catalogue # not yet assigned. Source: Author’s collection.](image)
Poland

Poland has issued four stamps with general messages of conservation and the changing climate since 2001, three of which are shown in Figure 7.30. The Polish 2001 Europa, water resources image imaginatively addresses a worldwide problem. The United Nations Conference stamp again incorporates the earth to illustrate the changing climate is a world issue.

![Image of Polish stamps](image)

Figure 7.30: Poland, 2001, 2007 and 2008. Europa, water resources; Earth Day; and United Nations Conference on Climate Change, Poznan. Gibbons catalogue # 3910, 4265 and WNS catalogue # PL062.08.

Source: Author’s collection.

Russia

The Russian Federation has published stamps to send messages and a concern in the changing climate since 1989. The first set of three (Figure 7.31) is titled Nature conservation, with world maps indicating areas of concern for each of the environments that constitute the images shown. The environments are Forests, Arctic preservation and Anti-desertification. I have classified this set as being appropriate to an analysis looking at the changing climate as the maps define the areas of concern on a worldwide basis. The se-tenant maps and text mean that these are focused lenses in intention. A worldwide concern is shown confirming Berglez’s contention that this is a feature of the representation of the changing climate message.
The next issue (Figure 7.32), from 1991, sends messages related to Environmental protection by presenting specific areas of Russian environmental concern and naming an animal threatened by the changing climate: the Bell Tower in Volga and the sturgeon; Lake Baikal and the sable; and the dried bed of the Aral Sea and the saiga. The saiga is a critically endangered antelope which originally inhabited a vast area of the Eurasian steppe zone. The initial reaction to the two outside images, a view of a water-enveloped city and ships stranded in a desert environment because of desertification, is confronting. These are strong lenses focused, for the first time, on a local basis.
Russia celebrated World Ozone Layer Day, and the 10th anniversary of Montreal Protocol on the reduction of use of chlorofluorcarbons with a single stamp in 1997 (Figure 7.33). The image shows radiation, represented by straight lines hitting the earth. This day was proclaimed in 1994 by the United Nations General Assembly and it is celebrated annually. The image here is a dramatic lens.

The Russian Federation postal authority once again features a worldwide map to mark the World Climate Change Conference held in Moscow in 2003 (Figure 7.34).
The 2005 set shown in Figure 7.35 invoked the description of earth as seen by the Russians from space as “the light-blue planet” and features water, describing the theme of water preservation through five dramatic photographs without narrative text.

![Image of the 2005 Russian stamp set](image)

**Figure 7.35: Russia, 2005. The Earth, light-blue planet. WNS catalogue # MS7369.**
Source: Author’s collection.

### China

As discussed in previous chapters, China issued stamps that looked outwards from the 1980s, but its first stamp projecting an environment message was issued in 1992 (Figure 7.36), celebrating the 20th anniversary of a United Nations’ initiative. China is a signatory to the Kyoto Protocol, but as a non-Annex I country is not required to limit greenhouse gas emissions. The People’s Republic of China is an active participant in climate change talks and other multilateral environmental negotiations, and claims to take environmental challenges seriously, although it is pushing for the developed world to help developing countries to a greater extent, as it argued at the 2009 Copenhagen Conference of the United Nations Framework Convention on Climate Change.

The English name of the issuing country is shown on stamps from 1992 as China frees itself into a global economy.
One would have to think that China is committed to protecting the environment, with its issue of a set in two parts during 2002–2004, which includes one really interesting message, that of maintaining a low birth weight. I cannot think of another country that would promote this as an ideal. Shown in Figure 7.37, series one features a global perspective on **Maintaining low birth weight**, **Forest production**, **Mineral resources protection**, **Air pollution prevention**, **Water resources protection**, and **Ocean protection**. Series two features **desertification control and prevention**, and **biodiversity protection**.

