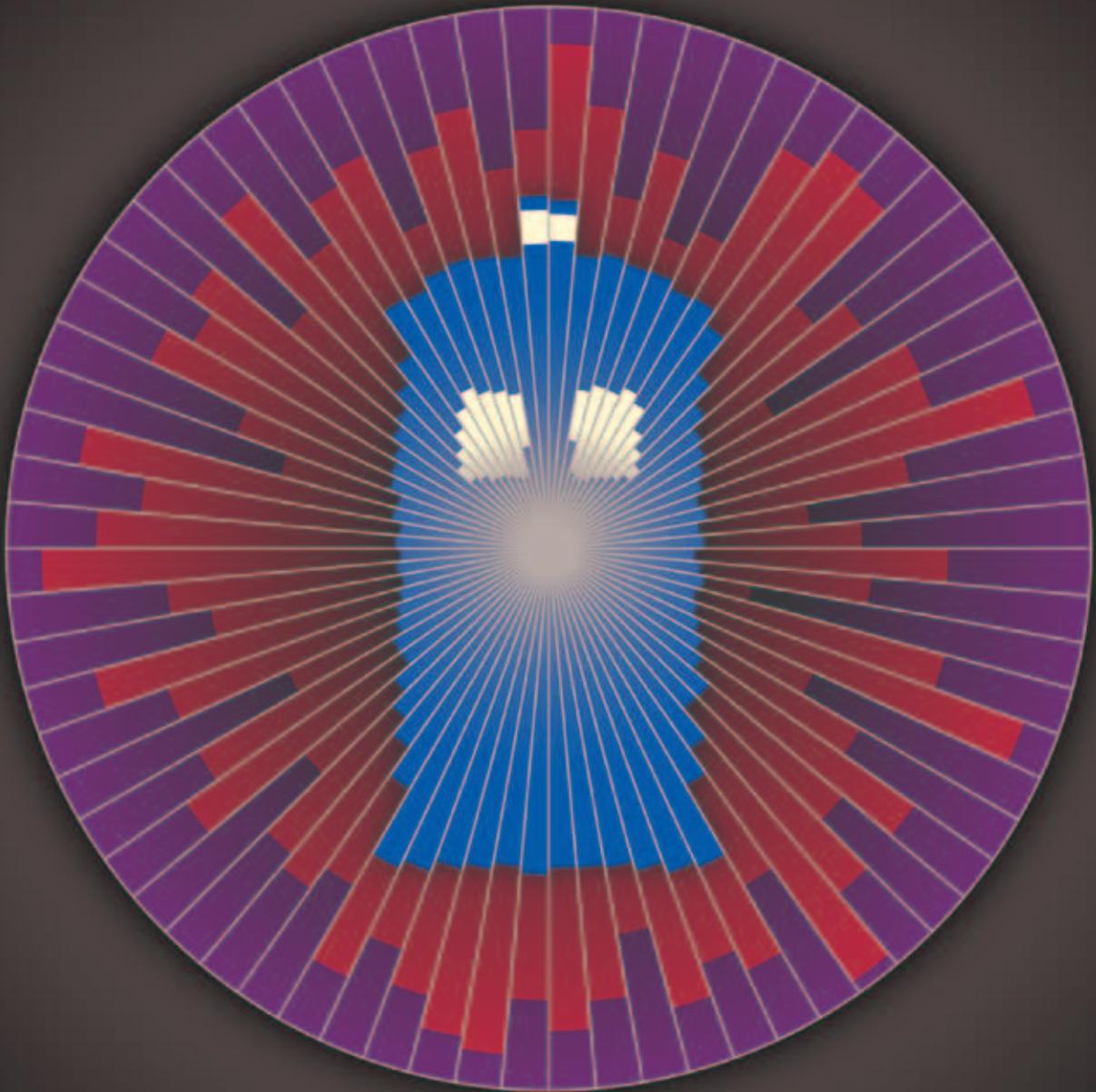


TIME & SPACE VISUALISER



PAUL SMITH

TIME & SPACE VISUALISER

The story and history
of **Doctor Who** as
data visualisations

Designed & written by
PAUL SMITH



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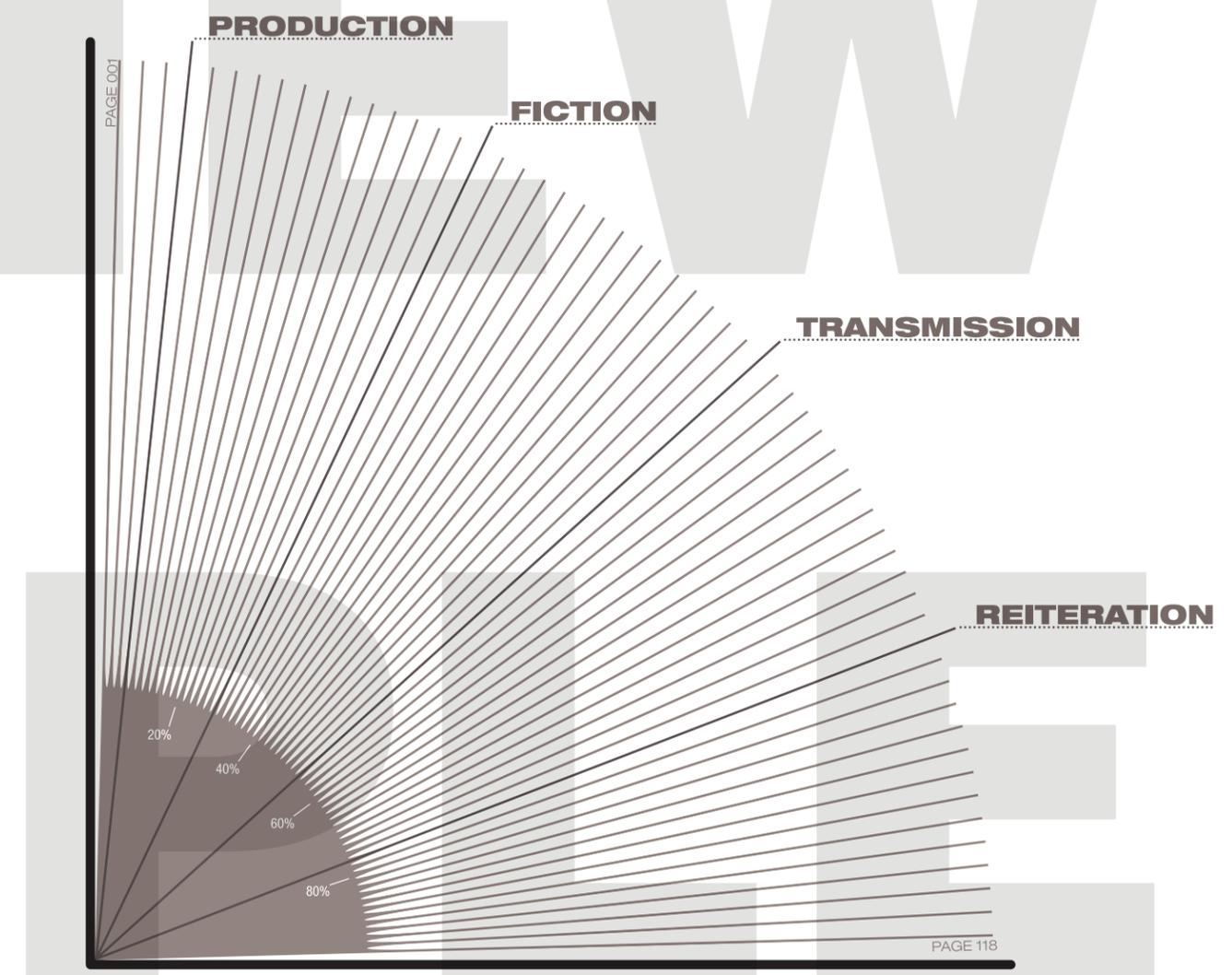
With thanks to David J Howe, Jon Preddle, Paul Scoones and Tony Smith

REVIEW

SAMM

■ About the author

Paul Smith is a graphic designer and production editor with more than 20 years' experience in the business press. Much of his work has involved presenting technical information and data in a clear fashion for easy understanding by the readership, but this is the first time he has applied those techniques to the facts and fiction of the BBC television series *Doctor Who*. His devotion to the programme goes back to childhood and has frequently sought a creative outlet. In his teens he edited the fiction fanzine *The Black Pyramid*, began designing alternative covers for the *Doctor Who* DVD range in 2001 (ongoing at www.velvet-jacket.com), and in 2011 he wrote, illustrated and produced *The Wonderful Book of Dr Who 1965*, a tongue-in-cheek pastiche of BBC Books' *Brilliant Book of Doctor Who*. It was followed this year by a light-hearted update of the 1973 *Radio Times Doctor Who 10th Anniversary Special* to celebrate the modern series.





INTRODUCTION

■ The world is full of information

It may seem that our lives are dominated by information now more than ever, particularly since the digital revolution, but they have always been so. From knowing where and what time of year mammoths are easiest to hunt, to finding which supermarket has the lowest price for frozen beefburgers, information is a product of the way humans codify the world around us. But how we categorise, interpret and represent that information is crucial to its utility and value. Knowing that mammoth herds head south as winter approaches is of little use if you don't know which direction 'south' is or can relate 'winter' to increasing coldness. And now, when our every online action produces reams of data about our likes and habits, what we buy, where we go on holiday and who our friends are, companies are battling to collate all this information to better target their wares at a more receptive audience.

Much of that information is in the form of numbers (and I don't just mean ones and zeroes): how many people do this, the number of times they watch that, how much someone spends on those. But to most people raw numbers are a difficult form to grasp. We can tell if a given quantity of something is bigger or smaller than the equivalent at an earlier point in time, but understanding the relative difference or the rate at which it's changing is harder just from looking at the numbers. We're much better at dealing with visual forms of information. Tell someone they eat 8,000 calories too much each day and they probably won't be able to relate to the fact, but show them exactly how much food that represents and they'll immediately understand the need to cut down. From the first people who translated measurements of distance and direction into maps and atlases, to Dr John Snow taking the tallies of cholera victims and plotting them on a street map of London to pinpoint the source of the disease, and Harry Beck rendering the route of the London Underground based on electrical diagrams, presenting data visually makes it easier to comprehend, interpret and apply.

One particular source of a surprising amount of information is the television series *Doctor Who*. While it may not be knowledge that's of much interest or use to most people, even those who enjoy watching an episode on a Saturday evening, there is a lot of it. With the programme approaching its 50th anniversary — an incredible achievement for any TV show (and even during the years when it wasn't on television it continued in the form of books, videos, magazines, plays, comedy acts, computer games and more) — there is a wealth of data not only about the places, people and monsters the Doctor has encountered on screen, but also how the episodes were produced, who starred in them, why particular creative decisions were made, where filming took place and what made it such a popular, iconic and enduring programme. And to a certain type of devotee of *Doctor Who* (I know because I'm one of them), this information is something to be accumulated, memorised (or at least held in books and magazines) and comprehended. By knowing as much factual detail about the show as we can, perhaps we can come to understand what it is that makes it speak so deeply to us.

But as we've seen, people aren't very good at understanding numerical and textual data. We prefer to picture it in a way that we can more readily relate to and appreciate any connections and correlations. That is what I've attempted to do in this book. I have taken facts from the full history of *Doctor Who* and visualised them in ways that are, I hope, informative, enlightening, unusual or simply eye-catching. Whether you're a follower of the Doctor's adventures or not, the aim is to show that data needn't be just numbers and tables, but can be treated more pictorially, and that by doing so we can more easily see what that information means and what conclusions can be drawn.

■ How big is the 'Whoniverse'?

Doctor Who is more than just a television programme. It may have begun that way but it has since spread into pretty much every other form of media, adapting and expanding as it goes. Within two years of the first episode's broadcast, the series appeared in book form. Three early serials were adapted into novels, one in particular recasting large parts of the original screenplay to detail events that were never seen on television. Shortly afterwards the first annual appeared, telling completely new tales about the Doctor. By then there were also two regular comic strips in production, one featuring the Doctor and the other presenting a history of the Daleks. In the mid-1960s the concept was translated to the cinema as two movies starring Peter Cushing as a human Doctor who has invented his own TARDIS. There were stage plays in the 1960s, 1970s and 1980s, ever more sophisticated computer games as the technology has advanced over the last three decades, and when the programme was no longer being made by the BBC for television, fans produced their own video and audio adventures. And throughout the series' history, there have been books and, latterly, websites cataloguing and analysing these myriad narratives.

This book, however, focuses on information solely from the television series as first shown on the BBC from 1963 to 1989 and 2005 onwards (up to "The Angels Take Manhattan" in 2012), in order to be accessible to the widest audience. While the Doctor's escapades in other media have been successful in their own right, the television series is the core output that is seen by the largest number of people, and the only one whose 'authenticity' is accepted by all. Not all information detailed is applicable to all eras of the series, so where reference is made to the 'original' or 'Classic' series, this refers to the initial 26-year run, while the 'revived' or 'New' series refers to *Doctor Who*'s 21st Century comeback, which has been explicitly presented as a continuation of the original rather than a separate reinterpretation or reboot of the concept. For those readers less familiar with the televised history of *Doctor Who*, the graphical guide at the start of the first section of this book will fill you in on the basics.

■ Visualising Time and Space

The book is divided into four sections. The first, **Production**, deals with information about the making of *Doctor Who* as a television programme, looking at details of its recording and the contributions made by the various production teams. The **Fiction** section examines data from within the narrative of the show, such as what planets the Doctor has visited, the lives of the companions he travelled with, and the plans of the villains and monsters they encountered. **Transmission** investigates the patterns in the way the programme was broadcast, its episodic structure and whether those who were watching liked what they saw. Lastly, **Reiteration** looks at how *Doctor Who* has lived on beyond its initial airing, from UK repeats to showings overseas, and from book adaptations to archival releases on video and DVD.

Every graphic should tell a story by itself, particularly to those ardent fans who have the underlying information already stored in their brains. For people who aren't quite so informed, each chart is accompanied by notes detailing the background and context of the subject under consideration, an explanation of how the data was compiled and discussion of the results and what they may reveal. Some highlight previously unconsidered relations between factors, some overturn long-held assumptions among fans, and some simply provide a new way of interpreting known facts. My primary goal has been to find as many different ways of visualising data as I could to show there are lots of options beyond lists and tables.

In compiling the data used in this book much has come from my own knowledge as a follower of *Doctor Who* for more than 30 years, as well as new research and viewings of the episodes themselves. But inevitably many of the facts about the programme, particularly such things as transmission information and releases in other media, are sourced from or corroborated using some of the innumerable reference books and websites about the series. Mostly these were general programme guides, but where I have relied on specific sources for a chart these are acknowledged in the text.

All collation, application, analysis and interpretation of the data is my own, however, including responsibility for verification and any errors arising from my calculations. I trust that the information presented here is true and accurate, but if you do spot any mistakes please contact me via the website given at the front of this book so it can be corrected for any future editions. Similarly, in some cases subjective decisions have been required when categorising certain aspects of the programme, and I welcome any discussion and debate of my choices.

■ Seeing the whole picture

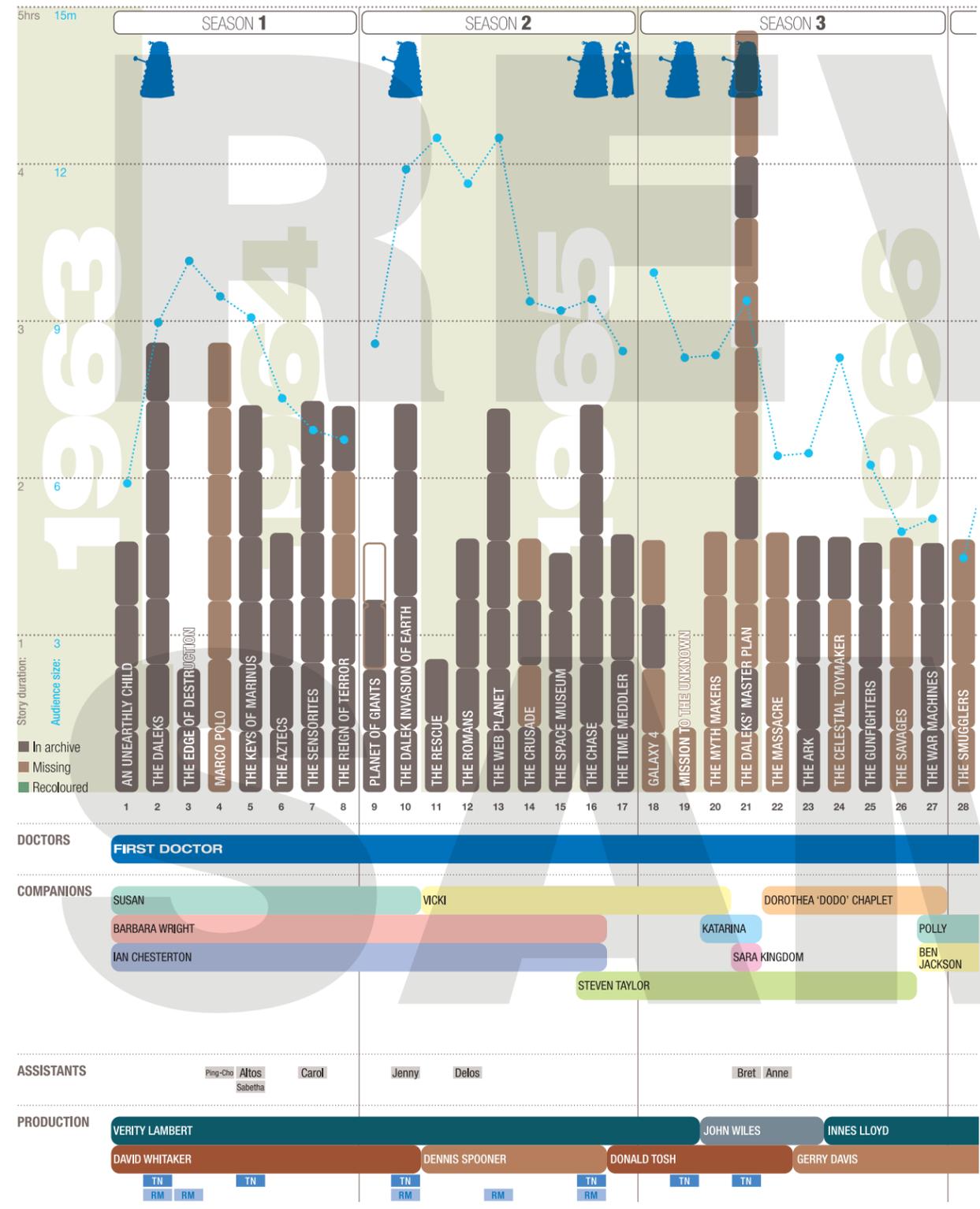
Doctor Who is probably the most researched and analysed television series ever, having as it does an almost unique power to captivate a core portion of its audience and inspire them not only to imagine but to want to know all about this incredible programme. The amount of information already recorded and still being discovered is staggering, but the more we learn the harder it becomes to see what, if anything, it all means. I hope this book shows there are ways to present this knowledge that make it easier to digest, simpler to understand and more intuitive to engage with. And that goes beyond the specifics of one media property: all information on any subject can be depicted in a way that makes it more attractive and applicable.

The volume of data in the world can only increase, and as more of our personal and working lives rely on the digital realm much of this data is being gathered and stored for the first time. Rather than let it sit ignored on numerous servers, we can use this data to better understand our interactions and impact on each other and the world around us. But to avoid being overwhelmed, we need to represent the information in a way that allows us to envisage what it means to us. There is a growing field of data visualisation and infographics that seeks to find new ways of appreciating all forms of information — a quick search online will lead you to numerous examples. My area of appreciation is *Doctor Who* — what's yours?



PRODUCTION

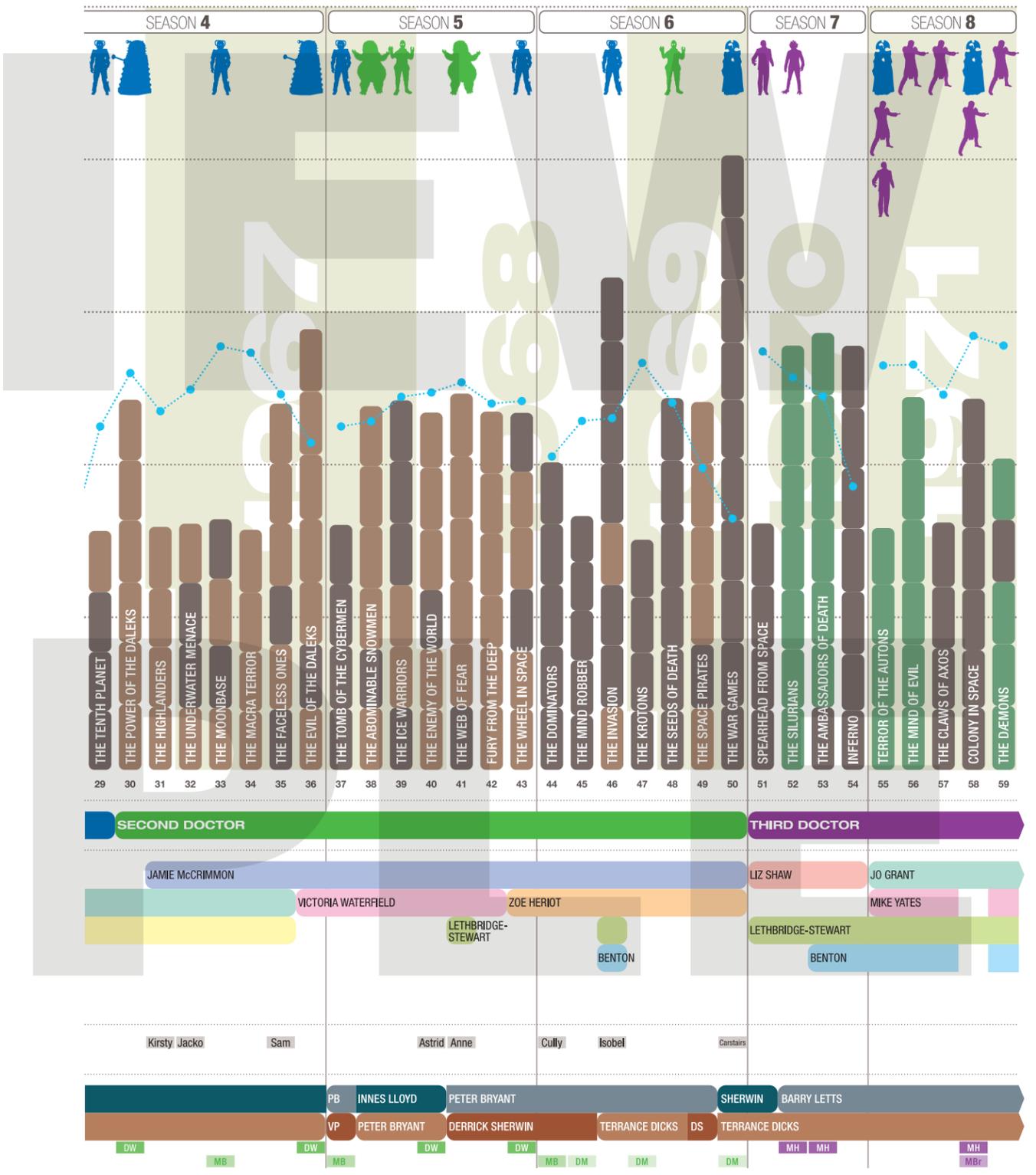
ALL OF TIME AND SPACE



■ Everywhere and anywhere. Everything that happened or ever will. Where do you want to start?

While this book isn't a typical guide to *Doctor Who*, it may be handy to know a little about what stories were shown when, who was in them, and which production teams made them. So starting as we mean to go on, here is that data presented visually, rather than in the commonly seen tables or lists.

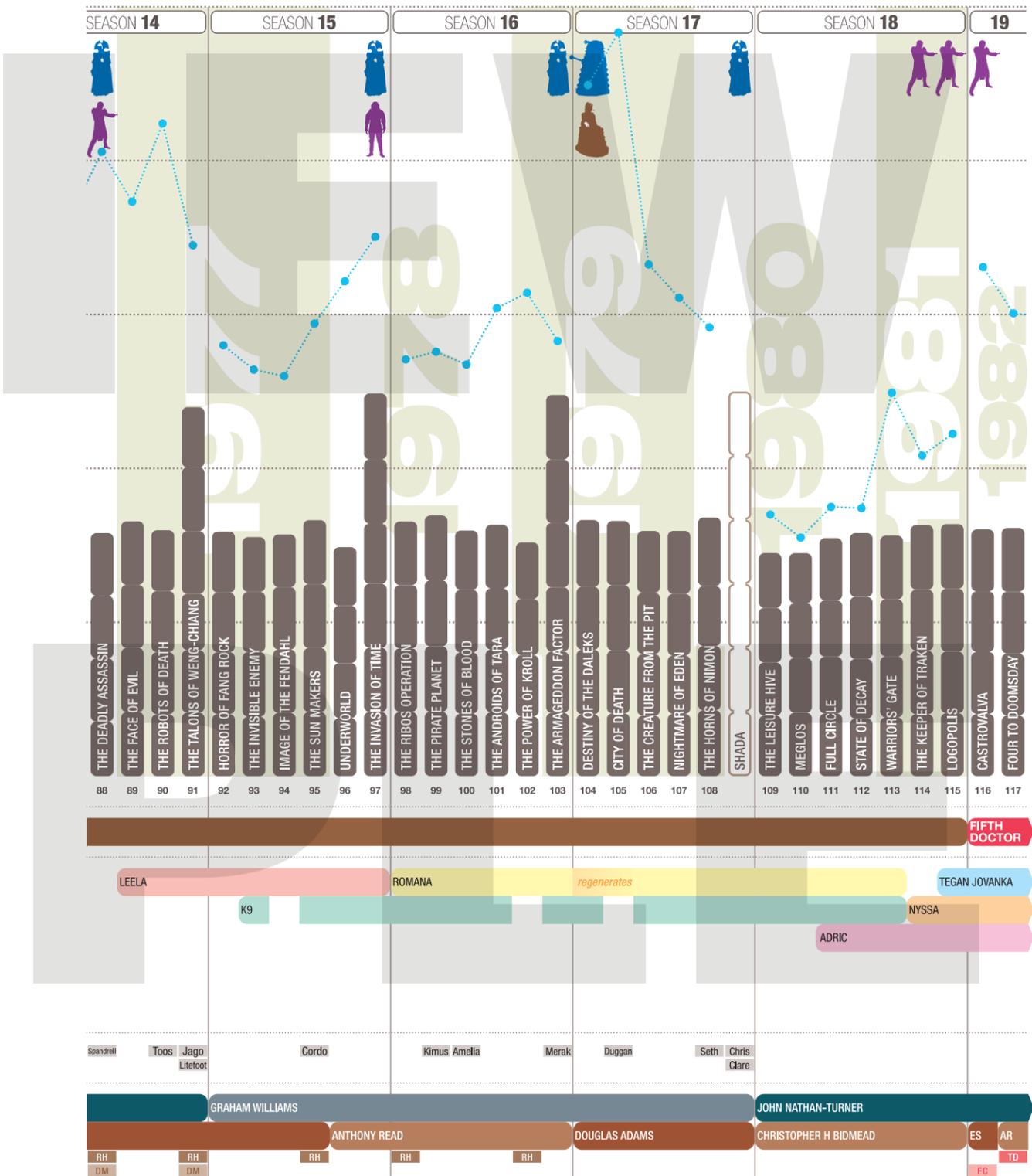
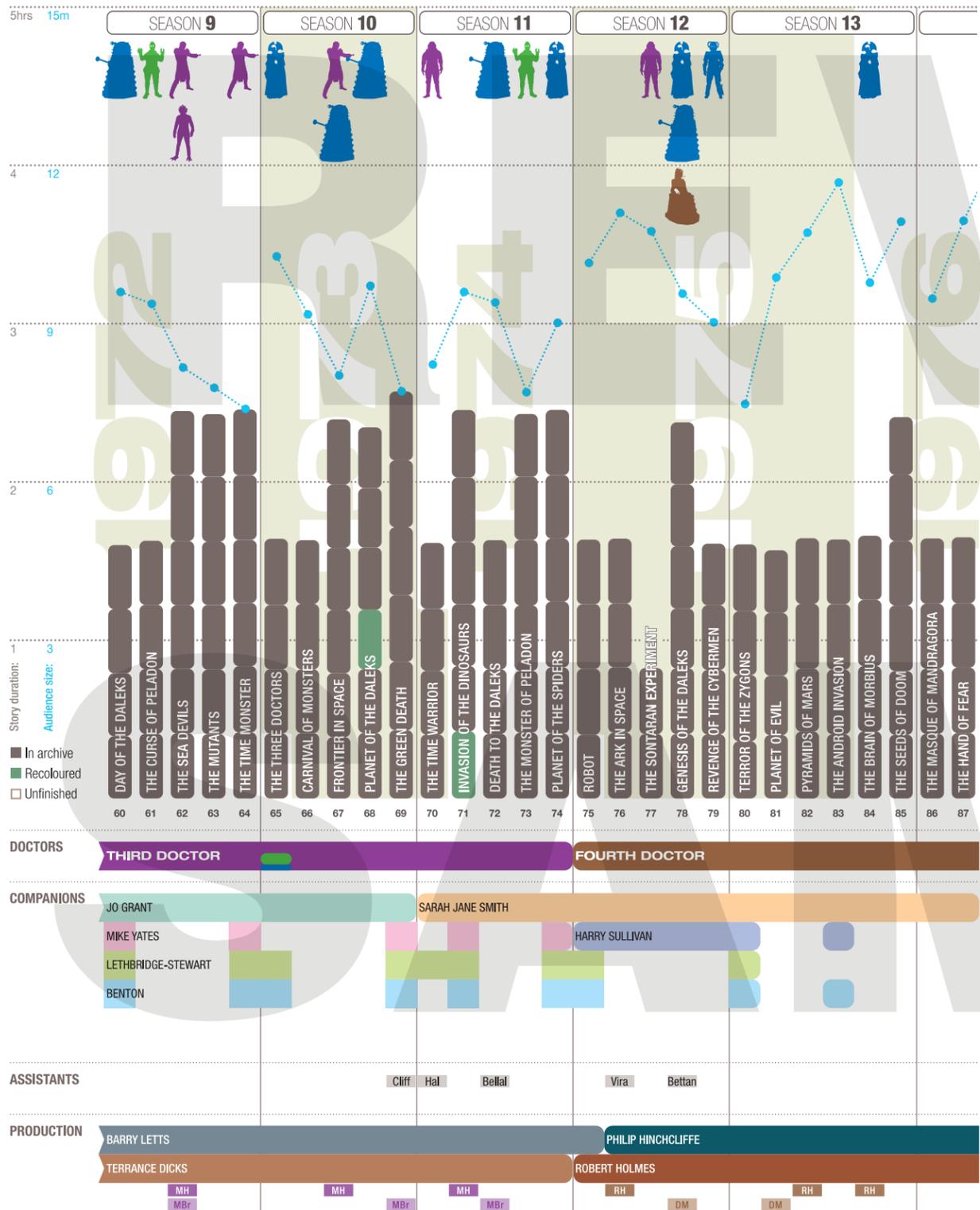
■ **Stories** are in transmission order (which sometimes differs slightly from the order they were made). The vertical scale in beige is time, with each block being one episode, scaled to its duration. The colour of the blocks shows each episode's state in the archive: surviving, missing or recoloured by combining black-and-white film prints with colour from off-air video recordings or other non-broadcast-quality sources. *[continued on next page]*



■ "Planet of Giants" was written and recorded as four episodes but the last two were cut into one for transmission. "Shada" was to be the concluding six-parter of Season 17 but strike action at the BBC prevented its completion. "The Five Doctors" was produced as part of Season 20 but not shown until eight months later for the show's 20th anniversary. "Resurrection of the Daleks" was made (and shown abroad) as four parts but re-edited into two longer episodes for first UK transmission to avoid a break during the Winter Olympics. Season 23 comprised one 14-part story, "The Trial of a Time Lord", and is numbered as such. But it was produced in three separate sections covering four linked stories, which are listed individually here to make the changes in companions and production personnel clearer. The only televised outing for the Eighth Doctor didn't have a story title on screen other than "Doctor Who" but is commonly called "The TV Movie". "The End of Time" is the only New Series two-episode story to have one overall title shown as parts one and two.

■ Overlaid in light blue are the **viewing figures** for each story (vertical scale on the left in blue). These are the average of the figures for each episode of a story, based on the officially recorded figures, which in recent years include time-shifted viewing within a week of first broadcast but not online catch-up.

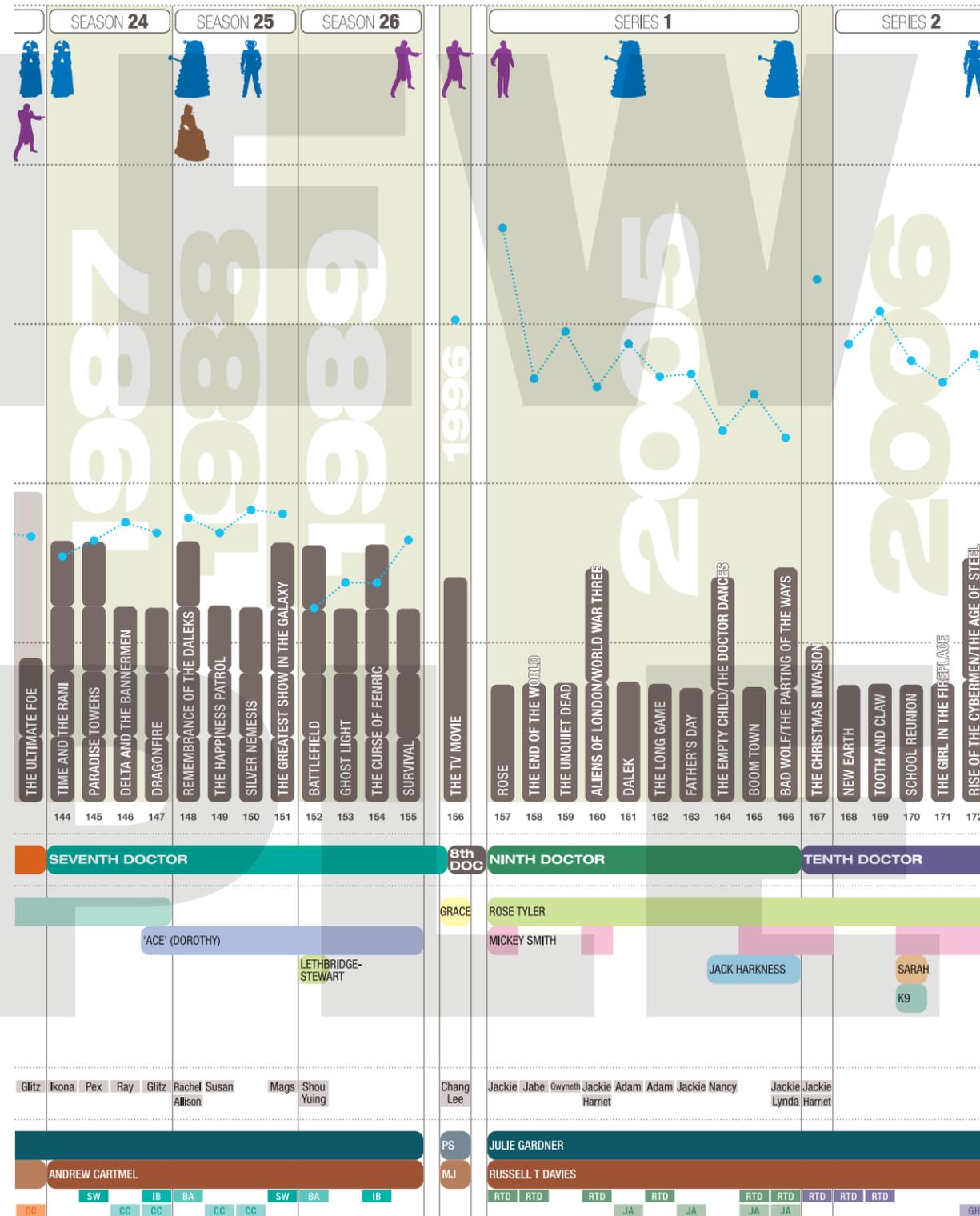
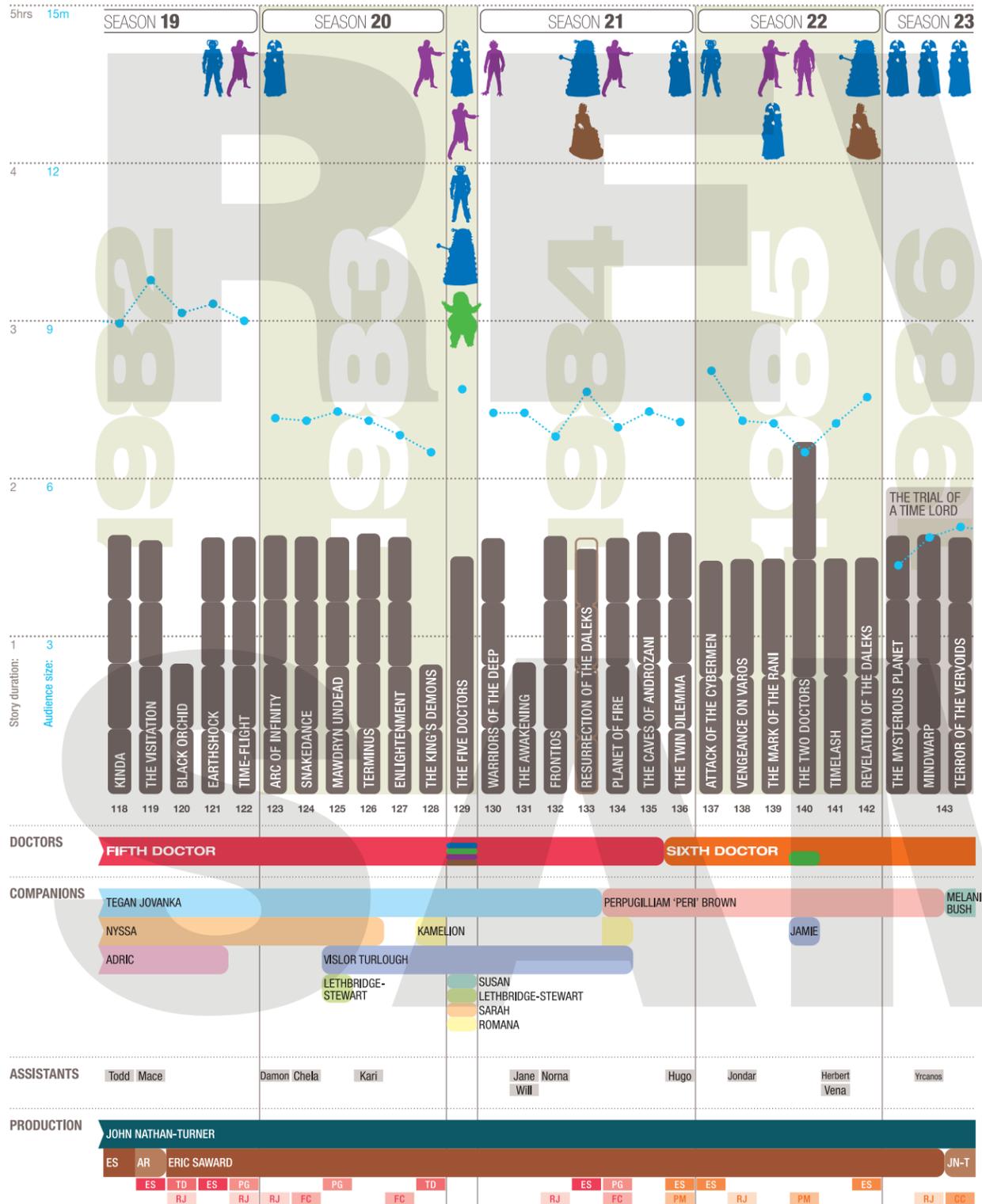
■ **Enemies** appearing more than twice are shown at the top, coloured according to the Doctor against whom they first battled. These are, in order of appearance: **FIRST DOCTOR** Daleks, Time Lords (excluding the Doctor, Romana and the Master), Cybermen; **SECOND DOCTOR** Yeti, Ice Warriors; **THIRD DOCTOR** Autons, Homo Reptilia (Silurians/Sea Devils), the Master, Sontarans; **FOURTH DOCTOR** Davros; **TENTH DOCTOR** Ood, Judoon, Weeping Angels; **ELEVENTH DOCTOR** The Silents. No enemies first encountered by the Fifth, Sixth, Seventh or Ninth Doctors made more than one further appearance.



■ The colour coding for each **Doctor's** era is used throughout the rest of this book for easy reference. Later appearances by past Doctors are indicated by their respective colours. The Seventh Doctor initially featured in the TV Movie before regenerating into the Eighth — the two didn't appear together.

■ **Companions** lists the generally accepted companions of the Doctor, so the likes of Katarina, Sara Kingdom, UNIT's Captain Yates and Sergeant Benton, Kamelion, Grace and Wilf are included, even though some never travelled with the Doctor. Curved corners on the bars indicate the start and end of their ongoing time with the Doctor, with later return appearances shown separately. Square corners indicate a temporary absence during their regular run. One-scene cameos are not included, even if they had lines, such as the phantom companions in "The Five Doctors" or Rose in Series 4 before "Turn Left".

■ **Assistants** indicates people who helped out for a significant proportion of a story, often performing a companion-type role alongside either the Doctor or one of his regular companions. Obviously there are many characters who assist the Doctor during his adventures, but these are the ones who feel like they could have gone on to become regular companions if the producers had so chosen or, in the case of the revived series, those relatives of regular companions who appear whenever the Doctor returns to modern-day Earth.



THE BEAST BELOW

■ The prevalence of story titles beginning with 'The', and other popular forms

It's probably not surprising that the word 'the' crops up a lot in the titles of *Doctor Who* stories — it is the most common word in the English language, after all. And given that most episodes are named with reference to a person, creature, place or concept within the story, it's standard to address that with the definite article. In fact, out of 359 *Doctor Who* titles — all on-screen titles, including the individual episode titles from the first 25 stories as well as their later assigned overall titles, plus "Shada" — 197 (54.9%) begin with 'The', 232 (64.6%) contain a 'the', and there are 247 instances of 'the' altogether, accounting for 22.7% of all words used in *Doctor Who* titles. In contrast only ten stories begin with the indefinite article, from the opening episode "An Unearthly Child" to 2012's "A Town Called Mercy".

Most story titles beginning 'The' follow one of three forms: 'The [noun(s)]', 'The [adjective] [noun]' or 'The [noun] [preposition] [noun]'. Only a handful take different structures. Some use lists of nouns, such as "The Unicorn and the Wasp" or "The Doctor, the Widow and the Wardrobe". Others drop the preposition by taking a possessive form: "The Daleks' Master Plan", "The King's Demons", "The Idiot's Lantern", "The Doctor's Daughter" and "The Doctor's Wife". Only four beginning with 'The' include a verb: "The Nightmare Begins" (the first episode of "The Daleks' Master Plan"), "The Pandorica Opens", "The Girl Who Waited" and "The Angels Take Manhattan".

Most of the titles that don't begin with 'The' or 'A' follow the same grammatical forms but simply drop the article. The fact that the Target novelisations of the television stories could comfortably prefix most titles with 'Doctor Who and the...' shows any original lack of the definite article was an affectation. It was only in the 1980s when more single-word titles were used — generally the name of a character or place — that this convention became tricky. There had been a few one-word titles before then, particularly among the individual episode titles of the early serials, but for overall titles only "Inferno", "Underworld" and the unfinished "Shada" preceded the rise of the form under John Nathan-Turner's producership. Of the nine seasons he produced only two didn't have a story with a one-word title, and in both cases that was down to last-minute changes. Throughout production of Season 23, the second segment was called "Mindwarp" until it was decided to show the whole season under the umbrella title "The Trial of a Time Lord". And Season 25's "Silver Nemesis" was simply "Nemesis" until late in the day when the adjective was added to highlight its anniversary nature.

Another reason for occasionally dropping an otherwise likely leading article was when the '[noun] [preposition] [noun]' form used a proper noun at the end. While a few Second Doctor stories had been happy to repeat the definite article — "The Power of the Daleks", "The Tomb of the Cybermen", "The Enemy of the World" — during the 1970s it became common to pick one or the other, thus "Invasion of the Dinosaurs", "Genesis of the Daleks", "Image of the Fendahl" and so on. This has persisted into the revived series, such as "Rise of the Cybermen" and "Last of the Time Lords".

There are some further noun combinations among those titles without a leading 'The', namely "Time and the Rani", "Delta and the Bannermen", "Tooth and Claw", "Love & Monsters" (we'll come back to that ampersand), "Smith and Jones", "Flesh and Stone" and "Vincent and the Doctor". Plus a few more verbs: "All Roads Lead to Rome" (episode two of "The Romans"), "Don't Shoot the Pianist" (episode two of "The Gunfighters"), "Fear Her" (the only title to use a pronoun instead of a noun), "Blink" (the only verbal one-word title), "Turn Left", "A Good Man Goes to War" and "Let's Kill Hitler". Other less common forms include "Small Prophet, Quick Return" (episode two of "The Myth Makers"), "Death to the Daleks" and "Mawdryn Undead".

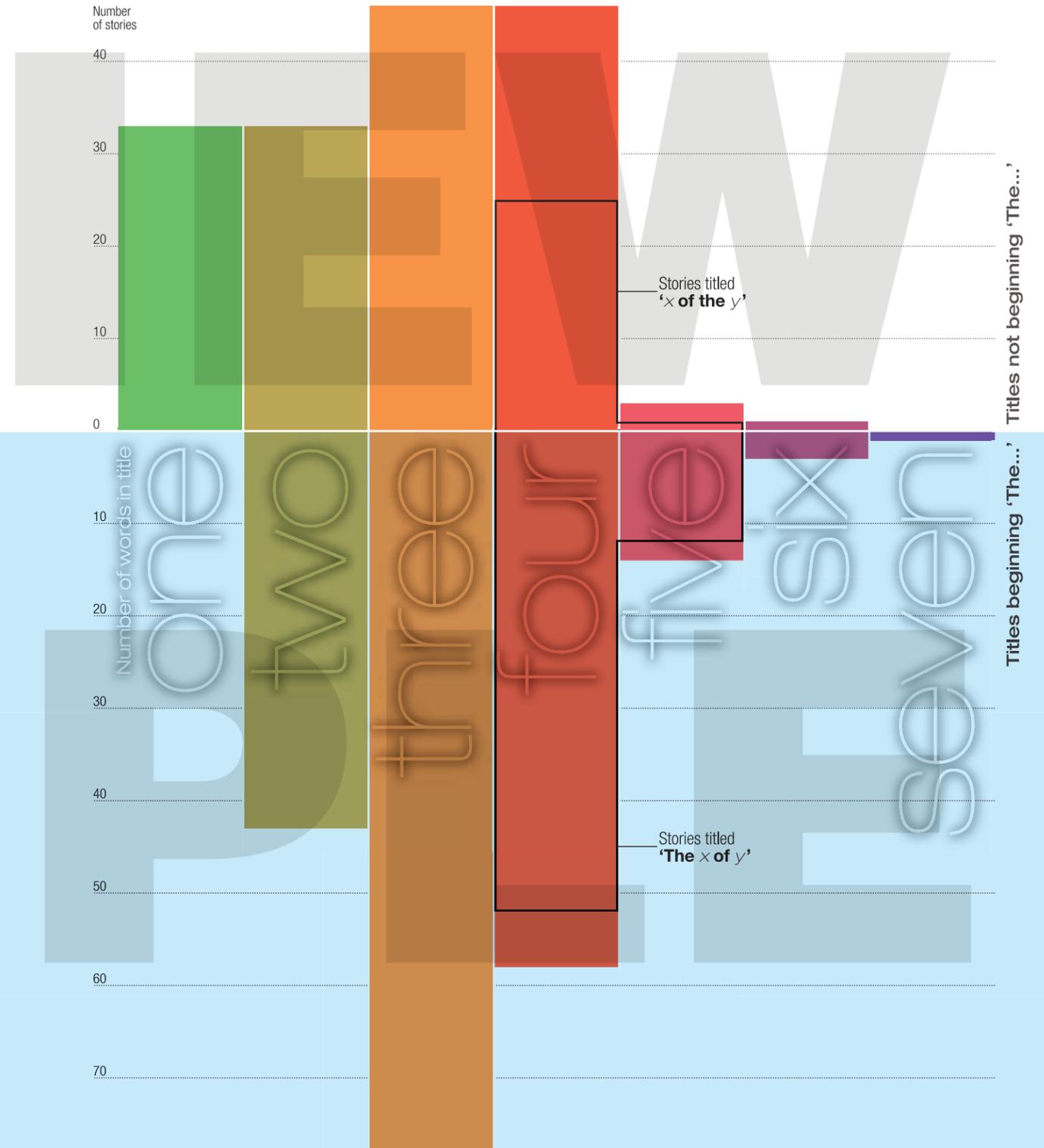
Punctuation is rare in story titles. Apostrophes are most common — usually in those possessive forms plus the two contractions mentioned above — but even so there are only 13 in all 359 titles (3.6%). As well as the lone ampersand and comma we've already mentioned, there are just two hyphens: in "Rider from Shang-tu" (episode five of "Marco Polo") and "The Talons of Weng-Chiang". There have also been only two titles with numerals: "Galaxy 4" (while that's a later-applied umbrella title for the serial it seems always to have been written with the numeral) and "42". At two characters, the latter is the shortest ever title, while the longest, in both characters and words, is "The Doctor, the Widow and the Wardrobe".

■ The data

The on-screen titles of each episode and story, plus the generally accepted overall titles for the first 25 stories, were grouped by the number of words they contain. "Shada" was included despite not being broadcast, but not the individual segment titles of "The Trial of a Time Lord". "42" was counted as one word, "Galaxy 4" as two. Contracted words were counted as one but hyphenated words as two. The groups were then divided between those that began with 'The' and those that didn't.

Obviously there are no one-word titles beginning with 'The'. "Kidnap", episode five of "The Sensorites" (1964), was the earliest, but the first single-word story title wasn't until 1970's "Inferno" (also the name of episode four of "The Romans"). The last was 2008's "Midnight". Similarly, the earliest two-word title not beginning with 'The' was episode three of "The Sensorites", "Hidden Danger". The fourth serial is collectively known as "Marco Polo", making that the earliest two-word story title although it was never used on screen; for that we had to wait for 1980's "Full Circle". Two-word titles beginning with 'The' are common, starting with the fourth ever episode, "The Firemaker"; the second ever story, "The Daleks"; or, for an on-screen story title, 1966's "The Savages", which was the first serial not to use individual episode titles.

The most common title length is three words, making up 34.5% of all titles, 62.9% of which begin with 'The'. The four-letter titles include many of the form 'The x of y' or 'x of the y' — 89.7% of those beginning with 'The' and 54.3% of others — while most (85.7%) of the five-letter titles beginning with 'The' extend this to 'The x of the y'. The sole example in the non-The group is "Last of the Time Lords". Only four titles have reached six words — "The Trial of a Time Lord", "The Greatest Show in the Galaxy", "The Curse of the Black Spot" and "A Good Man Goes to War" — beaten only by the seven-word title of the 2011 Christmas Special.