China celebrated World Earth Day with a uniquely round stamp with four star-shaped perforations in the perforated circle (Figure 7.38). The main image is the globe being cared for by multicolored hands. Also included within this figure is a 2010 issue featuring two ambitions: **Low carbon development** and **A green future**.
United States

The United States is the only country in the world not to have ratified the 1997 Kyoto Protocol, despite having recognised the need to advise the public of anti-pollution concerns as early as 1970. Since then, there was a gap of 25 years before the changing climate again featured on US postage stamps. Children’s paintings have been used in 1995 and 2001 issues (Figure 7.39) suggesting, perhaps, that it is the younger generation who will be affected by the impacts of the changing climate and that their involvement is crucial. The images used in the earlier issue are Earth clean-up, Solar energy, Tree planting and Beach clean-up. The final stamp here, Stampin’ the future is from a set of four titled Loving the world.

Figure 7.39: United States, 1995 and 2001. Earth Day and Stampin’ the future. Scott catalogue # 2951–2954 and 3415.
Source: Author’s collection.
Summary of stamps that have included messages representing the changing climate and environmental protection

Figure 7.40 is a bar chart plotted to show the number of stamps that have been issued since 1970 classified as having a changing climate or a sustainability message. As noted earlier, has been West Germany and, more recently, reunified Germany that has kept the message consistent, with a specific issue in 13 of the 21 years between 1980–2000 and 24% of all stamps with these messages from the ten counties studied. As might be anticipated, the number of changing climate and environmental protection stamps increases significantly after the millennium.

Figure 7.40: The number of stamps issued over the past 50 years with the subject of the changing climate and environmental protection.

- a) 1970: First world environment Day.
- b) 1975: Discovery of damage to the ozone layer.
- c) 1979: World Climate Change Research Programme launched.
- d) 1987: The UN Montreal protocol on “Substances that deplete the Ozone Layer”.
- e) 1990: 1st IPCC report.
- f) 1997: Kyoto Protocol signed by 37 countries, including the European Union.
- g) 2001: US President Bush denounces Kyoto.
- h) 2007: 4th IPCC report. Ex-Vice President Gore and IPCC win Nobel Peace Prize. Australia signs the Kyoto Protocol. The European Union confirms its environmental policies with the Lisbon Treaty.

The red arrow reflects the increase in stamps that tell the message of the changing climate since 2000. They have been issued, as illustrated above, from Australia (3 sets, 11 stamps), Germany (9 issues, 13 stamps), Ireland 2 issues in 2011 (seven stamps), Russia (3 issues, seven stamps), and China (4 issues, eleven stamps).

Source: Author’s research.
Postal authorities have publicised the prevailing scientific and public concern over climate change for 50 years and seemingly ignored the issue at times when government imperatives have changed, as is shown by Taylor (2012).

Germany has been the most consistent messenger, publicising the changing environment with issues — mostly single stamps — during 9 years between 1987 and 2011. France has issued the most stamps, with long sets in 2008 and 2010. The long gaps of inactivity between postal administrations first showing its concern and the subsequent issue seems to follow the Australian example highlighted by Taylor in her review of the changing political emphasis on the changing climate over time.

Every stamp has used science in abstract to convey its message. No image is personalised, with the exception of three of the US childrens’ paintings that include generic figures. Human hands are shown by three countries, signaling that the solution is in our hands. Photographic images are a common thread in drawing attention to the changing climate.

All the images contrive to send a message to make us aware of the problem. As pointed out in the study of the millennium stamp issues, the changing climate was largely ignored and was not, it appears, a political priority in 2000, despite the unchanging IPCC Reports and the Kyoto Protocol.

The stamps examined within this changing climate and environmental protection section are all strong lenses.

Berglez’s contention that the changing climate is seen as a worldwide problem, taking place in multifaceted geography in which interrelated processes and practices occur in separate places worldwide is proven through the use of maps and the earth shown as a globe by almost every issuer. The problems are acknowledged, but not necessarily accepted through policy changes and action by individual countries.
This text taken from The Representation of Science and Scientists on Postage Stamps: A science communication study, by Chris Yardley, published 2015 by ANU Press, The Australian National University, Canberra, Australia.