THE DOMINATORS

■ The BBC hierarchy of people in charge of *Doctor Who*, 1963-1989

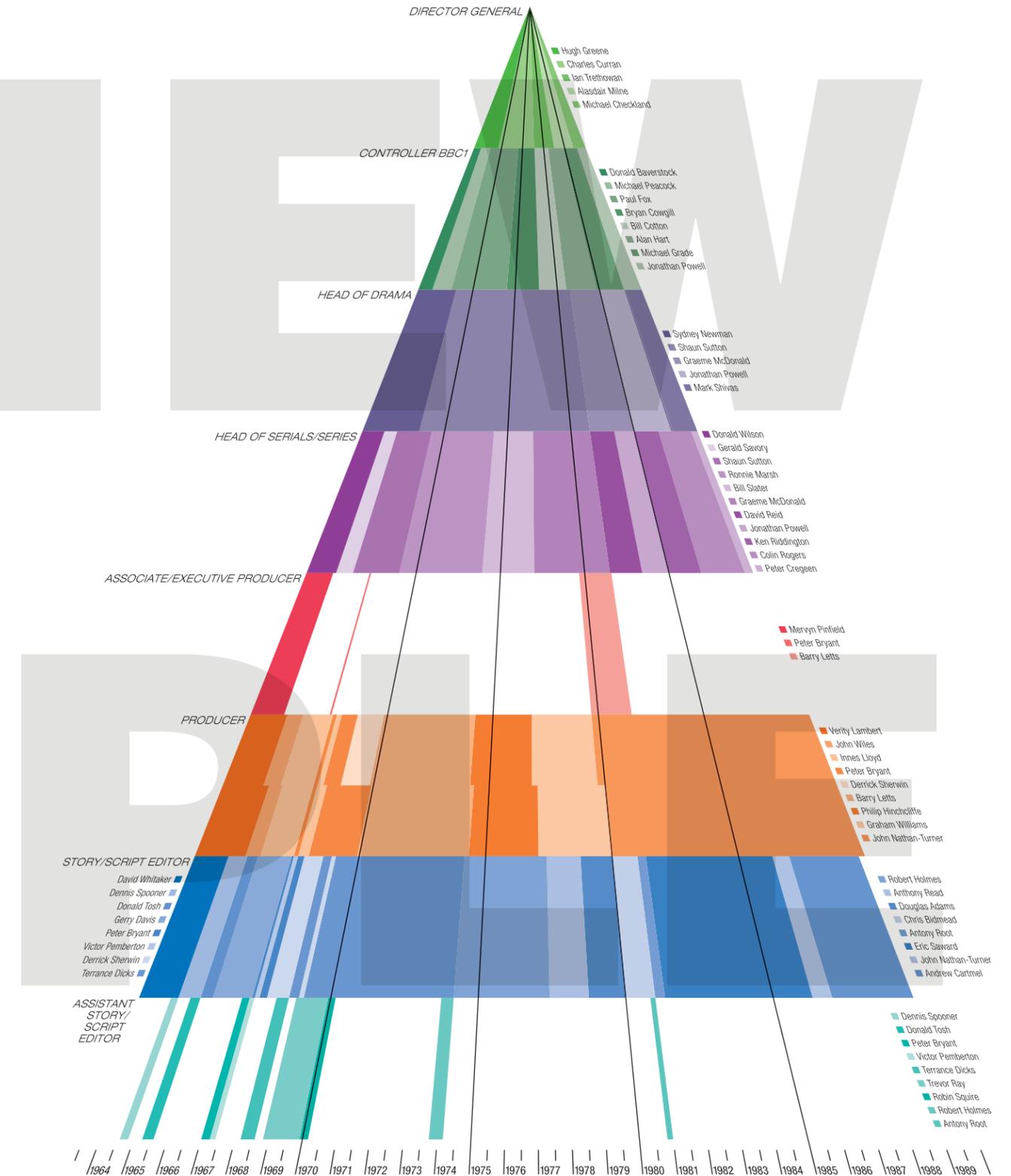
While fans will often know off by heart the names of the producers and script editors who made *Doctor Who*, they're less likely to know those people's department heads within the BBC, who will have had just as much influence over the changes in the programme through the years. The names Sydney Newman and Donald Wilson will be familiar as the two men credited with creating the concept of *Doctor Who* in the first place, but what of their replacements? Who were the people who supervised the day-to-day production teams' work, and did their career movements influence the show?

This chart lists those BBC employees in the management chain with direct responsibility for *Doctor Who*. While the title for each level may not be the precise job title for everyone — for example, the Drama Department was reorganised several times, particularly in the 1980s, with *Doctor Who* falling under the remit of the Head of Serials, Series or the two combined at various times — they indicate an equivalence of seniority. Assistant Script Editor was an occasionally filled position which here includes those periods when an incoming script editor was shadowing his predecessor to learn the ropes. Similarly, the steps in the Producer level indicate where incoming and outgoing producers overlapped as their tasks were handed over. Note also that Peter Bryant's brief stint as Associate Producer was not really an overseeing role, as Mervyn Pinfield's and Barry Letts' were, more a deputy position to producer Innes Lloyd as Bryant was assessed for promotion. However, he is included in the upper level for simplicity.

A number of higher management changes coincided with recastings of the Doctor. It's notable that while producer John Wiles' suggestions for replacing William Hartnell were vetoed by his Head of Serials Gerald Savory, it was only after Shaun Sutton had succeeded him that moves to remove Hartnell were approved. Patrick Troughton had decided to relinquish the role a few months before Ronnie Marsh became Head of Serials, and by then Head of Drama Shaun Sutton was more directly involved in persuading Jon Pertwee to take the part, whose tenure was secure under Marsh. But once Bill Slater took over as Head of Serials it seems the department was more willing to replace Pertwee than agree to his salary demands, and Slater was instrumental in the casting of Tom Baker.

Doctor Who could also have an effect on its departmental managers. In the mid-1970s the show was increasingly a target for the ire of Mary Whitehouse and her National Viewers' and Listeners' Association. This reached a climax after the broadcast of "The Deadly Assassin" in November 1976, when Whitehouse complained that the cliffhanger to episode three — in which the Doctor appeared to have drowned — breached the BBC's own guidelines. This not only resulted in Bill Slater instructing incoming producer Graham Williams to cut down the violence in the programme, but Director General Sir Charles Curran issued a public apology admitting a misjudgement had been made. While it would be going too far to suggest this in itself was instrumental in Graeme McDonald taking over from Slater as Head of Serials a month later, it's no coincidence that McDonald took a much closer interest in *Doctor Who*'s scripts from then on to ensure they didn't cross the line again.

Higher management's involvement in the programme usually involved issues of scheduling. While the show was a popular BBC1 Saturday evening hit, there was little to concern them, but by 1981, when Alan Hart became Controller of BBC1, *Doctor Who*'s viewing figures were in decline in the face of a concerted move by ITV to schedule *Buck Rogers in the 25th Century* in the same timeslot across its regions. It was Hart who moved *Doctor Who* from its traditional Saturday and ran it twice a week in mid-week early evening slots, both to try to regain its audience and as part of a wider experiment to see how a twice-weekly soap opera might fare. This had some success and *Doctor Who* was well supported by new Head of Series and Serials David Reid, culminating in the BBC organising a major event at Longleat in April 1983 to celebrate the show's upcoming 20th anniversary and the agreement to an out-of-season special to be shown near the anniversary itself. This would change under Reid's successor, Jonathan Powell, especially after he was promoted to Head of Drama when, with newly appointed Controller of BBC1 Michael Grade, he was party to the cancellation of *Doctor Who*. Only a fan outcry saved the series, but from then on it was considered something of an albatross around the neck of management. Powell and Grade later ordered the sacking of Sixth Doctor Colin Baker (whose casting had been approved by Reid in the very last weeks of his tenure as Head of Series and Serials), and it was under Powell's controllership of BBC1 that the show went into indefinite suspension.



CELESTIAL TOYROOMS

BBC studios used for recording 1960s episodes

Television Centre on Wood Lane in Shepherd's Bush, West London, has been the symbol of the BBC for 50 years since it opened as the broadcaster's first purpose-built television studios in June 1960. The BBC's initial television broadcasts famously came from Alexandra Palace in North London, which had been built as a public space for the Arts in the 1870s and was partly leased to the BBC from 1935. Its establishment there included the erection of the 67m transmission mast which is still in use today (and featured in the 2006 episode "The Idiot's Lantern"). When programme production resumed after the Second World War, it was becoming clear the two studios at Alexandra Palace would not be enough to supply a full television service.

In 1949 it was announced the BBC would build its own complex with eight studios in White City, and in the meantime it bought the nearby Lime Grove Studios as a temporary facility — one it ended up using for 40 years. These had been built by the Gaumont Film Company in 1915, expanded and redeveloped in 1932, and bought by the Rank Organisation in 1941. The BBC spent six months converting the film stages into four main studios for television production: Studios D, E, G and H, supplementing Studios A and B at Alexandra Palace (the letter C was skipped to avoid potential confusion with the Central Control Room, known as CCR, while Studio F was only ever used as a scenery store). While construction began on TV Centre in 1951, financing problems delayed the project, so in 1954 the BBC acquired Riverside Studios beside the Thames in Hammersmith. These buildings had been converted from industrial use into film studios by Triumph Films in 1933, and the BBC renamed its two studios R1 and R2. TV Centre finally came into use in 1960, first with Studio 3 (TC3) in June, followed by Studios 2, 4 and 5 over the following year.

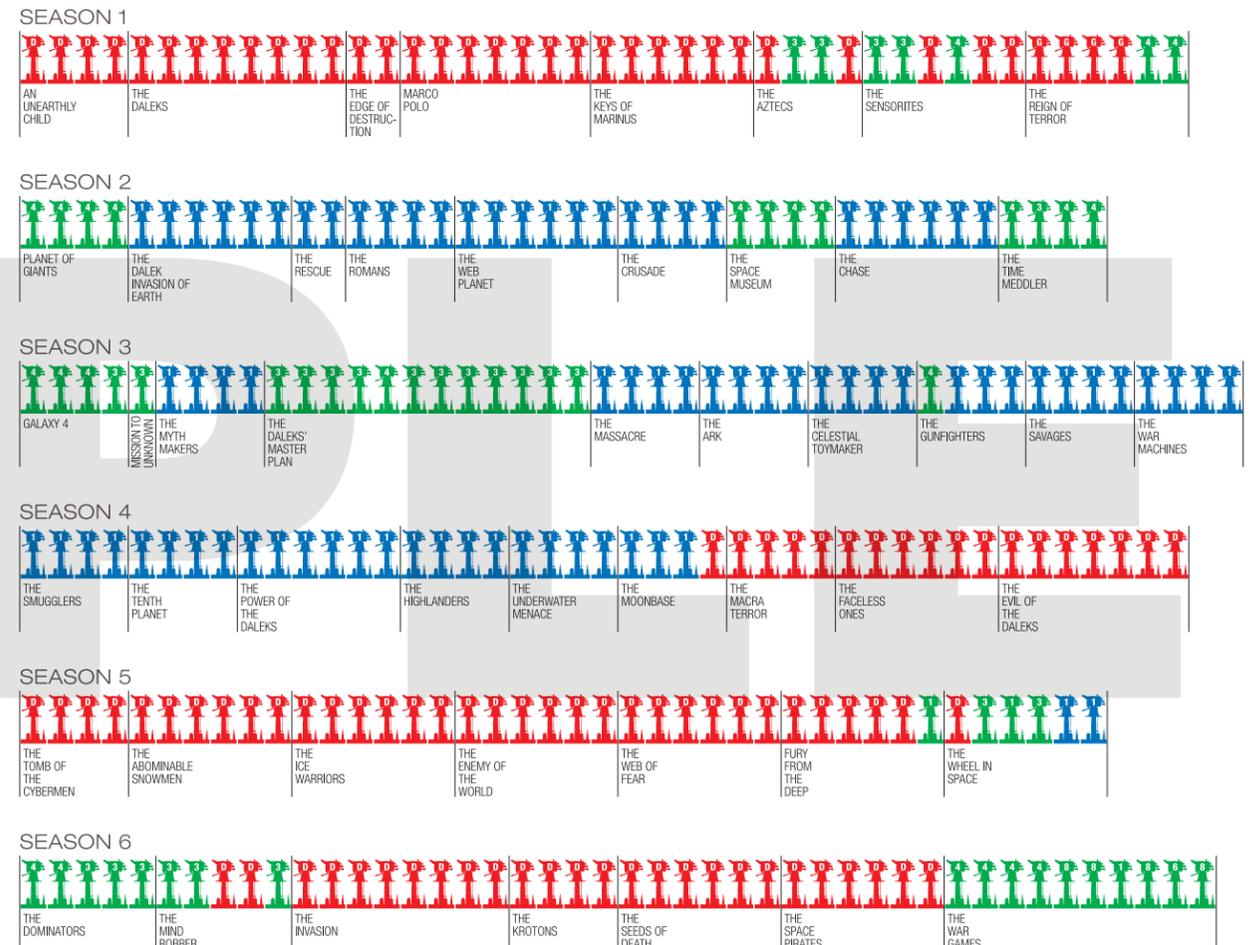
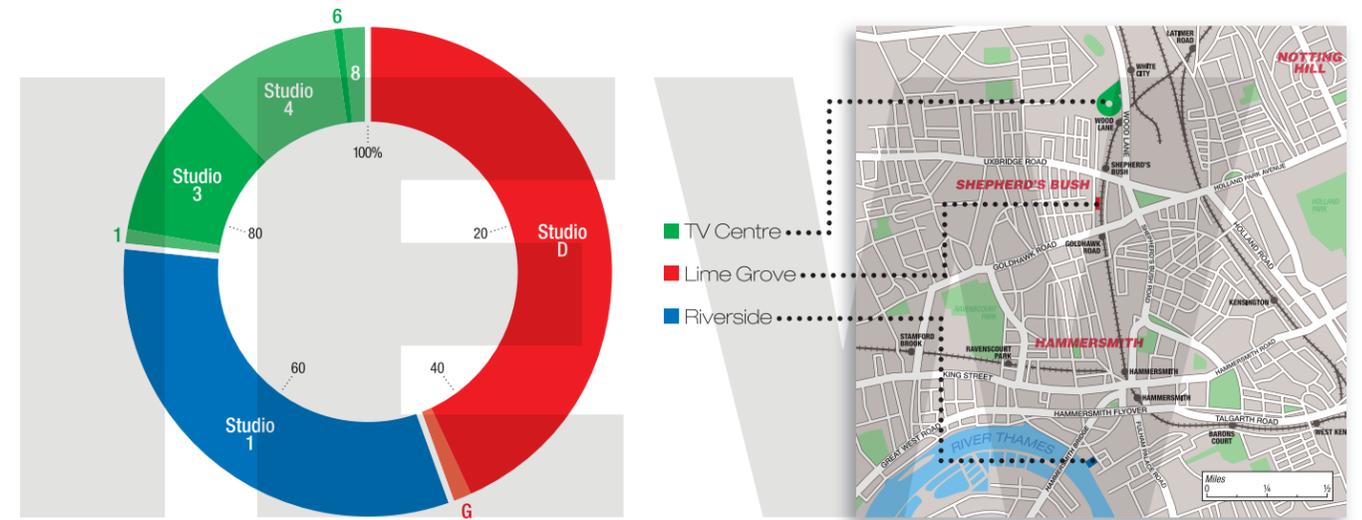
When *Doctor Who* was being planned over the summer of 1963, the question of where to record it was high on the agenda. The production team naturally wanted to use the new, state-of-the-art facilities at TV Centre. Lime Grove was still the prime production hub, however, even though the equipment there, particularly the lighting rigs, was over ten years old by then and the studios were not considered suitable for a highly technical show like *Doctor Who*. Nonetheless, Lime Grove Studio D was allocated and the first ever episode, the unbroadcast 'pilot', was recorded there on Friday 27 September 1963. Even after the series went into regular production with the restaging of "An Unearthly Child" on 18 October, concerns about the studios continued, with the limited technical equipment and unpleasant working conditions — largely due to the heat of the lights — making life difficult for cast and crew alike. A move to Studio G wasn't a viable solution as it didn't solve the technical problems and, although slightly larger than Studio D, had a more oblong floor space, too narrow for *Doctor Who*'s set requirements. Even so, the first four episodes of "The Reign of Terror" were recorded in Studio G during July 1964, after which production moved to TC4 while Lime Grove D had its sound equipment updated. This move had been decided earlier in the year to avoid the programme having to record under Studio D's hot lights in the high summer months, and may have been a factor in getting "Planet of Giants" made at all. A story in which the TARDIS crew were shrunk had been mooted from the very beginning of the show but CE Webber's original scripts were dropped when it was clear they couldn't be adequately produced with Studio D's facilities. The idea stayed on the schedules, however, moving down the running order until an appropriate studio could be assured. Story Editor David Whitaker didn't formally commission a new storyline from Louis Marks until late March 1964, by which time the summer studio allocation would have been decided. Or it may be that the production team's continued desire to make such a story finally persuaded the studio planners to give it the space it required in TV Centre.

After its first year's struggle, *Doctor Who* settled into Riverside 1 as its main home for the next two and a half years (possibly because series creator Sydney Newman threatened to abandon the return of the popular Daleks if suitable facilities weren't provided). R1 was almost the same size as TC3 and TC4, and better equipped than Lime Grove. The programme was allocated occasional stints at TV Centre — most notably for the 12-week production of "The Daleks' Master Plan" — but was mainly recorded in R1 until the end of February 1967, when it abruptly returned to Lime Grove D for the majority of the remainder of the 1960s. The main reason for this was that, with TV Centre up and running with six studios (and two more opening in 1967), the BBC was winding down its use of Riverside Studios and had ceased all production there by 1970. Why *Doctor Who* wasn't transferred to TV Centre may have been to do with the introduction of colour television around that time. BBC2 had begun broadcasting in 1964 and from July 1967 was showing programmes in colour. TC6 and TC8 opened that year as full colour studios, with TC1 and TC7 equipped for colour in 1968, TC3 in 1969 and TC4 in 1970 (TC5 wasn't updated until 1973 and TC2 was never fitted for colour production). The restricted use of TV Centre's studios because of this work must have required many programmes to continue being made at Lime Grove, including *Doctor Who* (the long-term future of which, let alone a switch to colour, was constantly in doubt during this period).

Another impact of TV Centre's move to colour seems to have been on *Doctor Who*'s switch to the higher-definition 625-line picture system. Although Lime Grove's cameras had been upgraded to 625-line-capable EMI 203 models in 1964, when the series returned there in 1967 it was still recorded in the old 405-line format. It didn't switch to 625 lines until episode three of "The Enemy of the World", recorded in December 1967, around the time BBC2 became a full-colour service. That channel had been broadcasting in 625 since it launched, so did its move to colour in the latter half of 1967 mean black-and-white 625-line-capable video recording desks were freed up for installation in Lime Grove?

The programme returned briefly to TV Centre for the end of the 1967/68 recording block (which ran to the end of "The Mind Robber"), with a final visit to Riverside during "The Wheel in Space". Interestingly, the two episodes recorded there were both captured onto 35mm film rather than video — R1's video recording equipment may have been removed by then. *Doctor Who* returned to TV Centre for good for the Second Doctor's swan song. Curiously some episodes were recorded in TC6 and TC8, both colour studios. It's tantalising to think these episodes were tests for recording the show in colour, as by then the next season had been commissioned, but the videotape catalogue numbers for them indicate they were monochrome.

The pie chart opposite shows the relative use of each studio. Despite successive production teams' unhappiness with it, Lime Grove had the most often used studios during the 1960s, although overall most episodes were produced in the larger studios at Riverside and TV Centre.





THE SOUND OF DRUMS

Share of stories by composer of incidental music

Paying a composer to write and record incidental music was something of a luxury for television dramas in the 1960s, especially for a tightly budgeted show like *Doctor Who*. When the series was establishing itself it was one worth paying for, with all but one story of Season 1 (the two-part filler "The Edge of Destruction") receiving a specially composed score. This wasn't written after recording to fit the pictures, as is the norm today, but general mood pieces would be recorded beforehand and played into studio at the appropriate points as the episodes were shot. Thus the composer might score 15-20 minutes of music to be used throughout a story irrespective of its length. By Season 2 money was being saved by using stock library music for some stories, or even that from earlier *Doctor Who* stories: "The Rescue" features cues originally written for "The Daleks".

This trend increased throughout the 1960s, with only half of Second Doctor stories having original scores written for them, the rest using stock pieces or even no music at all to really save money. By the 1970s, though, drama without incidental music was unusual and *Doctor Who*'s shorter seasons made paying a composer more affordable. Dudley Simpson, who had been writing occasional scores for the programme since 1964's "Planet of Giants", became the regular composer and by far the most prolific of the original series, scoring all but a handful of stories between 1970 and 1979. In 1980, however, incoming producer John Nathan-Turner felt a new style was needed alongside his other changes to the show and he turned to the BBC's Radiophonic Workshop to provide the scores. It had been creating sound effects for *Doctor Who* since its inception, most famously the TARDIS take-off sound, and in the cases of 1968's "The Wheel in Space" and 1969's "The Krotons", Workshop composer Brian Hodgson's extensive soundscapes were essentially the incidental scores for otherwise music-less serials. But by the 1980s the Workshop had proven itself a pioneer in electronic music, not just a maker of unusual sounds, and nearly all of its team of composers contributed to *Doctor Who*. Even when from 1986 the show returned to using freelance composers they were solo musicians producing their soundtracks electronically in their own studios.

Since the series returned in 2005 the music has been composed entirely by Murray Gold, who (as of "A Good Man Goes to War" in 2011) has now overtaken Simpson for the number of individual stories scored. Initially he recorded the music himself but from Series 2 was afforded the services of the BBC National Orchestra of Wales conducted by Ben Foster. Gold has even written several songs for the programme: 'Song for Ten' sung by Tim Phillips, which featured in the Tenth Doctor's debut "The Christmas Invasion"; 'Love Don't Roam' sung by Neil Hannon in "The Runaway Bride"; 'My Angel Put the Devil in Me' sung by Miranda Raison in "Daleks in Manhattan"; 'The Stowaway' sung by Yamit Mamo in "Voyage of the Damned"; 'Vale Decem' sung by Mark Chambers in "The End of Time"; and 'Abigail's Song' sung by Katherine Jenkins in "A Christmas Carol".

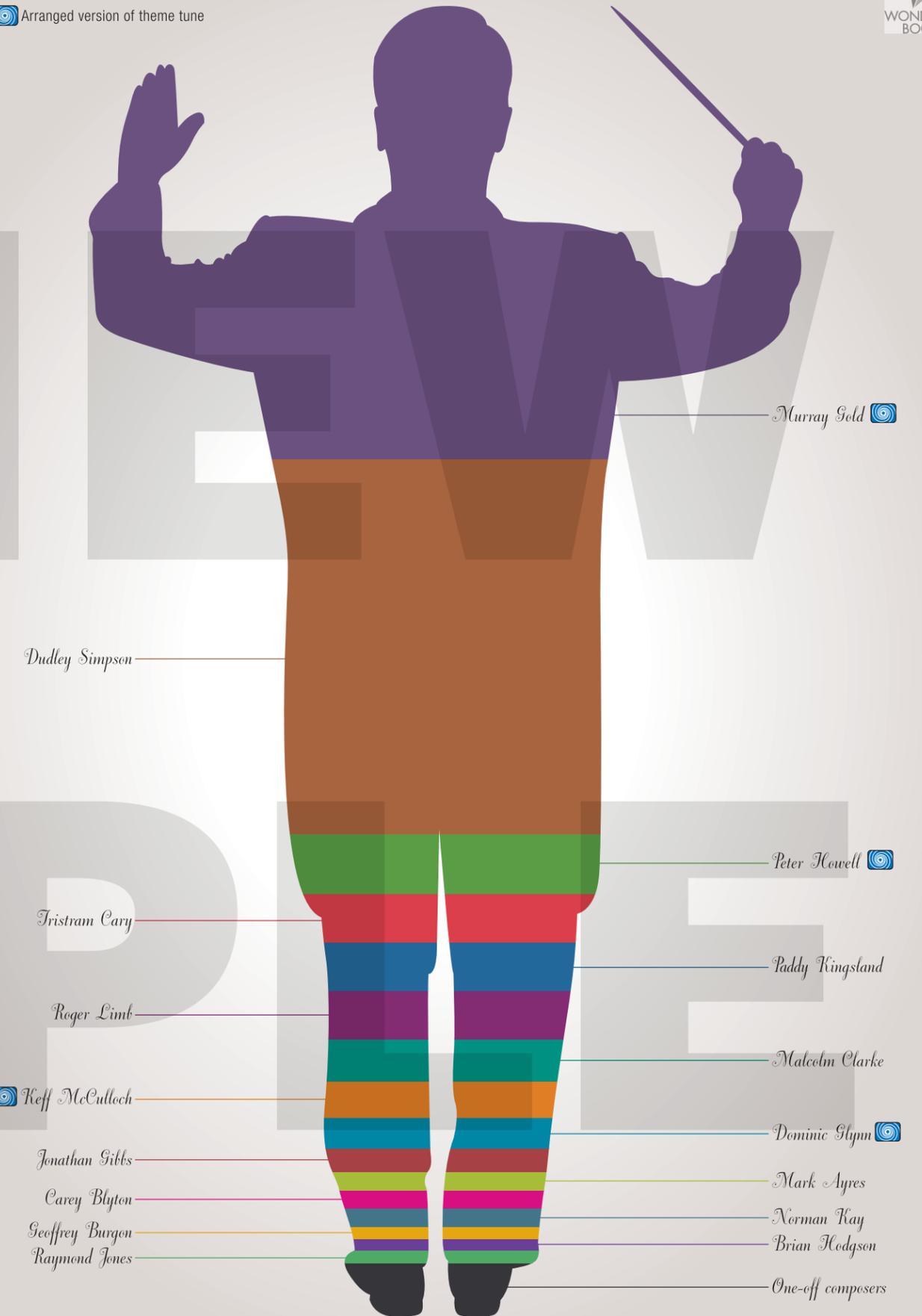
The data

| COMPOSER | NUMBER OF STORIES | SHARE OF STORIES |
|------------------------|-------------------|------------------|
| Murray Gold | 75 | 34.56% |
| Dudley Simpson | 62 | 28.57% |
| Peter Howell | 10 | 4.61% |
| Tristram Cary | 8 | 3.69% |
| Paddy Kingsland | 8 | 3.69% |
| Roger Limb | 8 | 3.69% |
| Malcolm Clarke | 7 | 3.23% |
| Keff McCulloch | 6 | 2.76% |
| Dominic Glynn | 5 | 2.30% |
| Jonathan Gibbs | 4 | 1.84% |
| Mark Ayres | 3 | 1.38% |
| Carey Blyton | 3 | 1.38% |
| Norman Kay | 3 | 1.38% |
| Geoffrey Burgon | 2 | 0.92% |
| Brian Hodgson | 2 | 0.92% |
| Raymond Jones | 2 | 0.92% |
| Richard Rodney Bennett | 1 | 0.46% |
| Charles Botterill | 1 | 0.46% |
| Francis Chagrin | 1 | 0.46% |
| John Debney & co | 1 | 0.46% |
| Don Harper | 1 | 0.46% |
| Richard Hartley | 1 | 0.46% |
| Stanley Myers | 1 | 0.46% |
| Elizabeth Parker | 1 | 0.46% |
| Humphrey Searle | 1 | 0.46% |

Simpson and Gold stand head and shoulders above all other composers on the series, between them accounting for almost two-thirds of scores. Even taken together, the Radiophonic Workshop composers — Malcolm Clarke, Jonathan Gibbs, Brian Hodgson, Peter Howell, Paddy Kingsland, Roger Limb and Elizabeth Parker — provided music for only 18% of stories, leaving just 18.5% (40 stories) to other musicians.

Those who were chosen to provide new arrangements of the *Doctor Who* theme tune bear no relation to prevalence, more a case of being in the right place at the right time. While Gold has produced three distinct arrangements of the theme during his time as sole composer on the series (and a few remixes of each), Simpson never had the opportunity to give us his interpretation. Ironically, the creator of the original, Delia Derbyshire, never composed incidental music specifically for the show, although tracks by her were used as stock music in 1970's "Inferno".

Arranged version of theme tune





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FICTION

THE WORLD ACCORDING TO DOCTOR WHO

Locations of televised stories set on Earth

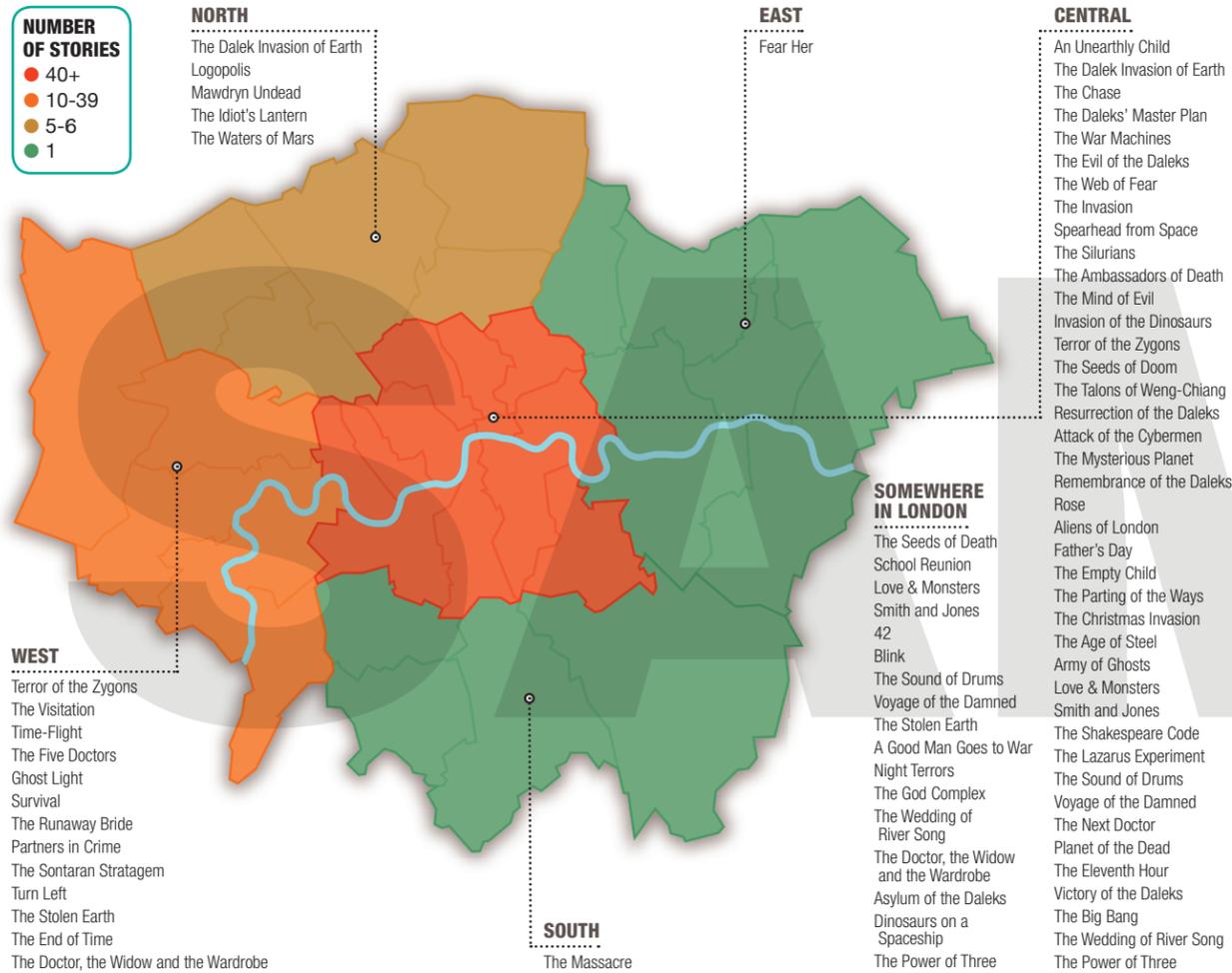
The Doctor has often stated that the Earth is quite his favourite planet, and it's by far his most frequent destination. Yet judging by his televised adventures, he has seen surprisingly little of it. He has barely visited a tenth of all the countries of the world, and the vast majority of his escapades have taken place in southern England (with a more recent increase in Welsh incidents).

The following three maps list stories with scenes set in London, the UK and worldwide. Some take place across multiple locations so are listed more than once. The events in "Amy's Choice" are not included as they were all a dream. Flashbacks are included if they feature new material, not just pre-seen clips. Stock-footage snapshots to show worldwide scale are ignored unless augmented with story-specific elements. Two-part New Series stories are listed by the episode title in which a location was first seen, but only once if a new location in the second part was in an already visited region.

Stories set in London

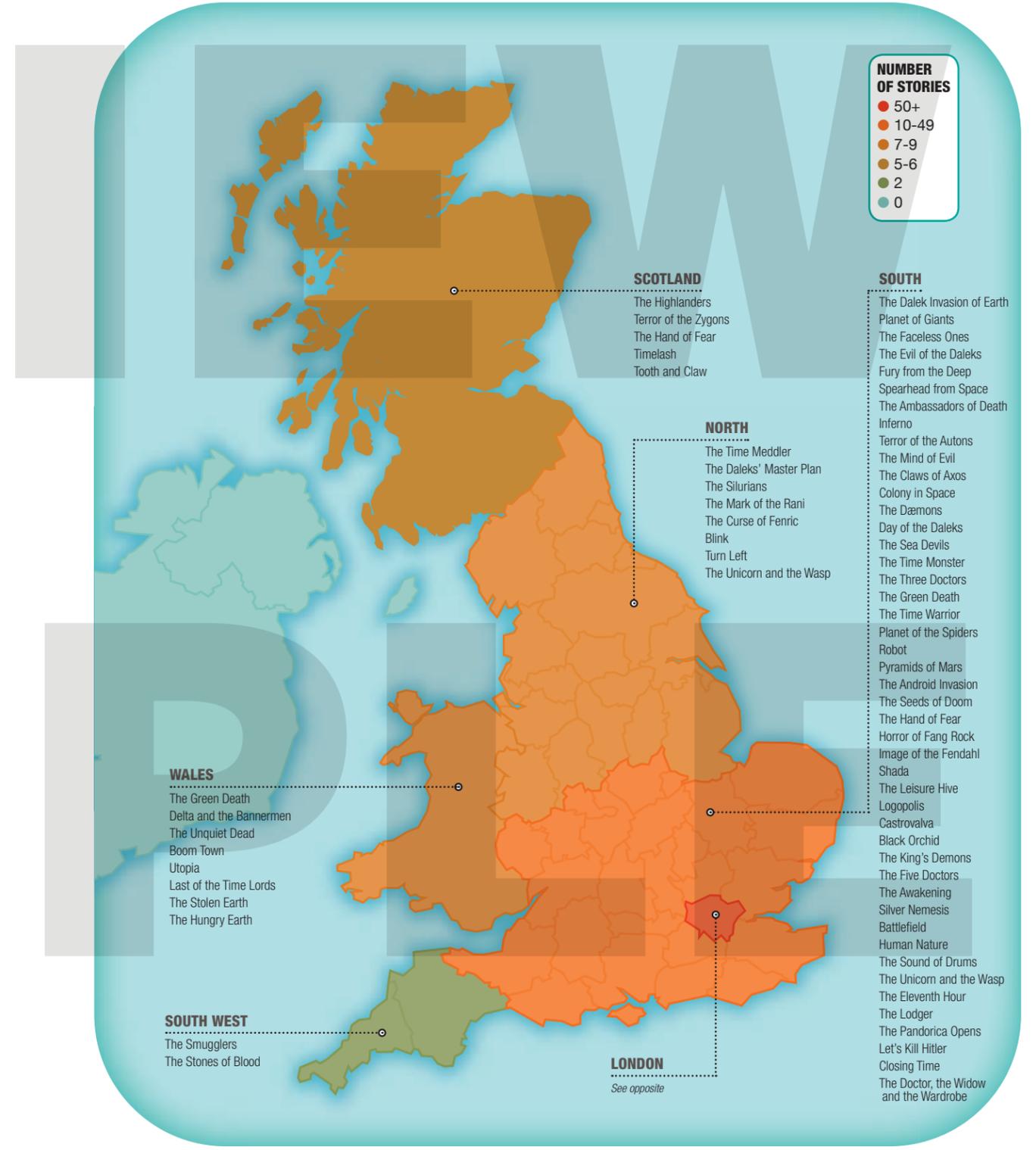
It's not surprising that a high proportion of *Doctor Who* stories are set in or visit London, as not only is it the country's capital but it's where the programme was produced for its first 26 years. Usually, unless featuring a major landmark like the Houses of Parliament or St Paul's Cathedral, the precise location in London is not specified on screen, but in the interests of placing as many stories as possible some can be reasonably estimated.

The distinctive obelisk nearby places Brendan School in Enfield (where "Mawdryn Undead" was filmed). Sarah's home in "The Five Doctors" may be in Croydon, as suggested in "The Hand of Fear", but here is taken to be in West London as that is where it was filmed (and where Sarah lived in her own series). Martha and her family's homes seen in "42", "The Sound of Drums" and "The Stolen Earth" could be anywhere in London. The script for "The Waters of Mars" puts Adelaide Brooke's house in London, while on-screen news reports give her a connection to Finchley, so it's assumed she still lives there. The National Museum in "The Big Bang" is probably in the museums district of South Kensington. The script for "The Doctor, the Widow and the Wardrobe" places the Arwell's pre-war home in Kew. The house the Doctor gives to Amy and Rory in "The God Complex" could have been in Leadworth but later events in "The Power of Three" suggest it's in London.



Stories set in the UK

Two-thirds of stories set on Earth take place in the UK (although none of them in Northern Ireland), and 60% of them in England. This is subject to revision, however — for example, we only discovered many years later that the closing scene of "The Hand of Fear" was in Aberdeen and not Croydon. Generic quaint English villages are assumed to be in the region where they were filmed, usually in South England (supported by the lack of Northern accents among the local yokels). Unless otherwise specified, the 1970s UNIT stories are assumed to happen in the Home Counties.



■ **Stories set overseas**

Only 22 countries other than the UK have featured in *Doctor Who* stories, and not all of them were actually visited by the Doctor himself. We see only the offices of global organisations in "The Tenth Planet" and "The Enemy of the World", where events are not witnessed by the Doctor. Similarly he is not physically present when he first says goodbye to Rose at Bad Wolf Bay (although he looks around as though he can see his projection's surroundings), or when people are seen to be hypnotised by the Sycorax in Paris and Rome, the Cybermen break through from their parallel world in Paris and India, or when the Daleks invade Germany.

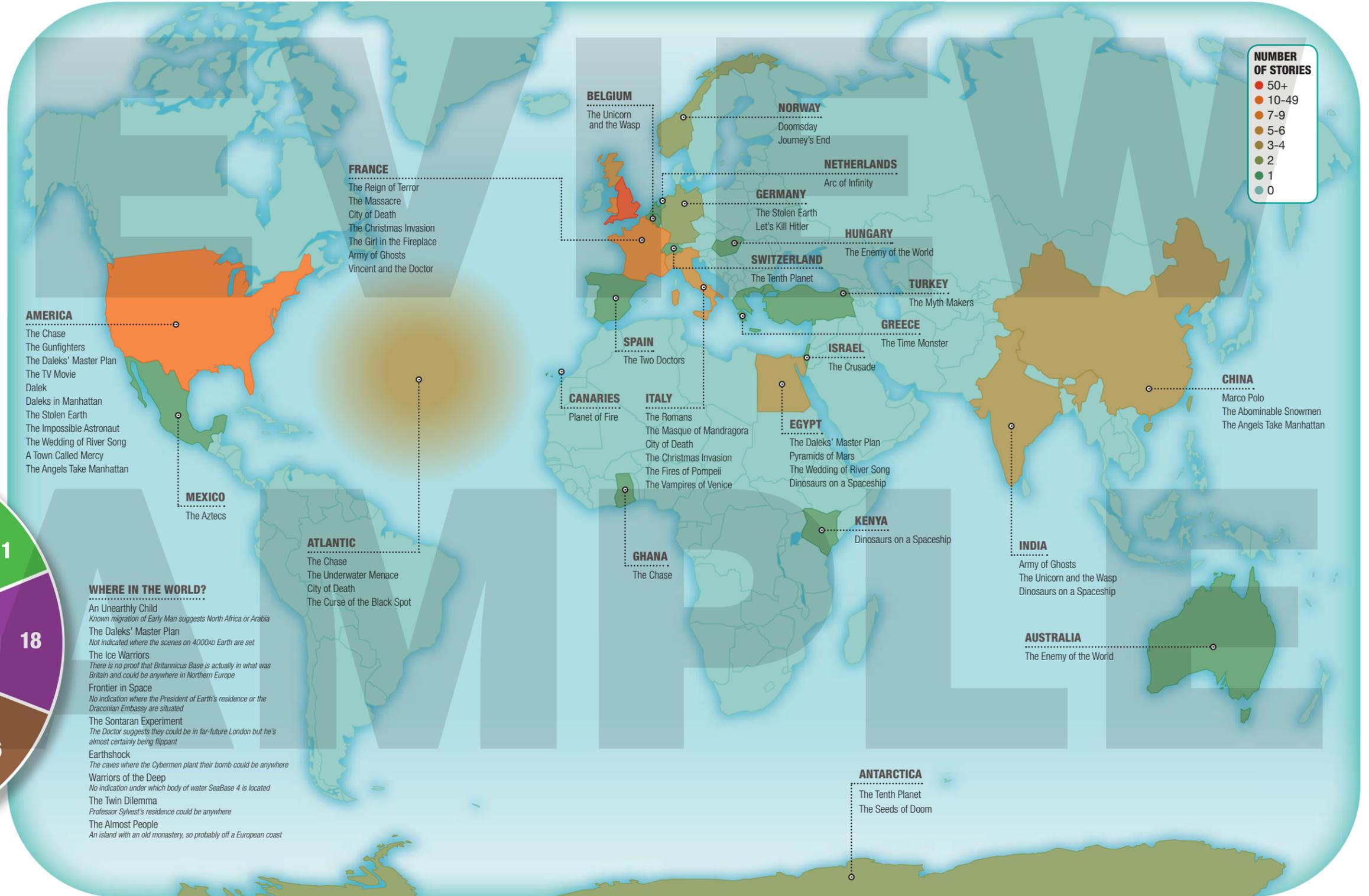
Some countries are the location for fleeting stop-offs. The Doctor makes a whistlestop visit to the Empire State Building in "The Chase" (although he sees a lot more of it in "Daleks in Manhattan") and doesn't stay long at Ghana's strange festival. His second visit to Dårlig Ulf Stranden was unavoidably brief, and we only see him stop off in Kenya to seek Riddell's help in "Dinosaurs on a Spaceship". His trips to Egypt in the same story and Belgium in "The Unicorn and the Wasp" appear to have been more involved although we only see glimpses of his adventures there.

■ **Number of stories set on Earth, by Doctor**

In all, 148 different stories have been set or have included scenes on Earth. Somewhat surprisingly, the Doctor who has spent most time on Earth was not the Third, despite being exiled here, but the Tenth, followed by the Eleventh, whose total is only going to increase (see graph below).

However, when these figures are taken as a percentage of each Doctor's total number of stories, the balances change. The Third and Tenth Doctors are more even, with 76.3% and 75.0% respectively of their stories featuring Earth. Discounting the Eighth Doctor, whose one story was on Earth giving him a 100% hit rate, the Ninth Doctor is the one who couldn't get enough of our world, with 80% of his stories set here (and the remainder in nearby orbit). The Eleventh is again second, with 78.6% of his stories at least looking in on Earth events. Only the Fourth Doctor has fewer than half of his stories featuring Earth, at just 38.1%, although again one ("The Ark in Space") takes place in an orbiting space station.

- First Doctor
- Second Doctor
- Third Doctor
- Fourth Doctor
- Fifth Doctor
- Sixth Doctor
- Seventh Doctor
- Eighth Doctor
- Ninth Doctor
- Tenth Doctor
- Eleventh Doctor



THE ROOF OF THE WORLD

Significant heights and depths experienced in *Doctor Who*

The Doctor's many visits to Earth have seen him not only venture around the globe but also far above and below its surface. Early on he was high in the Pamir Mountains, the highest peak of which reaches 7,495 metres, although the pass in which the travellers first met Marco Polo was probably nearer 4,200m — high enough for the elderly Doctor to succumb to altitude sickness. By comparison, the top of the Temple of Yetaxa was likely a mere 20m above the ground, offering grand vistas of the Aztec city but tiring to climb (and not a pleasant drop for Ixta). The TARDIS touched down briefly at the top of the Empire State Building in "The Chase". Although the tour guide claims they're on floor 102, it's clearly the observation deck on the 86th floor, at 320m (and as he exaggerates the height of the skyscraper, he's an unreliable guide). This puts the 457m down which the TARDIS crew had to lower themselves to escape the burning city on Mechanus in dizzying perspective. The First Doctor's last ascent was to the top of the GPO (now BT) Tower.

The Doctor's first venture into the depths of the planet came early in his second incarnation when he landed on an island near the Azores and was transported some 1,000m below sea level (based on the average sea depth in the area) to the remains of Atlantis. He would later descend an unknown distance into Euro Gas Refinery's impeller shaft to confront the Weed Creature, shortly after evading Yeti on London's Piccadilly Line just 20m below the surface. An earlier encounter with the robotic beasts had been his highest Earth adventure, around 4,600m above sea level in the Himalayas.

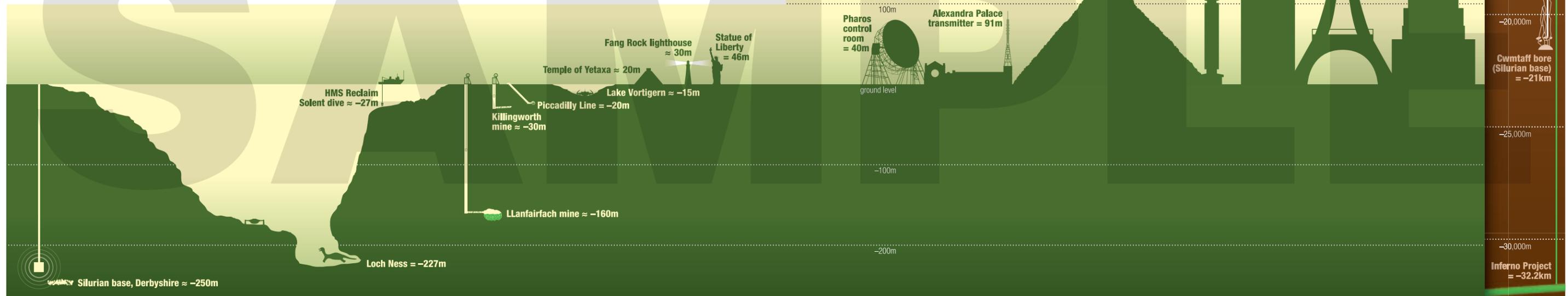
The Third Doctor was soon trying to make peace with cave-dwelling Silurians, some 250m down based on the depths of real Derbyshire cave systems, but nothing compared to the 32,187m (20 miles) Professor Stahlman's Inferno project had drilled into the Earth's crust. The Doctor himself didn't go that deep but the goo that came up the bore was not pleasant. A quick dive to some 27m, based on the depth of the eastern Solent, to meet the Sea Devils was a jaunt in comparison, although his venture down a Welsh coal mine — typically around 160m deep — at Llanfairfach was more harrowing.

The Fourth Doctor's encounter with the Zygons took him into the murky depths of Loch Ness, 227m at its deepest. Fang Rock lighthouse was probably around 30m, easy enough for a Rutan to climb, and nothing compared to the top level of Paris's Eiffel Tower at 273m, from which the Doctor and Romana flew (or did they take the lift?). If the Doctor wasn't scared of heights then, he soon had cause to be, falling to his fourth 'death' from the gangway of the Pharos Project radio telescope. Based on the similar Lovell telescope at Jodrell Bank, this would have been a plummet of some 40m.

The Doctor subsequently avoided high places (regenerative trauma presumably clouding his fear when he climbed up to the city of Castrovalva) but happily explored some caves where the Cybermen had planted a bomb (unknown depth but the troopers carry no climbing equipment) and visited SeaBase 4 at the bottom of an unknown body of water. The Sixth Doctor narrowly avoided a one-way trip down a mine shaft, although the one he landed the Rani's TARDIS in was likely not more than 30m deep as it was a drift mine with a ground-level entrance. The Seventh Doctor visited King Arthur's spaceship below the surface of Lake Vortigern — some 15m deep based on the reservoir where "Battlefield" was filmed.

The Tenth Doctor was understandably tentative when he had to climb Alexandra Palace's 67m transmitter (already atop a 24m-high building), being his first time that high since he visited the Pharos Project. He later learned 1 Canada Square in London's Canary Wharf was built to reach an anomaly 183m above sea level (so why they kept building to 235m is unclear). After swinging from the aerial of the Empire State Building 381m up, no wonder he kept to the lower chambers of Vesuvius given its pre-eruption peak was around 2,500m, reduced to 1,281m by the explosion the Doctor initiated.

The Eleventh Doctor took the TARDIS more than 21,000m below Cwmtaff in Wales to rescue Amy from the Silurian base there, but was later back above ground marrying River Song at the 139m apex of the Great Pyramid of Giza on a time-collapsing alternative Earth. From there the 46m-tall Weeping Angel Statue of Liberty wouldn't have seemed half as frightening as it did close up from the roof of a 16-storey New York apartment block.



JOURNEY INTO TERROR

Radius = number of stories
⊕ = number of episodes

- Met the Daleks
- Met Davros
- Met the Cybermen
- Met the Master
- Met another Time Lord
- Visited Gallifrey
- Encountered multiple Doctors
- Travelled in space without TARDIS
- Travelled in time without TARDIS
- Travelled via transmat
- Mind-controlled or hypnotised
- Kidnapped
- Duplicated
- Infected



Range of experiences gained by the Doctor's closest companions

There is a range of events the Doctor's companions can expect to encounter, from meeting his archest enemies to being flung bodily through time and space, and undergoing various forms of attack. One might presume the more adventures they have, the more of these experiences they'll gain, so the radius of the slices indicates the number of stories each companion appeared in, while the centre number is their number of episodes. It's no surprise, then, that Dodo or Liz gained less from their time with the Doctor, and yet Mel and Harry undergo more in a similar number of episodes. While Amy and Rory were in the highest number of stories, their knowledge of the Doctor and his people is notably lacking. Sarah is the only companion to face the full range of common terrors that travelling with the Doctor involves (Tegan just missing out by not actually meeting Davros in "Resurrection of the Daleks").

JOURNEYS END

■ Circumstances in which the Doctor's humanoid travelling companions joined and left the TARDIS

On all but a handful of occasions, the Doctor has had at least one companion journeying with him in the TARDIS. Indeed, it's a common refrain of the current series that he can get carried away when he travels alone and that having someone with him, particularly a human, is a calming influence. But as recently seen in "The Angels Take Manhattan", the Doctor doesn't like to deal with his friends leaving him, yet leave him they do, although not always of their own accord. For as the Doctor goes on ageing and regenerating, his shorter-lived companions must eventually go their own way.

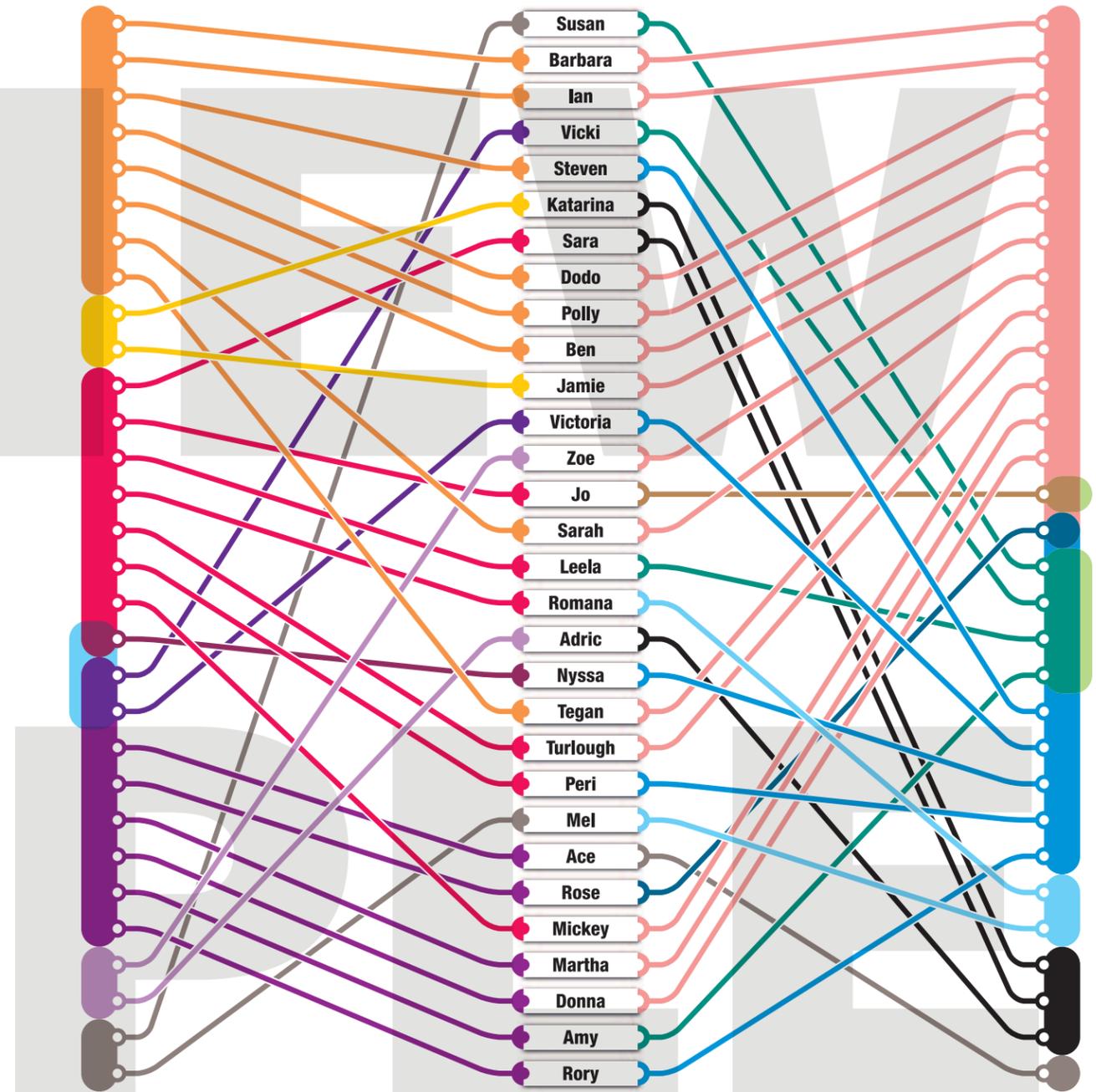
Curiously, for most of the original series, the Doctor never voluntarily invited anyone to come with him — they either were carried off in the TARDIS by accident, asked to go with him or were forced upon him by circumstances or higher powers. Only towards the end of the Classic series was he seen to specifically ask Ace to travel with him (although prompted by Mel), whereas in the revived series it's his most common way of finding a new companion. Perhaps the loss of the Time Lords has made him more open to needing company.

Happily, the most common reason for a companion to leave the TARDIS is they have come back home and so choose to move on with their lives. While Mickey initially elected to stay on a parallel Earth, he eventually made it back to our universe. Of those who have not made it home, often they have chosen to settle somewhere new because they've fallen in love, although some have been less lucky. While Steven was slightly pressganged by the Doctor into taking on the leadership of an alien society, he went along with it willingly, whereas Rory was unwittingly sent back in time by a Weeping Angel. While the same fate befell Amy, this was her choice in order to be with her husband. Peri is not counted as having left to be with a partner for, although she reportedly ended up marrying King Yrcanos, this wasn't her reason for leaving and she seems to have been making the best of a bad situation after the Time Lords stranded her on Thoros Beta.

Only three main companions have been seen to die as a result of their travelling with the Doctor, and none in the revived series (despite the prospect often being hinted at when a regular is due to leave the show). While Rose was reported as dead in our universe, she actually survived on a parallel world, so not quite a return home but not really ending up somewhere else either. Donna's mind-wipe was presented as a form of death, but in effect she just ended up back where she started. And despite both Amy's and Rory's many reversed demises, they eventually ended up living together in 1930s New York (as far as we know).

Not included here are Liz and the various members of UNIT as, although they assisted the Doctor while he was exiled to Earth, they didn't travel with him and carried on their regular lives during and after their association. Liz could have been listed as having been imposed on the Doctor (by the Brigadier) and then 'returned home' to her academic life in Cambridge. Also missing are the Doctor's two robotic companions, K9 and Kamelion. Two versions of K9 travelled in the TARDIS: the first the Doctor gave to Leela when she elected to remain on Gallifrey, while the second he left with Romana in E-Space. Kamelion only appeared in his joining and leaving stories so wasn't a full-time companion; he was arguably rescued by the Doctor from the Master's control but ended up being destroyed at the Doctor's own hand.

Other potential inclusions are Adam Mitchell, who was invited aboard (more by Rose than the Doctor) but dumped back home (with a futuristic USB port in his forehead); Captain Jack Harkness, who was rescued from being exploded by a World War Two bomb, then exterminated by a Dalek before being resurrected by Rose but left by the Doctor on a space station orbiting Earth in the distant future. He briefly returned, imposing himself on the Doctor, but ultimately elected to return to his duties at Torchwood in 21st Century Cardiff (not his native time). And the criss-crossing paths of the Doctor and River Song are so complicated that it's hard to say how or even if she ever joined or left the TARDIS!



ARRIVALS

- ACCIDENTAL – unaware what they were getting themselves into
- RESCUED – brought aboard to save them
- IMPOSED – forced on the Doctor or requested to join him
- ORPHAN – lack of parents reason for joining Doctor
- INVITED – directly asked by the Doctor to accompany him
- STOWAWAY – hid aboard the TARDIS
- UNKNOWN – circumstances of joining the Doctor not seen on TV

DEPARTURES

- RETURNED HOME – ended up back in their original location and time period
- WITH PARTNER – left the Doctor to be with a loved one
- DIDN'T RETURN HOME – left on non-homeworld or in a different time period
- CONTINUED OWN TRAVELS – left the Doctor but didn't settle down
- DIED – killed during their travels with the Doctor
- UNKNOWN – reason for leaving not seen on TV

BAD WOLVES

Changes in the gender balance of major villains in *Doctor Who* across four decades

The Doctor has had many more female than male companions and, despite the stereotype, they have rarely been screaming girls who need constantly rescuing by a man. But what about the villains the Doctor has come up against over the years? It could be argued that a sign of true sexual equality in drama is the willingness to present women to be just as scheming, self-serving and vicious as men can be. If producers and audiences shy away from female malefactors as unbelievable or merely uncomfortable, then surely they're not treating the genders equally.

This chart shows the number and proportion of male versus female villains during the four decades *Doctor Who* has been televised, each ring sized relative to the overall number of villains appearing in each decade. The full list of counted villains is given below. Such a selection is bound to be slightly subjective but specifically excludes gender-indeterminate monsters (what sex is a Dalek, or even Styggron for that matter?) except where they adopt a human form for much of their appearance or are clearly presented as male or female (clearest when it's the latter, a notable point in itself). Most, therefore, are human/humanoid where it's clear what sex they are. The aim has been to highlight that writers choose whether to make the evildoers in their stories men or women. Even in historical stories featuring characters based on real people, it was the writer's choice to focus on those characters.

What defines a villain is also subjective. The list here focuses on the main adversaries who get enough character development and screen time that it's clear their morals are suspect, so no thuggish henchmen unless they're significant enough to get a name and clearly support their bosses' goals and relish their role in forcing others to comply (such as Packer in "The Invasion"). A character is counted if they can be described as closed-minded to all but their own ambitions, regardless of any impact on others, whether the aim itself is malicious (usually) or not. If someone who has acted despicably comes to realise their error or relents on learning the consequences of their actions, then they are considered to be not inherently evil and aren't included (such as the Controller in "Day of the Daleks"). It's those who choose their behaviour, know it has a harmful effect on others but continue anyway and will not be deterred whom we can call demonstrably evil.

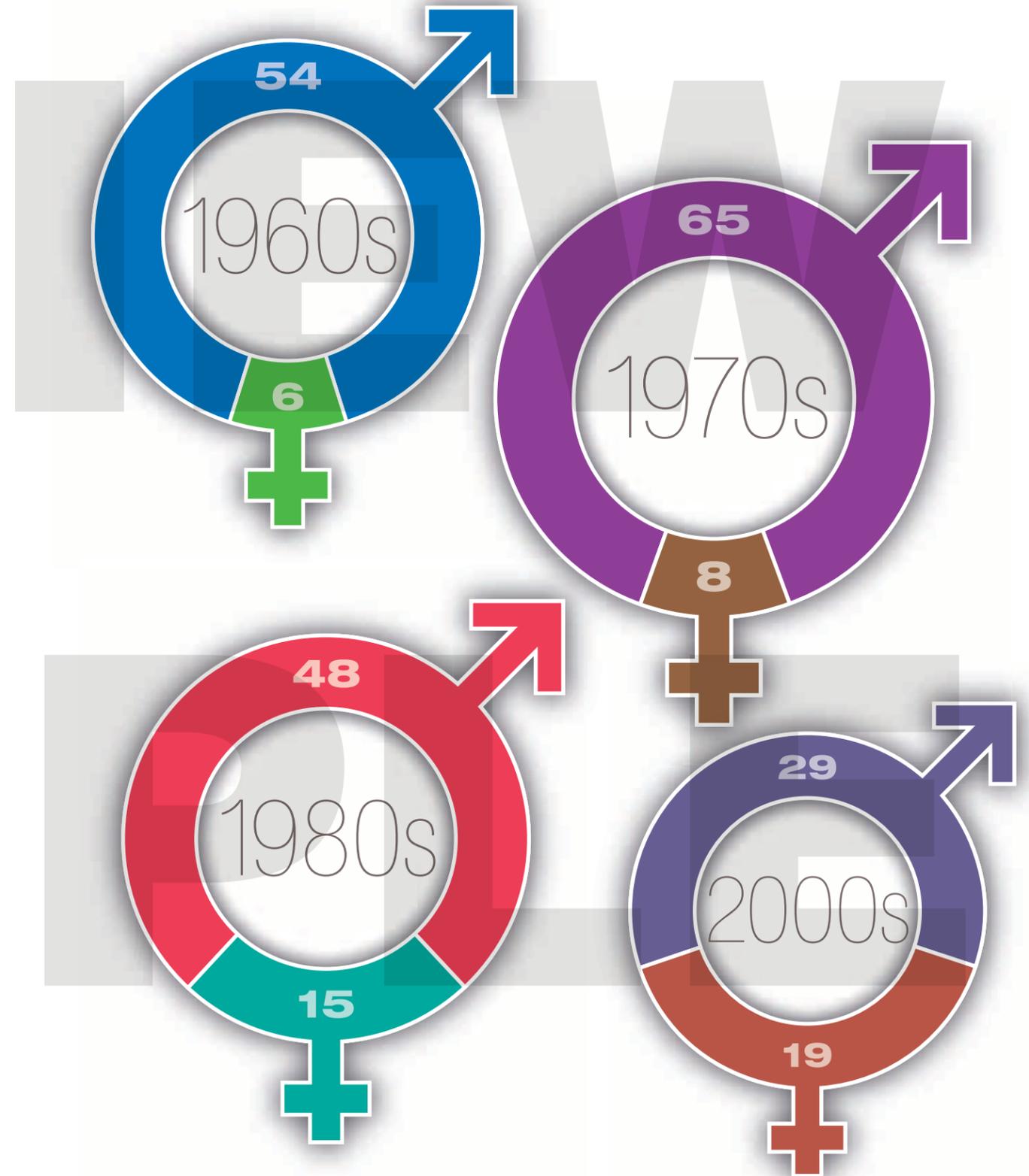
It's perhaps unsurprising that the balance of male to female villains has become more even between the 1960s and today, as societal attitudes to women have grown fairer. It's nevertheless notable that in its very first year, *Doctor Who* featured a female murderer who clearly felt no remorse for her actions. And while 1965's "Galaxy 4" is generally seen as a hackneyed example of the 'good isn't always beautiful' cliché, it did have the nerve to present a strong, clear-minded woman in a position of command (she just happened to be a nasty, self-important harridan).

The 1970s showed little improvement, despite a greater number of villainous characters overall, with barely a 1% shift in the balance. Indeed, there were no female villains at all during the Pertwee era, and few during Tom Baker's time until Graham Williams became producer, with Season 16 featuring three stories in a row that had immoral women, two the prime adversaries. The 1980s took the ratio almost to 1:3 female to male villains. It's up for debate whether this was in part due to the presence of Margaret Thatcher leading the country — Helen A and her female-run police force in "The Happiness Patrol" notwithstanding — but clearly there was greater consideration given to making the bad guys into bad girls more often.

The revived series has struck a more even balance, although men are still more evil than women by a factor of 3:2. This is also across a lower number of villains overall, despite there being more individual stories than in each of the preceding decades. Perhaps human villainy is seen as less of a novelty for a family adventure series these days, but at least it's not always the men who are up to no good.

The data

- 1960s **MALE** Kal, Tegana, Vador, Eysen, Yartek, Tlotoxl, Léon Colbert, Robespierre, Forester, Bennett, Sevcheria, Nero, El Akir, Lobos, The Monk, Mavic Chen, Zephon, Kirksen, Kariton, The Abbot of Amboise, Marshal Tavannes, The Toymaker, Cyril, Ike Clanton, Phineas Clanton, Billy Clanton, Seth Harper, Johnny Ringo, Edal, Captain Pike, Cherub, Bragen, Solicitor Gray, Captain Trask, Professor Zaroff, Ola, The Director, Kennedy, Theodore Maxtible, Eric Klieg, Salamander, Benik, Giles Kent, Rago, Toba, Tobias Vaughn, Packer, Eelek, Caven, General Smythe, Major Von Weich, The War Chief, The Security Chief, The War Lord
FEMALE Kala, Locusta, Maaga, Cassandra, Catherine de Medici, Kaftan
- 1970s **MALE** Channing, Major Baker, General Carrington, Reegan, Professor Stahlman, Brigade Leader, The Master, Harry Mailer, Captain Dent, Morgan, Bert, Hepesh, The Marshal, Professor Jaeger, Omega, Kalik, Cross, Hinks, Irongron, Sir Charles Grover, Butler, General Finch, Eckersley, Ettis, Lupton, Jellicoe, Vural, Davros, Nyder, Kellman, The Duke of Forgill/Broton, The Caber, Professor Sorenson, Salamar, Sutekh, Mehendri Solon, Morbius, Harrison Chase, Scorby, Count Federico, Hieronymous, Captain Rossini, Eldrad, Chancellor Goth, Taren Capel, Magnus Greef, Li H'sen Chang, Lord Palmerdale, James Skinsale, Gatherer Hade, The Collector, Castellan Kelnar, Graff Vynda-K, Pirate Captain, Count Grendel, Thawn, Rohm-Dutt, Ranquin, The Marshal, The Shadow, Scaroth, Tryst, Dymond, Soldeed, Skagra
FEMALE Hilda Winters, Sister Lamont/Odda, Eldrad, Queen Xanxia, Vivien Fay/Cessair, Madame Lamia, Countess Scarlioni, Lady Adrasta
- 1980s **MALE** Pangol, Meglos, General Grugger, Dexter, Aukon, Zargo, Rorvik, The Master, Proctor Neman, Monarch, Persuasion, Hindle, Ringway, The Castellian, Commander Maxil, Lon, Mawdryn, Captain Striker, Marriner, President Borusa, Nilson, Sir George Hutchinson, Joseph Willow, Lytton, Timanov, Sharaz Jek, Morgus, Stotz, Chief Officer, Quillam, Shockeye, The Borad, Tekker, Jobel, The Valeyard, Glitz, Dibber, Crozier, Doland, Chief Caretaker/Kroagnon, Gavrok, Kane, Ratcliffe, De Flores, Captain Cook, Chief Clown, Josiah Samuel Smith, Commander Millington
FEMALE Lexa, Camilla, Kasia, Enlightenment, Captain Wrack, Solow, The Rani, Chessene, Kara, Belazs, Helen A, Daisy K, Priscilla P, Lady Peinforte, Mrs Pritchard
- 2000s **MALE** Sneed, Joseph Green, General Asquith, Henry van Statten, The Editor, Father Angelo, Finch, John Lumic, Magpie, Toby Zed/Beast, Victor Kennedy, Lance Bennett, Diagoras, Professor Lazarus, Jeremy Baines/Son of Mine, The Master, Rickston Slade, Max Capricorn, Lucius Petrus Dextrus, Klineman Halpen, Luke Rattigan, General Cobb, Rassilon, Francesco Calvierri, The Dream Lord, Kazran Sardick, Colonel Manton, Solomon, The Shakri
FEMALE Cassandra, Margaret Blaine, Matron Casp, Sister Jatit, The Wire, Yvonne Hartman, Empress of the Racnoss, Florence Finnegan, Lilith, Jenny/Mother of Mine, Lucy Saxon, Matron Cofelia, Sky Silvestry/Entity, Mercy Hartigan, Rosanna Calvierri, Alaya, Restac, Jennifer Lucas ganger, Madame Kovarian



BELL OF DOOM

How the main antagonists got their comeuppance at the conclusion of New Series stories

It's said there are only seven different types of story at heart, but judging by the revived series of *Doctor Who* there are many more potential endings, at least when it comes to giving the bad guys their just desserts. The villains and monsters have faced a range of retributions once the Doctor has foiled their plans, from that trusty standby of being blown up to more unusual punishments like being trapped on an old Betamax videotape.

While the details of each adversary's comeuppance may vary, they can be broadly categorised. For example, whether it's a Dalek deciding it has become too tainted by humanity or the Master turning on his Time Lord tormentors, they involve the threat being ended through an act of self-sacrifice. While no attempt was made to limit the number of categories — if an outcome had not been shown before it was assigned a new set — endings were grouped if they held a broad similarity. Sometimes a story has two entries if it had separate antagonists or one who was soundly trounced.

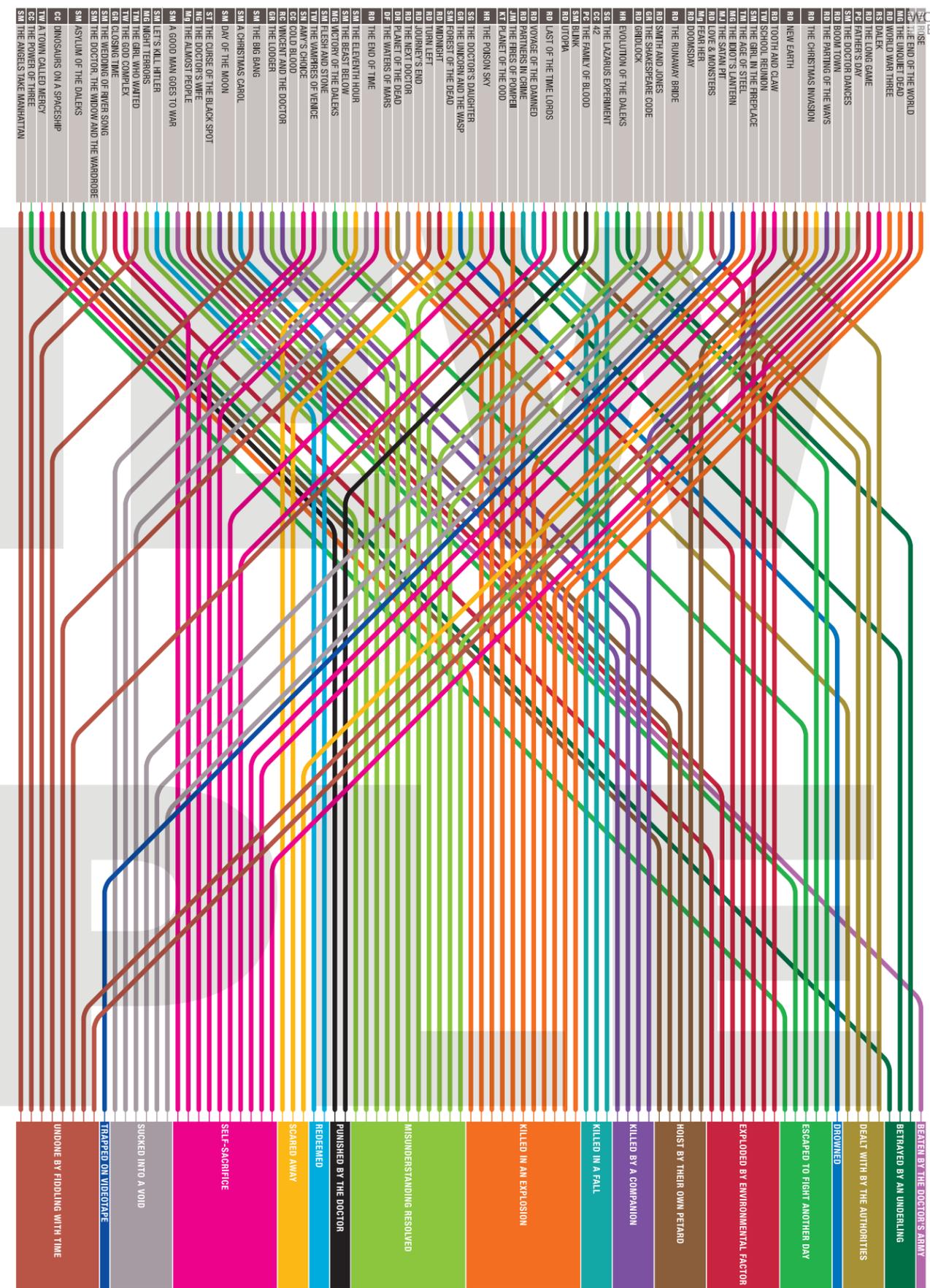
The colour-coded traces reveal any repetition of similar denouements and whether a writer displays a bias towards any outcomes. For example, the three most recent of Toby Whitthouse's four scripts have the antagonists willingly going to their deaths, be it Rosanna accepting her race's fate, the Minotaur tiring of its existence or Kahler Jax selecting his own punishment for his crimes. Similarly, Steven Moffat is the only writer to have redeemed any of his villains, both Kazran Sardick and Melody Pond seeing the error of their ways and performing a selfless act.

Blowing up the bad guys (arguably an easy way out) is joined as the most common outcome by the threat being resolved through the clarification of a misunderstanding, each accounting for an eighth of endings. Steven Moffat was the first to use this latter technique, with the nanogenes in "The Empty Child/The Doctor Dances" learning how to heal humans properly, returning to it for "The Beast Below" and 2011's Christmas special. Close on their heels is the villain's self-sacrifice, followed by the problem being negated through some temporal effect. This 'pressing reset' method is *Doctor Who*'s timey-wimey equivalent of the 'it was all a dream' cliché and risks invalidating the audience's investment in the drama. That the series' two showrunners have been responsible for six of its eight uses is either worrying or a sign they know it should only be used by experienced writers.

Only three resolutions can be classed as genuinely unique: the Wire's being recorded onto video in Mark Gatiss's "The Idiot's Lantern", the Vespiform's death by drowning in Gareth Roberts' "The Unicorn and the Wasp", and the routing of the Headless Monks by the Doctor's army of recruits. The Monks are not merely scared away by the threat of the Doctor's wrath, as the Scyrorax, Vashta Nerada and Atraxi are, but their defeated withdrawal doesn't really count as escaping to fight another day; the link to that from "A Good Man Goes to War" is for Madame Kovarian.

The abbreviations of writers' names are: **CC** Chris Chibnall; **GR** Gareth Roberts; **DF** Russell T Davies and Phil Ford; **DR** Russell T Davies and Gareth Roberts; **HR** Helen Raynor; **JM** James Moran; **KT** Keith Temple; **MG** Mark Gatiss; **Mg** Matthew Graham; **MJ** Matt Jones; **NG** Neil Gaiman; **PC** Paul Cornell; **RC** Richard Curtis; **RD** Russell T Davies; **RS** Robert Shearman; **SG** Stephen Greenhorn; **SM** Steven Moffat; **SN** Simon Nye; **ST** Steve Thompson; **TM** Tom MacRae; **TW** Toby Whitthouse

SAM



TRANSMISSION

DAYS OF RECKONING

Variations in the transmission times of *Doctor Who*

Doctor Who has been shuffled around the TV schedules several times over its long life. Initially episodes were made one a week and the programme was shown almost all year round, with just a month or two's break at the end of the summer. This was a punishing process, especially for the regular cast and crew, as they were working almost solidly year after year. This is why occasional episodes didn't feature either the Doctor or one of his companions, so that the actor could take a much-needed holiday.

By the time the show moved to colour in the 1970s, television production techniques were changing as videotape editing became easier, allowing programmes to be recorded in a different scene order to that shown in the final episodes. *Doctor Who* also moved to shorter seasons broadcast over 26 weeks or so, initially from January to June, then later from September to March. Further shortening came in 1982 when the programme was shown twice a week over 13 weeks. Then in 1985 the length of each episode was changed from 25 minutes to 45 minutes, still over 13 weeks, but when the programme returned in 1986 it was back to 25-minute episodes running for 14 weeks.

The return of *Doctor Who* in 2005 saw it adopt the same structure as 1985's season: 45-minute episodes broadcast over 13 weeks. 2009 saw the show take some time out, with just three hour-long specials (with part 2 of the last on New Year's Day 2010), before briefly returning to form in 2010, since when it was experimented with shorter 'half-seasons' of five to seven episodes twice a year.

Transmission pattern through each year from 1963-1989 and 2005-2012 (opposite)

This charts the transmission of *Doctor Who* during each year in blocks indicating the weeks in which a new episode was shown, with paler colours marking repeats of past episodes on BBC1 or 2. It highlights the near-all-year broadcast during the first two Doctor's eras (1968 had only four weeks when no *Doctor Who* was shown), dropping to half-yearly seasons for the Third and Fourth Doctors, and three-month runs for the rest.

Once the programme moves to shorter seasons, the changes in its starting time become clearer: initially New Year, drifting back to pre-Christmas before shifting to early autumn for most of the Fourth Doctor's era. Even then, it often took a mid-season break over Christmas before returning in January (often billed as a 'new series'). It returned to a New Year start for the early 1980s, shifting back to autumn after the 1985 suspension.

July and August are clearly the months with the fewest showings of new episodes, no doubt avoided as this is the most common time for family holidays so a poor time to schedule a family show like *Doctor Who* — although during the show's high popularity in the late-1970s summer repeats became common. But from the mid-1970s the second quarter also becomes barren until the return of the series in 2005. (The TV movie starring the Eighth Doctor, not included here, was shown in the last week of May 1996.) This post-hiatus period also highlights the prevalence of the Christmas special in the final week of each year.

Number of episodes first broadcast on each day of the week (overleaf)

Saturday is the traditional day for *Doctor Who*, with 84.2% of episodes being first broadcast on this day. Indeed, for the show's first 18 years it was only ever shown on early Saturday evening (excluding repeats), as have each of the revived series' regular episodes. But in the 1980s the BBC's schedulers were trying out new models, and *Doctor Who* was moved to twice-weekly broadcasts in 1982 – seen by many as a test run for the launch of *EastEnders* in 1984. Before returning to Saturdays in 1985, it was shown on each weekday at some time, although Wednesday gets a boost to 5.2% of all episodes thanks to the last two years of the original series being shown on that day.

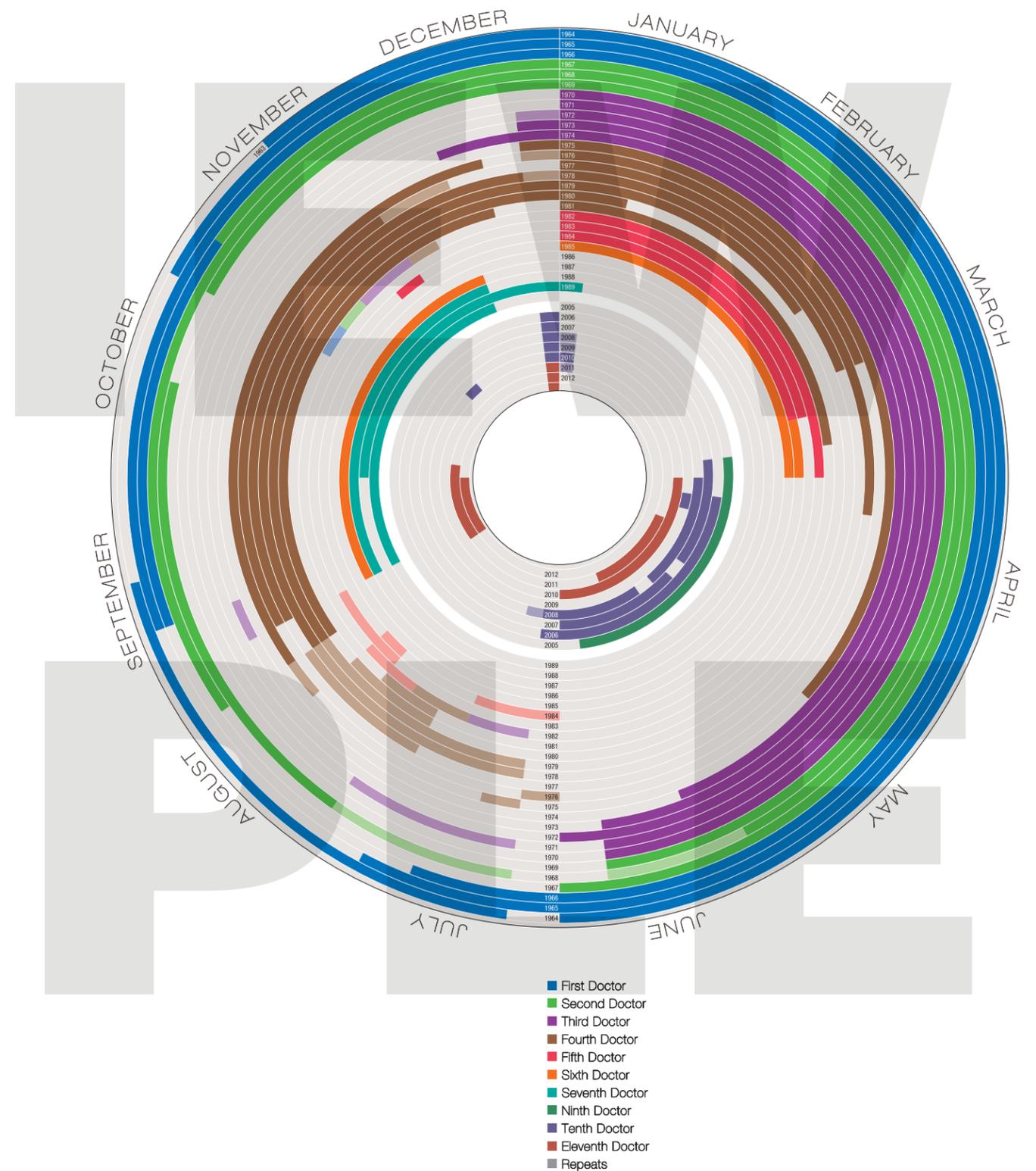
It wasn't until the series returned that it saw an episode broadcast on a Sunday, thanks to Christmas specials showing on Christmas Day.

(Note: to keep the count to a square number, this chart only includes episodes up to "The Doctor, the Widow and the Wardrobe". The five episodes of the 2012 series were each first broadcast on a Saturday.)

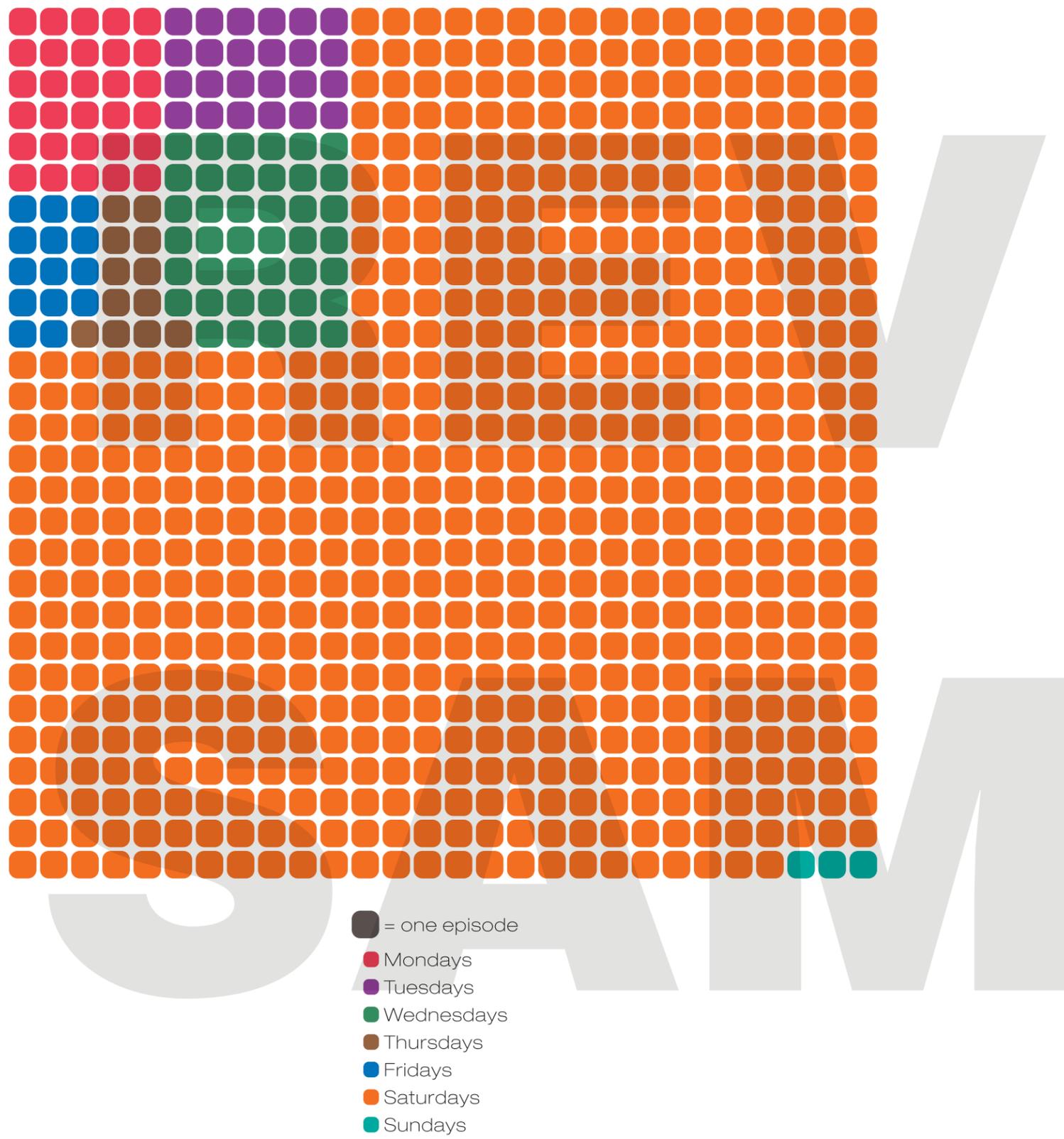
Number of episodes first broadcast on each day of the year (overleaf)

Although most episodes have been shown on a Saturday, the actual days of the month these fall on shifts, so this chart highlights which dates have had the most *Doctor Who* showings (excluding repeats). The summer dip is again most noticeable, and hotspots naturally fall into seven-day patterns, particularly at the start of the year, highlighting the predominance of a January start for seasons. Thanks to the New Series' regular Christmas specials, Christmas Day has become the most common day of the year on which to see a new episode. Only two achieve the double-whammy of being on both a Saturday and Christmas Day, however: 1965's "The Daleks' Master Plan" part 7 and 2010's "A Christmas Carol".

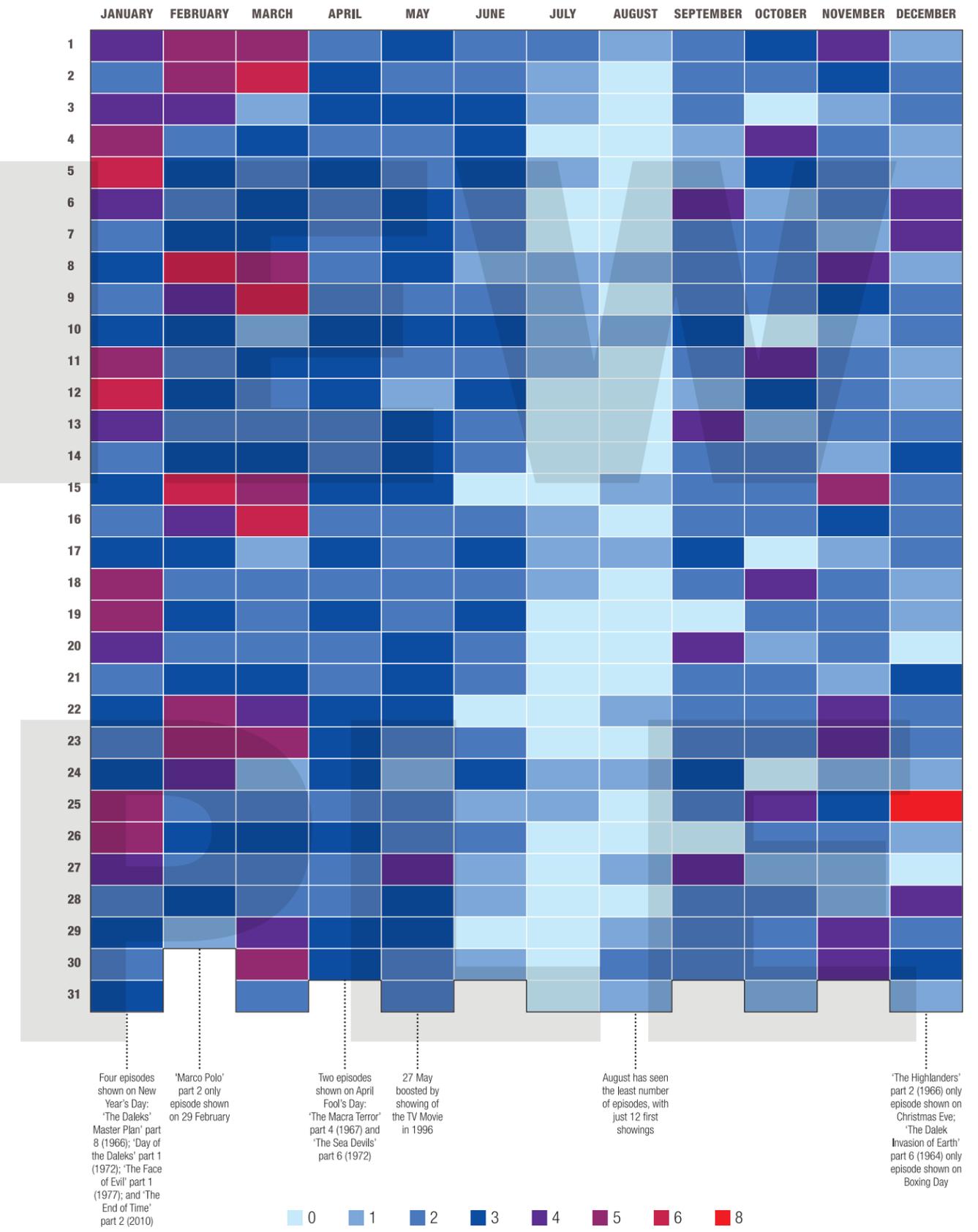
Transmission pattern through each year from 1963-1989 and 2005-2012



■ Number of episodes first broadcast on each day of the week



■ Number of episodes first broadcast on each day of the year



THE DIMENSIONS OF TIME

Most common time slots for first broadcast of *Doctor Who* episodes

Many fans would say the best time to watch *Doctor Who* was well into the evening hours of a dark autumn night, just like when they were children. But as we've seen from the yearly transmission pattern, there are only three periods when the programme was broadcast in the latter months of the year: the first six years (when it was on nearly all year anyway), the Fourth Doctor's era and the Seventh Doctor's. Similarly, it has predominantly been shown in the early evening, between five and six o'clock, with 58.5% of episodes starting broadcast within this hour. Only 12.7% have started after seven o'clock. Those beginning after 7.30pm are almost exclusively the Seventh Doctor stories, when the programme was shown on Wednesday evenings opposite *Coronation Street* — but those fans harking back to the thrill of watching on an autumn evening are not usually proponents of this era.

Excluding the TV Movie, which had an unusually late showing at 8.29pm on a May Day Bank Holiday Monday, the latest an episode has begun broadcast is 7.40pm, "The Greatest Show in the Galaxy" part 3 and "Gridlock" going out at this time. The earliest is 5.09pm, for the first three parts of "The Keeper of Traken" and episodes one, two and four of the following story "Logopolis". The most common time for an episode to start is 5.15pm, with 80 (10.2%) doing so, while a further 48 began within three minutes either side (taking the share to 16.2%).

The chart shows the hours of five to eight o'clock divided into ten-minute segments, with the radius of each span indicating the number of episodes starting within that slot. The hour hand indicates the earliest time an episode has been shown, the minute hand the latest, while the second hand marks the average across all episodes — specifically, 3 minutes and 6.6 seconds after six o'clock. The median falls at 5.51pm, a time at which 47 episodes have begun broadcast.

After the dominance of the 5.10-5.19pm slot, with 135 episodes starting then, the next most common is 5.50-5.59pm, with 128 episodes. 89 began between 5.40 and 5.49pm, while 56 started in the ten minutes after 5.30. All other time slots have fewer than 50 episodes beginning during those ten minutes. The least common time, with just four episodes starting in this slot, is 7.20-7.29pm, one of which was "The Five Doctors", broadcast on a Friday evening as part of 1983's Children In Need telethon. After the six earliest episodes mentioned above, which began just a little ahead of their 5.10pm scheduled starting time, the next least common time to show an episode is 7.10-7.19pm, with 14 episodes beginning then, all Tenth and Eleventh Doctor stories. The last segment with fewer than 25 episodes showing is 6.30-6.39pm, these 18 episodes including all six parts of "The Talons of Weng-Chiang".



Latest
19:40

Earliest
17:09

Average
18:03

Most common
17:15

SAMPLE

125

CLOSING TIMES

Total number of '25-minute' episodes: **679**

39.6% within 30 seconds of 25m

Average duration: **24m 14s**

Most common duration: **24m 30s**

Base: All episodes from 'An Unearthly Child' 1 to 'Survival' 3 excluding 'The Five Doctors', 'Resurrection of the Daleks' and Season 22



Spread of durations for *Doctor Who*'s two standard episode lengths

For the majority of the original series, *Doctor Who* followed a format of multi-part stories show in approximately 25-minute episodes. Since its return it has adopted the structure more common to today's television series of one- or two-part stories of 45 minutes each, which the original series only dabbled with once for Season 22. The only episodes outside these standards are season finales and specials (and one season opener, "The Eleventh Hour"). These are included with the 45-minute episodes in the chart below, except the 90-minute "The Five Doctors" and the 85-minute TV movie. The original series was better at hitting its target, with a higher percentage of episodes within 30 seconds of the standard duration. Indeed, if one takes this to actually be 24½ minutes, which was the true target for the 25-minute slot, then an impressive 60% of episodes were within 30 seconds of this length.

Total number of '45-minute' episodes: **108**

Average duration: **47m 1s**

29.6% within 30 seconds of 45m

Most common duration: **44m 43s**

Base: 'Resurrection of the Daleks', Season 22 and all episodes from 'Rose' to 'The Angels Take Manhattan'

Excluding episodes over 50 minutes

Average duration: **44m 54s**

34.0% within 30 seconds of 45m





THE TIME MONSTER

■ Total time required to watch all of *Doctor Who* to date

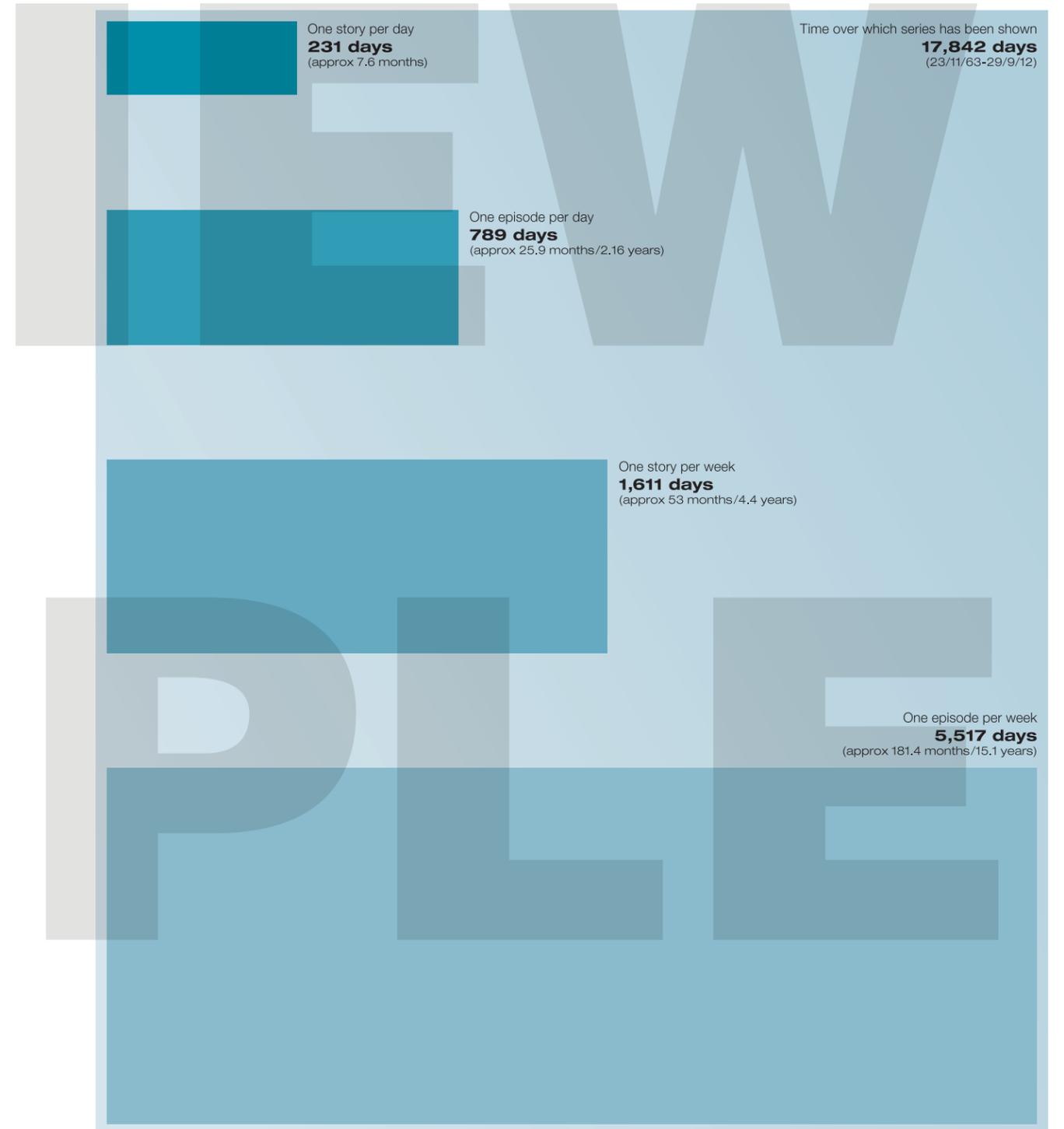
Up to "The Angels Take Manhattan", there have been 231 *Doctor Who* stories (not including "Shada", counting "The Trial of a Time Lord" as one story, and "Utopia" as a separate story from "The Sound of Drums/Last of the Time Lords") made up of 789 individual episodes. These have been broadcast over a span of 48 years, 10 months and 6 days. But how long would it take if you were to sit down and watch all the episodes in one consecutive run?

The answer is surprisingly short. For a show approaching its 50th anniversary (even taking into account that it was off the air for 15 years), all those episodes run end to end would take up just 15.08 days. Still, that would be quite a marathon and doesn't account for tea or toilet breaks. Perhaps watching (or, in the case of the missing episodes, listening to) one story a day is more realistic. While the single episode "Mission to the Unknown" would be easy to fit in, it would take you nearly six hours to watch all of the 14-episode "The Trial of a Time Lord" in one sitting, and close to eight months to get through the whole series — still doesn't sound long, perhaps, for such a long-lived programme.

Most people should be able to find time to watch an episode a day, surely, even if they're 45 minutes long in some cases. Then it would take you more than two years to get through the lot, by which time there would be a couple more seasons to add on. If you have a particularly busy life and can only manage time at the weekend to watch one story, then you'd need to keep going for nearly four and a half years, by which time we'll almost certainly be watching the Twelfth Doctor in action. And at just one episode a week — mirroring the original broadcast but without all those annoying gaps between seasons — then you should just be finished in time for *Doctor Who*'s 65th anniversary. If you're a long-time fan who's old enough to remember watching the first episode on broadcast, then this might not be a wise option to undertake...

All episodes consecutively
15.08 days

All existing episodes consecutively
13.26 days



SAMPLE

FLASHPOINT

Cumulative changes in weekly audience numbers

We've seen from the average audience sizes for each year how *Doctor Who* has fared over time, but how many viewers come and go over the course of a season? To compare the weekly shifts in viewer numbers, and to see which seasons held on to their starting audiences, which won more viewers and which saw people drift away, the following charts normalise each year's debut episodes to zero and plot the subsequent rises and falls in audience size each week. The revived series are shown opposite, while the original series are presented in groups over the next four pages.

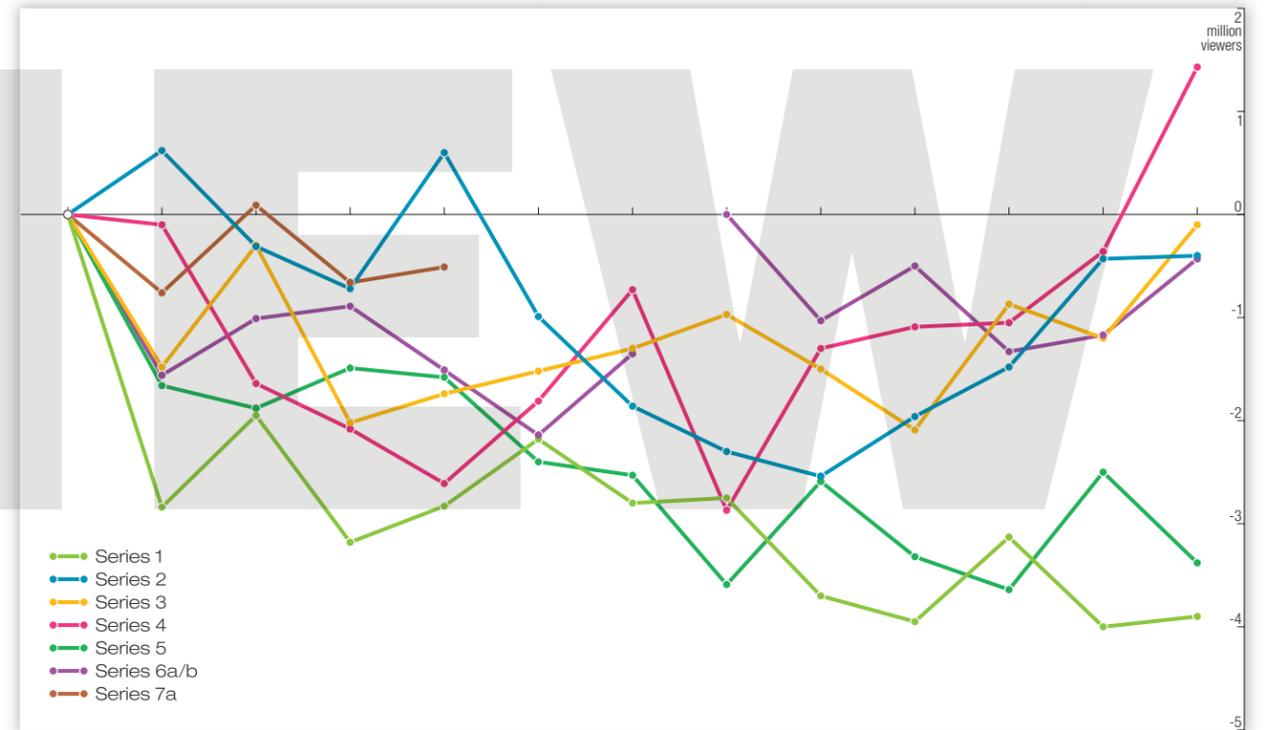
These charts use the official viewing figures for the first broadcast of each episode on BBC1, which for recent years include people who have watched a recording within a week of broadcast, but not BBC iPlayer users. For Series 5 onwards they include viewers watching on BBC HD channels when showing episodes simultaneously to BBC1. Influences on the size of such initial audiences are numerous and hard to catalogue. Not only is the perceived quality of the ongoing series a factor but also things like how well received the previous episode was, what publicity and anticipation has been generated for an episode, how popular the programme scheduled before or after is, the time of day the episode is shown, whether it was delayed by preceding programmes, what was on other channels, whether an episode falls on a bank holiday, and even what the weather is like. Individual rises and falls may be hard to explain without this full context, therefore, but the trend for each season overall can be discerned.

Weekly changes in audience size for Series 1-7a (2005-12)

The top chart opposite plots the cumulative change in each episode's viewer numbers from the previous episode, with the initial episode normalised to zero. The immediate observation is that Series 2 (2006) was the only one to build on its debut audience the next week. Because season openers tend to get a higher rating than later episodes thanks to all the launch publicity, to build on this for the second episode is impressive. Note, however, that this series had the lowest audience for a debut episode, at 8.6m viewers, until 2012's Series 7a (8.3m). However, it was also one of only two seasons to later rise significantly above its initial audience, thanks to the return of the Cybermen in episode five; Series 4's surprise regeneration at the end of episode 12 led to the concluding episode gaining almost two million extra viewers, almost 1.5m above the season's opening episode.

Conversely, Series 1 (2005) had the biggest fall from its opening episode, although this did score a record high of 10.8m viewers owing to anticipation around the return of *Doctor Who* to our screens, a figure not beaten within any other 21st Century season (only by special episodes). The general trend for most of these Series is gradually to dip around the middle before picking up again towards the season finale. Series 3 (2007) bucked this trend the most, with a relatively light dip early on (surprisingly the return of the Daleks gained the second-lowest audience that year) but then a more steady rise to a finale almost as widely seen as its debut. Only Series 1 and 5 (2010) had an overall downward trend, closing with 3-4m viewers fewer than they started with. They had the greatest drop-offs after their opening episodes, however, and each was a new experience for viewers — Series 1 being the first for over 15 years, of course, and Series 5 being the first headed by Steven Moffat and starring Matt Smith.

The bottom graph shows the same cumulative changes, but normalised to each year's second episode, to take out the impact of the opening episodes' typically higher audiences. The relative evenness of Series 3 is clearer here, hovering around the zero line, as are the two halves of Series 6 (2011). Series 1's decline is also seen to be less severe without the huge opening audience, dipping by only a million or so towards the end. Being the only year to raise its audience after the first episode, Series 2's line moves down here, highlighting its mid-season dip.



LOVE & MONSTERS

Original audience size versus popularity rating by fans

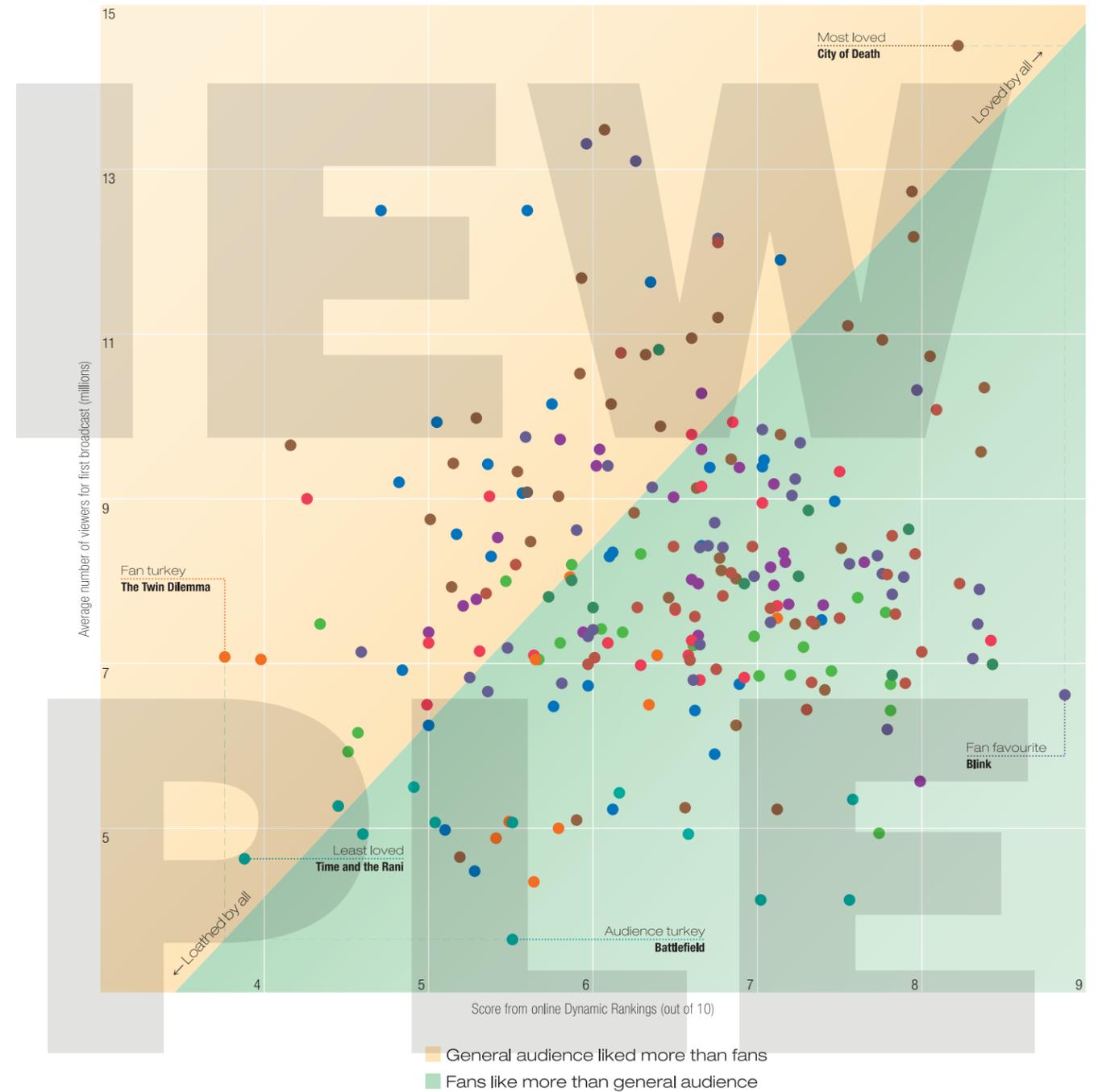
When gauging the popularity of any particular *Doctor Who* story there are two available measures: the number of people who chose to watch it when it was first broadcast, and the subsequent opinion of dedicated fans. (A third measure would be the audience appreciation index, but these figures aren't available for all episodes.) As we have seen, there are many factors affecting the number of people who decide to sit down and watch an episode of *Doctor Who* at any given showing. So audience size is a very broad guide to how much people like the programme, perhaps better applied to longer timescales than individual serials, but it's the best indicator of the general popularity of the series we have. Fans, on the other hand, like nothing more than debating the pros and cons of stories and scoring them relative to each other. There have been many surveys of story popularity over the years and, while finding two fans who agree on how good a story is is pretty close to impossible, the bigger the survey sample the more accurately an overall opinion can be divined. For this chart, the scores from the Doctor Who Dynamic Rankings site at dewhurstdesigns.co.uk/dynamic were used. This hosts an ongoing survey of fan opinion, with more than 7,300 voters to date. The scores used here were those as of 23 November 2012.

Plotting each story on an axis of average number of viewers versus overall fan rating shows the spread of the programme's popularity. A diagonal joining the minimum and maximum figures on each axis gives a line that can be said to represent agreement between general viewers and fans about their liking of a story, with results above and to the left of this line indicating the audience liked them more than fans do, while those below and to the right are stories fans like more than the public did. An imaginary line moving perpendicular to this would connect stories of equal overall regard, with greater concord between the two audiences the closer the story is to the diagonal.

Not unexpectedly, more stories fall below the diagonal, indicating they're more highly appreciated by fans than their original broadcast audience size suggests they were by the general public. This is clearly demonstrated by the fans' highest rated story (by some margin), 2007's "Blink", which was originally seen by a below-average 6.62m viewers on broadcast. 1965's "The Web Planet" (closest to the upper left corner of the chart), on the other hand, was seen by an impressive 12.5m people when first shown but is the 12th lowest rated story by fans, with a score of 4.71 out of 10. Conversely, only 4.63m people chose to watch 1987's "Time and the Rani" when it was shown, a story now ranked second worst by fans, making it the least loved story from all of *Doctor Who*. Most loved is 1979's "City of Death", ranked 10th by fans and viewed on broadcast by 14.5m people. This was helped by a strike blanking out ITV at the time, but it's still comforting to fans to know that one of their most respected stories was seen by so many people. More balanced is the result for 1977's "The Robots of Death", the next most loved story and much closer to the diagonal, viewed by 12.73m people and ranked 18th by fans with a score of 7.94. Close behind, but slipping into the 'preferred by fans' side of the chart, is 1976's "The Deadly Assassin", ranked slightly higher by fans at 17th with a score of 7.95 but seen by 12.18m people on broadcast.

Other stories sitting on or very close to the diagonal are, from top right to bottom left: 1982's "The Visitation" (9.78m viewers/6.6 fan score); 1972's "Day of the Daleks" (9.6m/6.66); 2008's "Partners in Crime" (9.14m/6.36); 1977's "The Sun Makers" (8.83m/6.25); 1967's "The Macra Terror" (8.2m/5.87); 1985's "Attack of the Cybermen" (8.05m/5.86); 2005's "The Long Game" (8.01m/5.87); the same year's "Aliens of London/World War Three" (7.81m/5.73); 2007's "The Lazarus Experiment" (7.19m/5.48); 1983's "Arc of Infinity" (7.15m/5.31); 2007's "Daleks in Manhattan/Evolution of the Daleks" (6.83m/5.25); 1983's "The King's Demons" (6.5m/4.99); 1966's "The Gunfighters" (6.25m/5.0); and 1987's "Delta and the Bannermen" (5.27m/4.45).

Assessing the results by Doctor, while all have most of their stories falling on the 'preferred by fans' side, the First and Fourth are most evenly split either side of the diagonal (although widely spread), corresponding to the two periods of the programme when viewing figures were at their highest. Most closely clustered along the diagonal are the Third, Fifth and Sixth Doctors. The Third Doctor only has one result straying far from the consensus line, 1970's "Inferno", which is rated highly by fans with a score of 7.99 (ranked 14th) but was seen on broadcast by just 5.57m viewers. The Fifth Doctor has a similar fan favourite in 1984's "The Caves of Androzani" — ranked third with a fan score of 8.42 but with viewing figures in line with the rest of the stories that year — but also a story that's way over into the 'preferred by audience' side: 1982's "Time-Flight" was seen by 9m viewers on broadcast but is generally disliked by fans, scoring just 4.26, putting it fifth from the bottom of their rankings. The Second, Ninth and Eleventh Doctors' stories all fall very close to each other, largely clustered in the region between 7m and 9m viewers with fan scores of 6-8. Of the two last, only season openers and Christmas specials fall significantly outside this area.



General audience liked more than fans
Fans like more than general audience

- First Doctor
- Second Doctor
- Third Doctor
- Fourth Doctor
- Fifth Doctor
- Sixth Doctor
- Seventh Doctor
- Eighth Doctor
- Ninth Doctor
- Tenth Doctor
- Eleventh Doctor

REITERATION

THE RETURN

■ Average ratings for repeat broadcasts of *Doctor Who* episodes on BBC1 and BBC2, by year and number of stories

In contrast to today's television landscape, where 24-hour schedules are cheaply filled with repeats of past shows, in the 1960s and 1970s when there were only three or four channels, reshowings of even popular programmes were a rarity. Not only did repeats require extra payments from the broadcasters to the people who appeared in them (as actors' union Equity feared they might do its members out of new work), they were often criticised by viewers, who felt they should be getting new programmes to watch. The culture at the time was that if you wanted to see a particular show you had better catch it on broadcast as it was likely never to be seen again.

Doctor Who fans were more accepting of repeats; indeed, they welcomed them. Another chance to see an adventure you only half-remembered from a recent season — or worse, had unavoidably missed an episode of — was a thrilling event that didn't occur often enough. In fact, *Doctor Who*'s earliest repeated episode was its first. The BBC decided that as the show had launched amid the turmoil following US President John F Kennedy's assassination the day before, plus being hit by a widespread power outage (another more common feature of the 1960s and 1970s), it didn't get the attention they had hoped for and so "An Unearthly Child" part 1 was repeated ahead of the second episode, "The Cave of Skulls". It gained 1.6m more viewers than the initial broadcast the week before.

Another repeat wasn't forthcoming for five years, however. In the mid-1960s Dalek creator Terry Nation withdrew the BBC's rights to use the creatures as he tried to launch them in their own series in the US. "The Evil of the Daleks" broadcast at the end of Season 4 in May-July 1967 was therefore presented as the final Dalek story, with their seeming destruction from civil war (engineered by the Doctor, of course). So that the following season wouldn't be completely Dalek-less, however, the serial was chosen to be repeated during the gap between Seasons 5 and 6. This move was so unusual that the showing was actually tied into the narrative of the preceding story. At the end of "The Wheel in Space", the Doctor warns Zoe, who has stowed away aboard the TARDIS, of the dangers she might face by presenting his "thought patterns" on a screen — that is, the video of "The Evil of the Daleks". The following week, the repeat of episode one began with an extra voiceover by the Doctor and Zoe to explain the opening scene, and Season 6's first story, "The Dominators", began the week after the Dalek serial concluded with the Doctor tired from his mental efforts.

With the boom in popularity of *Doctor Who* during the 1970s, it became common practice to repeat a few episodes between seasons, often at Christmas. The first was a repeat of the Third Doctor's opening story, "Spearhead from Space", a couple of weeks after the close of Season 8, followed at Christmas by a reshowing of that season's concluding story, "The Dæmons", edited from five episodes into a 90-minute omnibus edition. This became a regular feature, with omnibus versions of "The Sea Devils", "The Green Death", "Planet of the Spiders" and "Genesis of the Daleks" shown in the weeks between Christmas and New Year of 1972-75 respectively. Also slotted in were a late-summer 1973 omnibus repeat of "Day of the Daleks", a further unscheduled repeat of the "Sea Devils" omnibus in 1974 (when cricket coverage was hit by industrial action), and an omnibus of "The Ark in Space" ahead of the launch of Season 13 in 1975.

From 1976 it was usual to repeat a story or two from the previous run in the summer gap between seasons, either with the episodes edited together into a 'feature' length but not cut, or individually shown. In the case of the "Five Doctors" repeat in 1984, the original 90-minute special was shown in four parts as it had been overseas. These repeats only ceased after *Doctor Who* was suspended in 1985.

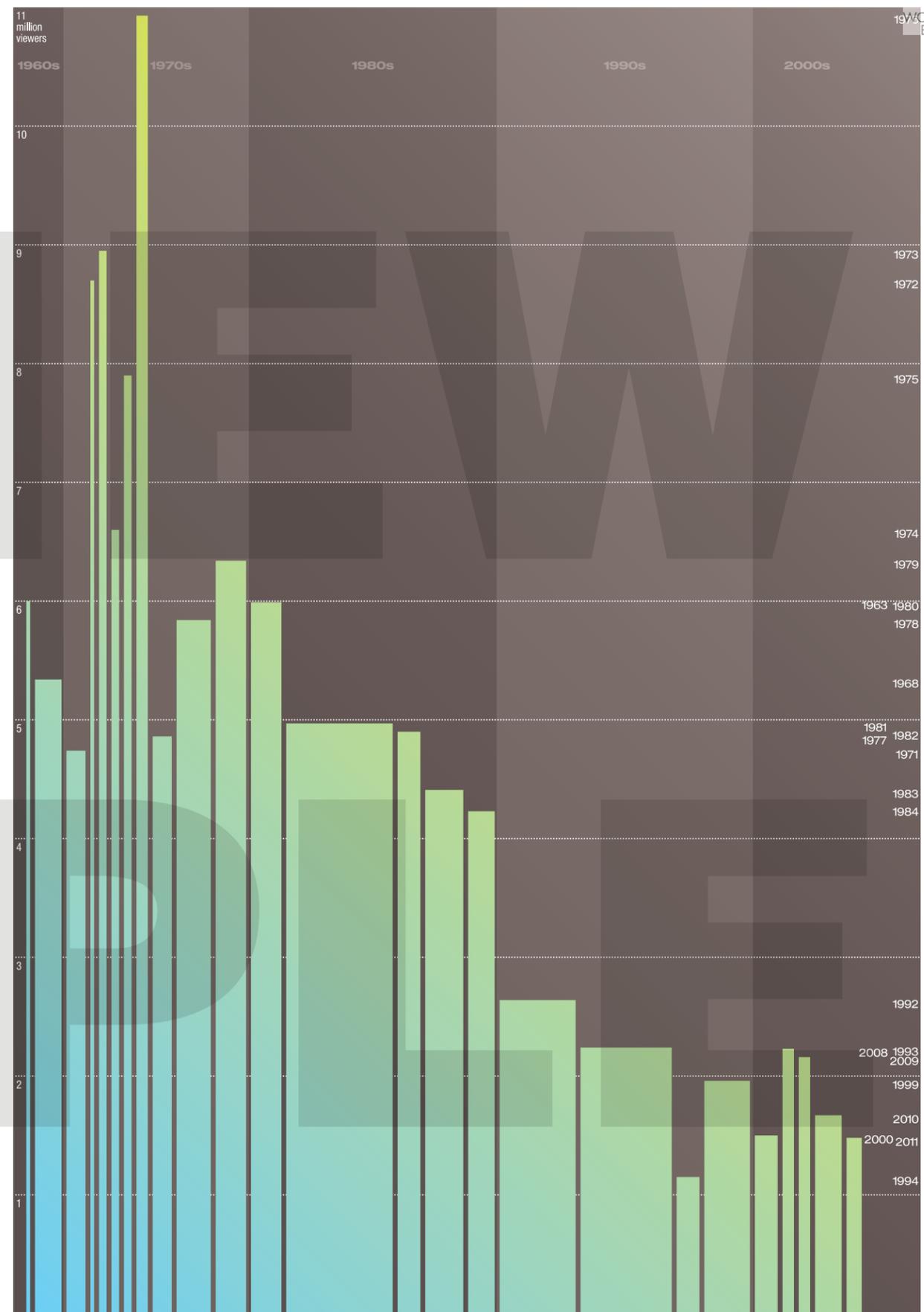
The biggest chance to see old episodes on television again came in autumn 1981 when producer John Nathan-Turner secured a five-week run on BBC2 to bridge the longer than usual gap between Seasons 18 and 19. Billed as "The Five Faces of Doctor Who", this was the first time past Doctors' stories had been reshown, and a rare outing for black-and-white episodes ten years after the introduction of colour. Limited to four-part stories (from what was then available in the archive) and wanting to feature all the Doctors, Nathan-Turner chose "An Unearthly Child", "The Krotons", "Carnival of Monsters", "The Three Doctors" and "Logopolis" for broadcast. With good publicity and a teatime slot, this was a popular outing, as the rise of home video was beginning to make audiences appreciate the ability to revisit past programmes. It was such a success that the following summer more space was given to 'out-of-time' *Doctor Who* repeats, with omnibus editions of "The Curse of Peladon", "Genesis of the Daleks" and "Earthshock".

With no new *Doctor Who* after 1989's Season 26, the next batch of repeats on BBC2 were a welcome relief from the drought. Kicked off with a specially made half-hour documentary, *Resistance is Useless*, these again presented one story from each Doctor: "The Time Meddler", "The Mind Robber" and "The Sea Devils" in early 1992, and "Genesis of the Daleks" (again!), "The Caves of Androzani", "Revelation of the Daleks" and "Battlefield" in early 1993. The series' anniversary in 1992 was celebrated with a showing of the freshly recoloured "The Dæmons", and its 30th birthday the year after saw a return to BBC1 with a repeat of "Planet of the Daleks", each episode preceded by a five-minute look at different aspects of the show.

With the release of stories on home video ramping up in the 1990s, and satellite television channels showing old programmes, *Doctor Who* fans had more chances than ever to see past adventures. The American-made TV Movie didn't lead to a series but got a repeat on BBC2 in November 1999 as part of *Doctor Who Night*. It was intended to follow this with a full run of colour story repeats at weekday teatimes, beginning with "Spearhead from Space". Sadly audiences were poor and after "The Silurians" the run skipped ahead to "Genesis of the Daleks", but this failed to drum up extra viewers. Full audience figures for these last two aren't available so in the chart they are represented by the average of the episodes that do have figures.

These days, with multiple channels and online catch-up services, missing an episode of *Doctor Who* seems impossible and repeats on BBC3 are numerous (at least of New Series episodes). As such, repeats on BBC1 are afforded only to special episodes. The 2007 Christmas special, "Voyage of the Damned" starring Kylie Minogue, was shown again in the New Year, while the high audience for the Series 4 finale led to a speedy repeat of its two episodes. Further repeats have been restricted to Christmas specials, including all of those to date following the 2010 special "A Christmas Carol".

The chart shows the average audience for repeat showings for each year they were shown, in chronological order. The width of the bars is proportional to the total number of episodes repeated that year, with omnibus editions counted as one episode.



THE EXPLODING PLANET

■ Countries that broadcast *Doctor Who* in the 20th Century, by number of stories shown

While repeats of *Doctor Who* on UK television were few and far between in the pre-digital age, the series was re-broadcast around the world in more than 70 countries. By the time *Doctor Who* started, the BBC was commonly selling its programmes to overseas broadcasters, either directly through its Television Enterprises department (later BBC Enterprises, now BBC Worldwide) in London or subsidiary offices in Toronto and Sydney, or via regional distributors such as Television International Enterprises, which supplied broadcasters in Africa, the Middle East and the Caribbean; Time Life Films/Television, which marketed programmes to the Americas; and Overseas Redifusion, whose clients included South-East Asian broadcasters.

Because different countries used different television systems of varying levels of technical sophistication, it was simpler, cheaper and more reliable to supply programmes on film rather than videotape. For this reason BBC Enterprises regularly 'telerecorded' programmes, whereby the picture was shown on a special large, flat monitor to which was synched a film camera. *Doctor Who* was telerecorded onto 16mm black-and-white film from the start until near the end of the Third Doctor's era, by which time providing overseas broadcasters with colour videotape was much more viable. Positive copies of the telerecorded film negatives would then be sent to countries that bought the rights to show the programme and, after an agreed time or number of broadcasts, were destroyed, returned to BBC Enterprises or passed on to another country that had negotiated to transmit the show. This meant Enterprises didn't necessarily have to strike a new print for every broadcaster that bought the show but could reuse copies already in circulation or which had previously been returned. So although "An Unearthly Child", for example, was sold to 34 countries in the ten years after its UK broadcast, it's unlikely anywhere near that number of copies were made. Then again, larger countries such as Australia may have been sent or made their own duplicate copies for distribution to regional television stations. Without full records, it's impossible to know how many copies of each story there were.

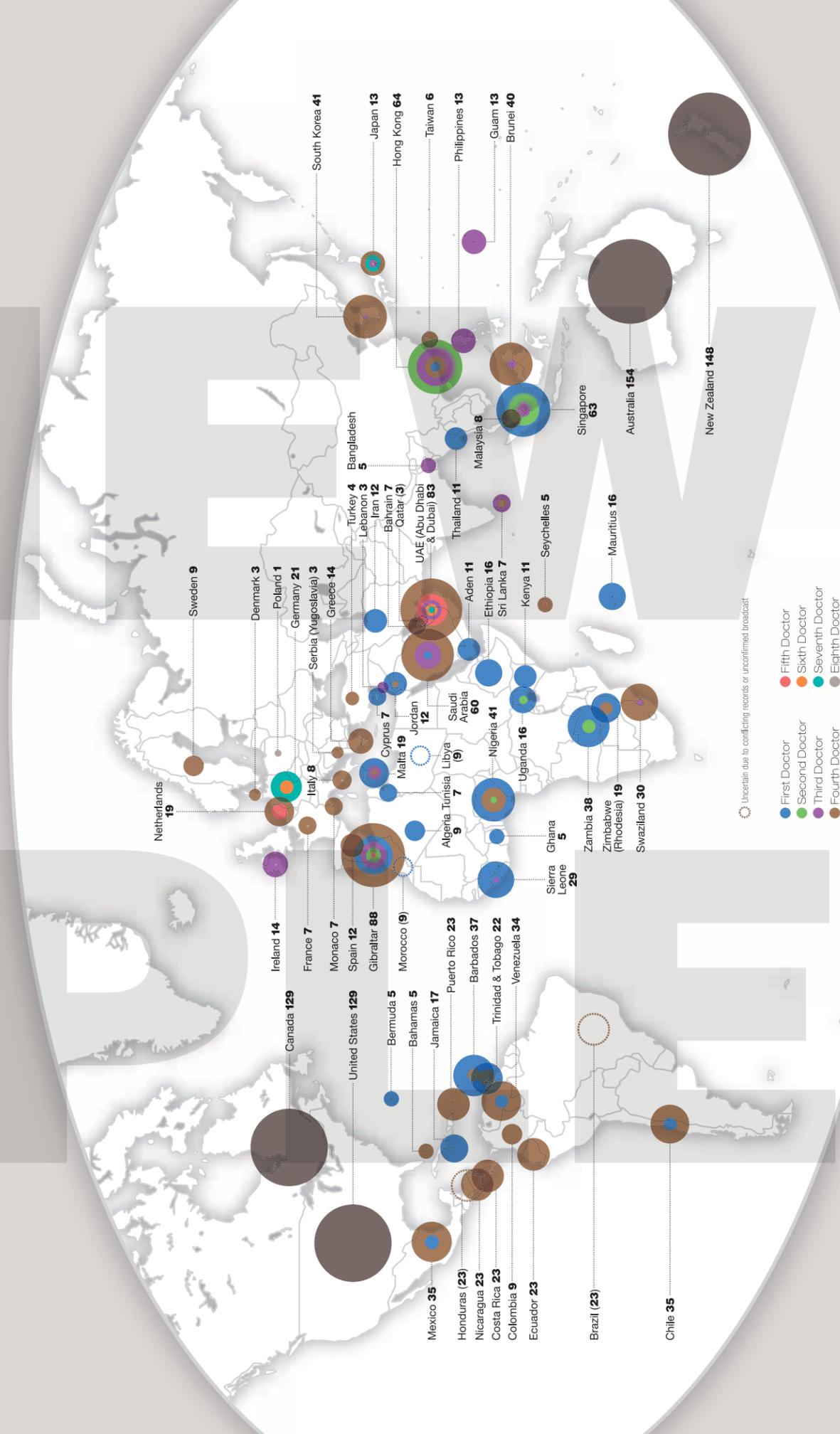
Australia was one of the earliest and most consistent buyers of *Doctor Who*, first showing the series from January 1965 and going on to broadcast all but two of the original series stories. This was actually key to the programme's showing in Asia and New Zealand as a major broadcaster like ABC in Australia could afford the initial clearance fees necessary to show the episodes. These were generally applied to a region rather than one country, so once ABC had bought a serial other broadcasters in the same region could purchase it at a much lower price. This meant if the Australian broadcaster rejected a story, it was effectively unavailable to the rest of the region as other broadcasters were unable or unwilling to pay the full clearance fees. Nonetheless, the first overseas broadcaster to show *Doctor Who* was NZBC in New Zealand, which bought the first three stories and showed them from September 1964. These were given a 'Y' rating by the country's television censors, which meant they couldn't be shown before 7.30pm; subsequently NZBC decided it preferred to show the programme earlier (and maybe wasn't keen on paying the initial clearance fees) and so didn't buy any more until the late-1960s, by which time Australia had bought and shown later stories, making them cheaper for NZBC to purchase. Even then it only broadcast those which received a 'G' rating, which meant many serials were omitted if they couldn't be suitably cut. Australia's censors also required occasional cuts to make the programme suitable for a young audience, and ironically the removed material was kept long after the episodes themselves had been destroyed, making these short snippets all that survives from many 1960s episodes.

The other major buyers of *Doctor Who* were Canada and the US, although they didn't pick up the programme until the 1970s and only later showed the earlier stories. (Canada had bought the first seven stories in 1965 but dropped the series after showing only five.) Other countries that had significant periods of showing *Doctor Who* were Gibraltar, the Arab Emirates of Abu Dhabi and Dubai, Hong Kong and Singapore.

This map shows which countries broadcast original-series episodes of *Doctor Who* before 2000. The size of each disc is relative to the number of stories shown, and the colouring indicates which Doctors' eras these covered. Note that these bands are sized relative to the radius of the disc, not its area, with the least-shown Doctors in the centre and the most-shown at the edge. Visually this favours those Doctors who had more episodes shown in the country to highlight which are most likely to be remembered by viewers. As Australia, Canada, New Zealand and the US showed most (surviving) episodes from all eight 20th Century Doctors, their discs have not been colour coded. Although BBC Enterprises sales records have been examined by various researchers over the years, they are not always complete nor even consistent. The broken circles indicate where there is some evidence the country bought *Doctor Who* but either it's inconclusive or searches of local newspaper listings have given no proof the episodes were actually shown.

The two main periods of overseas sales — the early First Doctor and Fourth Doctor stories — are clear (also see next chart, overleaf). The former are predominantly in the Caribbean, Africa and the Middle East, plus Hong Kong, Singapore and Thailand in the Far East. The later sale of Fourth Doctor stories to American broadcasters through Time Life also opened up markets in Central and South America, as well as Brunei and the United Arab Emirates. The cluster of European countries showing Fourth Doctor stories, plus Saudi Arabia and South Korea, came later after the BBC's surviving archive of episodes had been collated and offered for sale in the mid-1980s. The Second Doctor got most exposure in parts of Africa plus Hong Kong and Singapore, whereas the Third Doctor's appearances in Guam, the Philippines and Saudi Arabia were probably off the back of Time Life's deal with US television stations, which also supplied US Air Force bases. The 1980s Doctors had far less distribution, the Fifth only showing in the Netherlands and ever-faithful Gibraltar, plus later in the UAE, while the sale of the Seventh Doctor stories to Germany led to it later showing the Sixth Doctor's era.

■ For comprehensive information on the sale of *Doctor Who* overseas, visit broadcast.org, from which data used here was derived



○ Uncertain due to conflicting records or unconfirmed broadcast

- First Doctor
- Second Doctor
- Third Doctor
- Fourth Doctor
- Fifth Doctor
- Sixth Doctor
- Seventh Doctor
- Eighth Doctor

A HOLIDAY FOR THE DOCTOR



Number of countries each Doctor Who story was broadcast in during the 20th Century, by region

We've looked at where around the world *Doctor Who* was shown, but which Doctors and stories were most widely seen? This chart lists each 20th Century story with a dot for every country in which it was broadcast. These are coloured by region, with the four key markets — Australia, Canada, New Zealand and the US — getting their own colours, while other countries are grouped into the six main territories in which the series was sold. Solid dots represent overseas showings during the episodes' original sales period (usually within five or ten years of their original offering by BBC Television Enterprises), while rings indicate countries that bought the stories when they were offered again after the BBC's archive holdings of the series were first collated in the early 1980s. For stories originally broadcast in the UK after around 1984, a ring indicates a country that has bought the story as 'back catalogue', having already shown later stories. Filled paler rings denote a country that documents suggest probably showed *Doctor Who* but for which corroboratory evidence, such as contemporary programme listings in local newspapers, has not yet been found.

Most immediately obvious are the two periods when the series was most widely sold: the early First Doctor stories and the early Fourth Doctor stories. The colouring also makes it easy to see where these showings were: in the former case, predominantly African countries, along with the Caribbean and the Middle East, while the latter's sales were initially to Central and South American countries (although exactly how many is unclear), boosted by further sales in Europe in the late-1980s. Conversely, the Third Doctor era saw most sales to Asia, alongside the US's first purchases of the series.

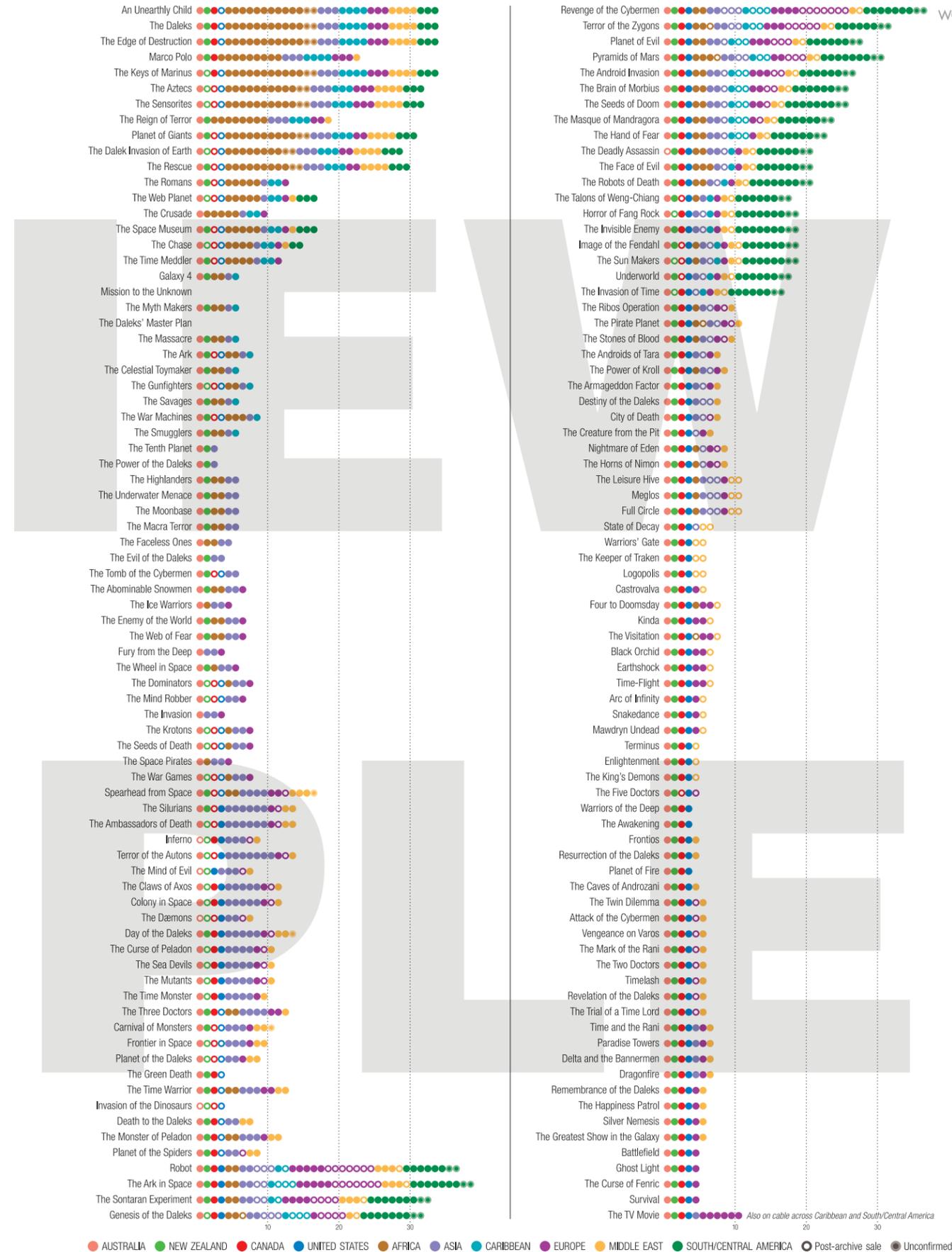
Some of the variations in early overseas sales of *Doctor Who* can be tied to the batches in which episodes were offered, although a buyer didn't have to take all the episodes in a batch. For example, the first batch consisted of the opening three stories and, presumably as it was a new series, this was shown in full by all the countries that bought it. The next few batches covering "Marco Polo" to "The Chase" were less consistent, however, with some African, Middle Eastern and South American countries not showing all stories. The reason for this is to do with how the programme was dubbed for non-English-speaking audiences. BBC Enterprises was happy to sell to foreign-language broadcasters and would supply them with the usual film prints (with English soundtrack) plus a tape of just music and sound effects (that is, no dialogue [and often different music from that used in the original episodes]) with which the buyer could mix their own recording of the dialogue in their local language. One early such market was the Spanish-speaking countries of Central and South America, and in 1966 one of the first here to show interest was Radio Caracas Televisión (RCTV) in Venezuela. This was the first broadcaster in the region to show *Doctor Who* and, it seems, the one to arrange for a batch of early serials to be dubbed into Spanish. However, for reasons unknown, RCTV chose not to re-dub the historical stories — except for "The Aztecs", which had obvious relevance to its audience. Records show it cancelled its purchase of "Marco Polo" and "The Reign of Terror" from the first season, presumably after viewing the film prints and deciding adventure in 13th Century China and Revolutionary France wouldn't interest Venezuelans (or at least not as much as voyages to Marinus and the Sense-Sphere). The BBC would only have created music-and-effects tracks for the serials Venezuela ultimately bought, so when other countries such as Mexico and Chile purchased the series they were only offered those stories that had already been re-dubbed. Equally, when broadcasters in Arabic-speaking countries in the Middle East and North Africa were considering buying *Doctor Who* in late-1967, they were only offered those same non-historical serials for which music-and-effects tracks had already been made, to which they could add new Arabic dialogue.

The effect of this is clear from the chart. Of the first 17 stories, the ones set in Earth's past — "Marco Polo", "The Reign of Terror", "The Romans", "The Crusade" and "The Time Meddler" — sold significantly less, all because RCTV decided it didn't want those historicals (only "The Aztecs"). The African countries that showed all these stories were English-speaking ones like Sierra Leone and Uganda, whereas only nine of the serials up to "The Rescue" were dubbed into Arabic. The fall in sales with the loss of those African and Middle Eastern buyers is striking (not helped by Hong Kong and Thailand dropping the series at this point too), followed by the South American broadcasters after "The Chase".

For the remainder of the First Doctor's time, Barbados, Sierra Leone, Singapore and Zambia were the main buyers alongside Australia and New Zealand, while the Second Doctor stories were mainly bought by Australia, Hong Kong, Singapore and, latterly, Gibraltar. It's these less-widely sold stories that are now largely missing from the BBC archives, but that doesn't necessarily imply a direct causal link. Indeed, research has shown most of these episodes survived undiscovered in Sierra Leone until the 1990s when they were destroyed during civil war. Conversely, even perversely, three episodes survive from "The Daleks' Master Plan", which with its prequel "Mission to the Unknown" are the only stories never to have been broadcast abroad. Australian censors rated some episodes as too adult for the ABC's preferred transmission time so it decided not to show them rather than make extensive cuts, which left them too expensive for other broadcasters to acquire. ("Invasion of the Dinosaurs" almost suffered the same fate as it too was initially rejected by the ABC and the original transmission tapes were subsequently marked for erasure surprisingly soon after UK broadcast. Fortunately all but episode 1 evaded the wiping process and the serial was later sold to the four key markets during the 1980s.)

While the early Fourth Doctor seasons were ultimately seen in more countries than even the early First Doctor stories, their distribution was slower. Initially only Australia, Hong Kong, the Netherlands, New Zealand and the United Arab Emirates showed Fourth Doctor stories within two or three years of their UK transmission. It was only after American distributor Time Life bought Seasons 12-15 in 1978 that the programme gained wider showings in Central and South America (dubbed into Spanish), boosted later by sales in Asia, the Caribbean and Europe from the mid-1980s onwards. While these episodes established a dedicated audience for *Doctor Who* in the US, which went on to buy the rest of the series and as much of its back catalogue as then survived, few of the other countries stuck with it, only Brunei, Gibraltar and the UAE showing most of the remainder of the Fourth Doctor era. For the rest of the original series the four key markets were almost the sole buyers, with other countries occasionally showing sporadic blocks of episodes: Gibraltar's once-consistent broadcasts ended with Season 19; the Netherlands showed nine stories from Seasons 19 and 20; Japan bought Season 24 but no more, whereas Germany's transmission of the Seventh Doctor stories were popular enough that it later showed the Sixth Doctor's.

For comprehensive information on the sale of Doctor Who overseas, visit broadcast.org, from which data used here was derived





A CHANGE OF IDENTITY

Comparison of initial UK release orders of Doctor Who Target books, BBC videos and BBC DVDs

Unlike most TV series, *Doctor Who* has never been issued on other media in the order of its broadcast, starting with the first story and working through to the most recent. The book range from the Target imprint of WH Allen & Co began while the original show was still on air, but although it launched with three First Doctor stories that had previously been released in the 1960s, these weren't the first three stories broadcast. It then skipped to stories featuring the then-current Third Doctor, moving onto the Fourth, Fifth, Sixth and Seventh as they came along, but interspersing their stories with unreleased ones from the programme's past. When *Doctor Who* came to be released on VHS and then DVD, the order became even more random, to offer a more even spread of stories from each Doctor's era. Note the list of books omits those for missing stories, while some stories were never novelised.

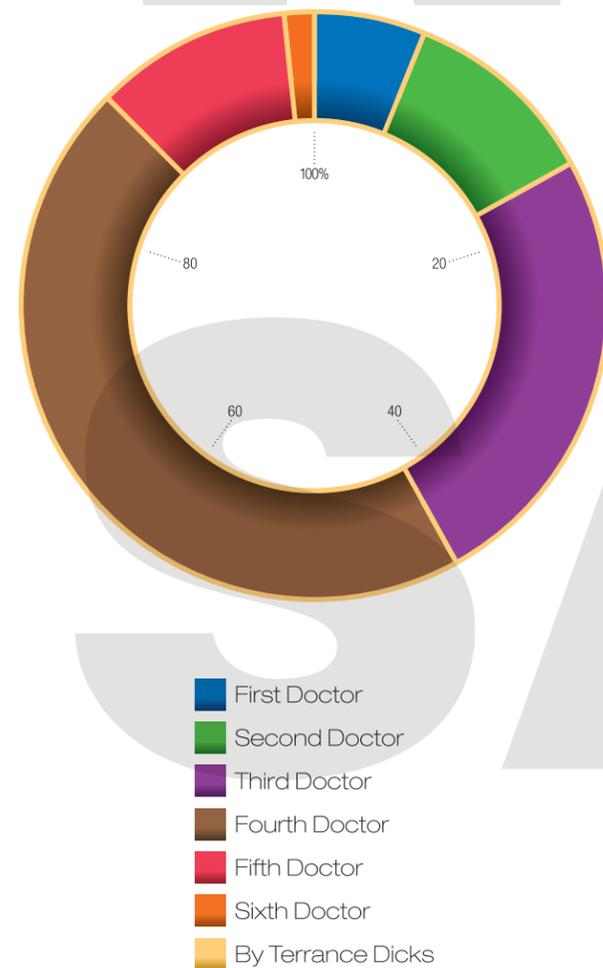
■ Target book
 ■ BBC VHS
 ■ Released in box set
 ■ BBC DVD
 ■ Released in box set



THE REIGN OF TERRY

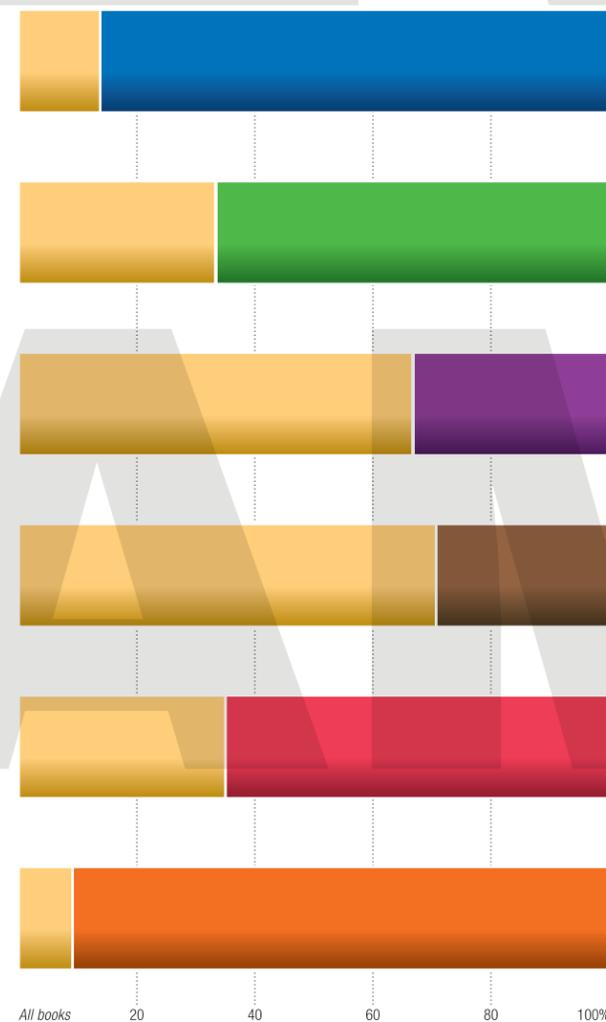
Share of Terrance Dicks books featuring each Doctor

With the Target range being launched towards the end of the Third Doctor's era and Terrance Dicks being the most prolific novel writer throughout the Fourth Doctor's, it's no surprise that most of the 64 Target books he wrote feature these two Doctors, almost half of his output being Fourth Doctor tales. With seven books apiece from the Second and Fifth Doctors' eras, they each account for 10.9% of his novelisations. By the time the majority of the First Doctor stories were being adapted, Target's policy was to approach the original script writers first, many of whom were glad to revisit and revise stories they'd written some 20 years previously, and which often hadn't yet been released on video. This left fewer pickings for Dicks, whose four First Doctor books are "An Unearthly Child", "Planet of Giants", "The Dalek Invasion of Earth" and "The Smugglers". He wrote only one Sixth Doctor story — the late Robert Holmes' "The Mysterious Planet" (parts 1-4 of "The Trial of a Time Lord") — and no Seventh Doctor books, all but one of which were by their original script writers.



Share of each Doctor's books written by Terrance Dicks

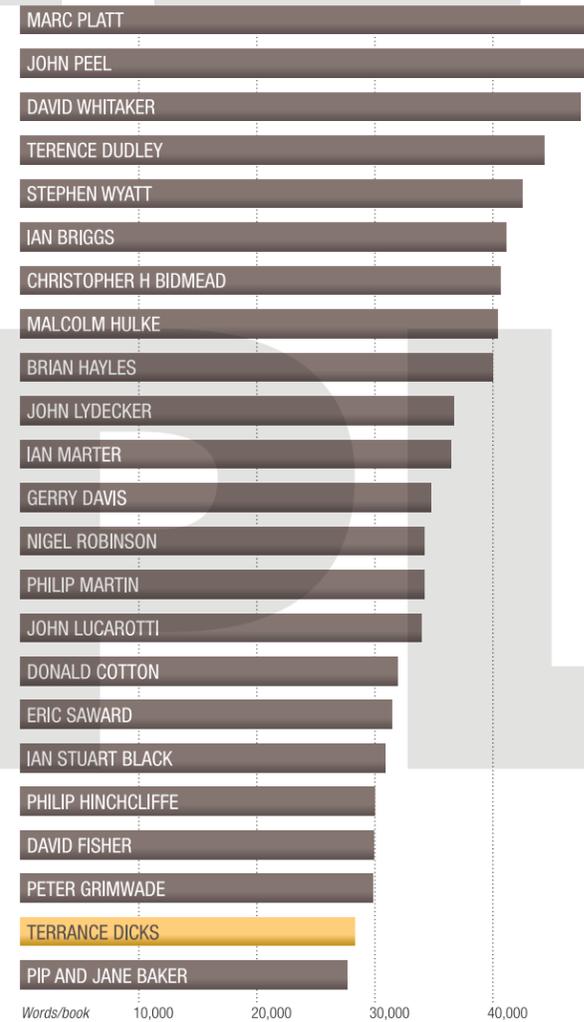
Looking at Dicks' books in relation to the total number of novelisations for each Doctor gives a rather different picture. While just under half of his books featured the Fourth Doctor, these accounted for seven-tenths of that incarnation's stories, highlighting just how prolific Dicks was during that era of the programme. Similarly he adapted two-thirds of the Third Doctor's stories — a sensible choice given he was script editor for that period of the show's history. Again, with a similar number of stories each in total, the share of Second and Fifth Doctor stories adapted by Dicks is roughly equal at around a third. Even his one book for the Sixth Doctor accounts for 9.1% of all Sixth Doctor stories as there were only 11 to be adapted. Of the 5,242,181 words in the entire Target range, Dicks wrote 1,814,202 — just over 35%. In comparison, the next most prolific writer, Ian Marter, wrote just 6.25% of the total word count.



Average word counts by author

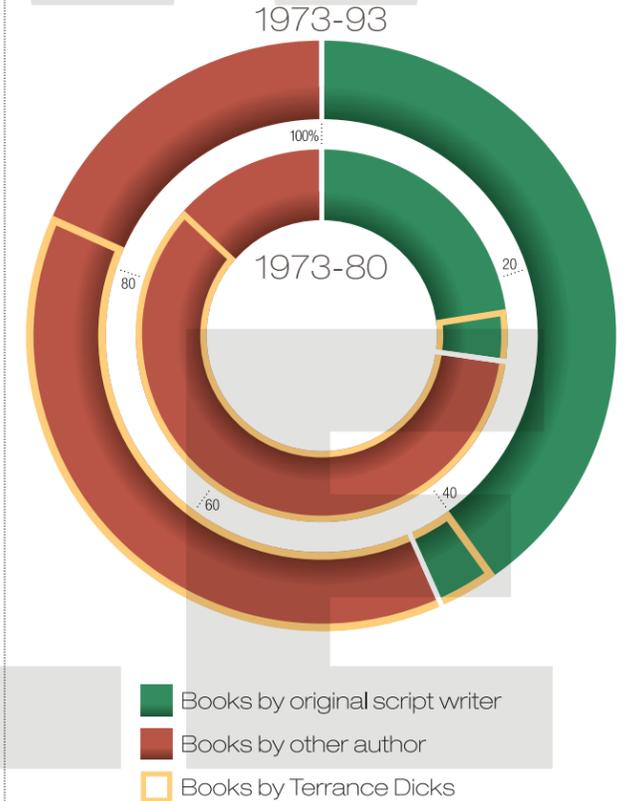
Dicks may have written the most Target *Doctor Who* novelisations, but they're by no means the longest. In terms of the average word count per book for each author to have written more than one, Dicks comes second to last, just above the terse writings of Pip and Jane Baker. John Peel's position excludes his adaptations of "The Power of the Daleks" and "The Evil of the Daleks", which at 79,222 and 93,600 words respectively are far above the standard allowed during the main run of Target books and would give him an overall per-book average of 62,711. As such, Marc Platt's near-50,000-word adaptations of "Ghost Light" and "Battlefield" place him top. The overall average word count across all books is 33,350 words, to which John Lucarotti comes closest on average, in spite (or perhaps because) of his novelisation of "Marco Polo" having one of the lowest average words per episode of the range.

Thanks to Paul Scoones for the word counts



Share of novelisations by original TV writers

Even though the Target range increasingly moved towards having the television serials' original writers adapt them for print, the sheer number taken on by Terrance Dicks means that overall more than half of all the books were written by different authors to the original scripts. Dicks' coverage of other writers' work is highlighted by the fact that although he adapted all of the television scripts he penned alone — including "The Brain of Morbius" but not "The War Games" (nor "The Seeds of Death" for which as story editor he totally rewrote most of Brian Hayles' scripts) — because this was only five stories the vast majority of his work for Target was in novelising other people's work. This becomes even clearer when looking at just those books published between 1973 and 1980 inclusive (inner ring), of which just over a quarter were by their original script writers whereas three-fifths were Dicks adapting others' serials.



THE WHEEL OF FORTUNE

Time difference in months between Classic Doctor Who stories' releases on VHS and DVD

As we saw earlier, the release orders for *Doctor Who* on both video and DVD have been pretty random, in part owing to the changing priorities of the people at BBC Worldwide who control the schedule, but mainly because there really is no set order for watching the programme. Rather than an ongoing narrative, *Doctor Who* has been more like an anthology series with a couple of continuing characters, as the TARDIS deposits its inhabitants in a new location every four weeks or so. Throughout most of the original series, there was little to link one story to the next beyond some subtle character development for the regular companions (sometimes not even that) and the occasional back reference.

So when it comes to releasing the series for home viewing, there is little imperative to present it in its original broadcast order. For one thing, many of the early serials are missing from the BBC's archive or are incomplete, so some jumps would be necessary anyway. Then there's the fact that not all viewers like every era of *Doctor Who*. The show's unique ability to regularly recast its leading man and frequent changes of production team (as with any long-running series) mean the style of storytelling has changed many times over the years, as has the whole process of television programme making. So to release the series in strict order would not only depress the Seventh Doctor fans who would have to wait years to see their favourite stories, but limiting buyers to fans of a particular era for any length of time could have made the range uncommercial.

Following on from the almost-as-erratic story-based release order of the Target books, to which fans were already accustomed, it was entirely reasonable for the BBC, when it came to issuing *Doctor Who* on VHS, to take a similar approach and offer stories from across the show's rich history to appeal to as much of the potential audience as possible. The range started slowly and expensively, as toes were dipped into the relatively new home video market, but by the 1990s its commercial viability was proven and releases quickly rose to around one a month.

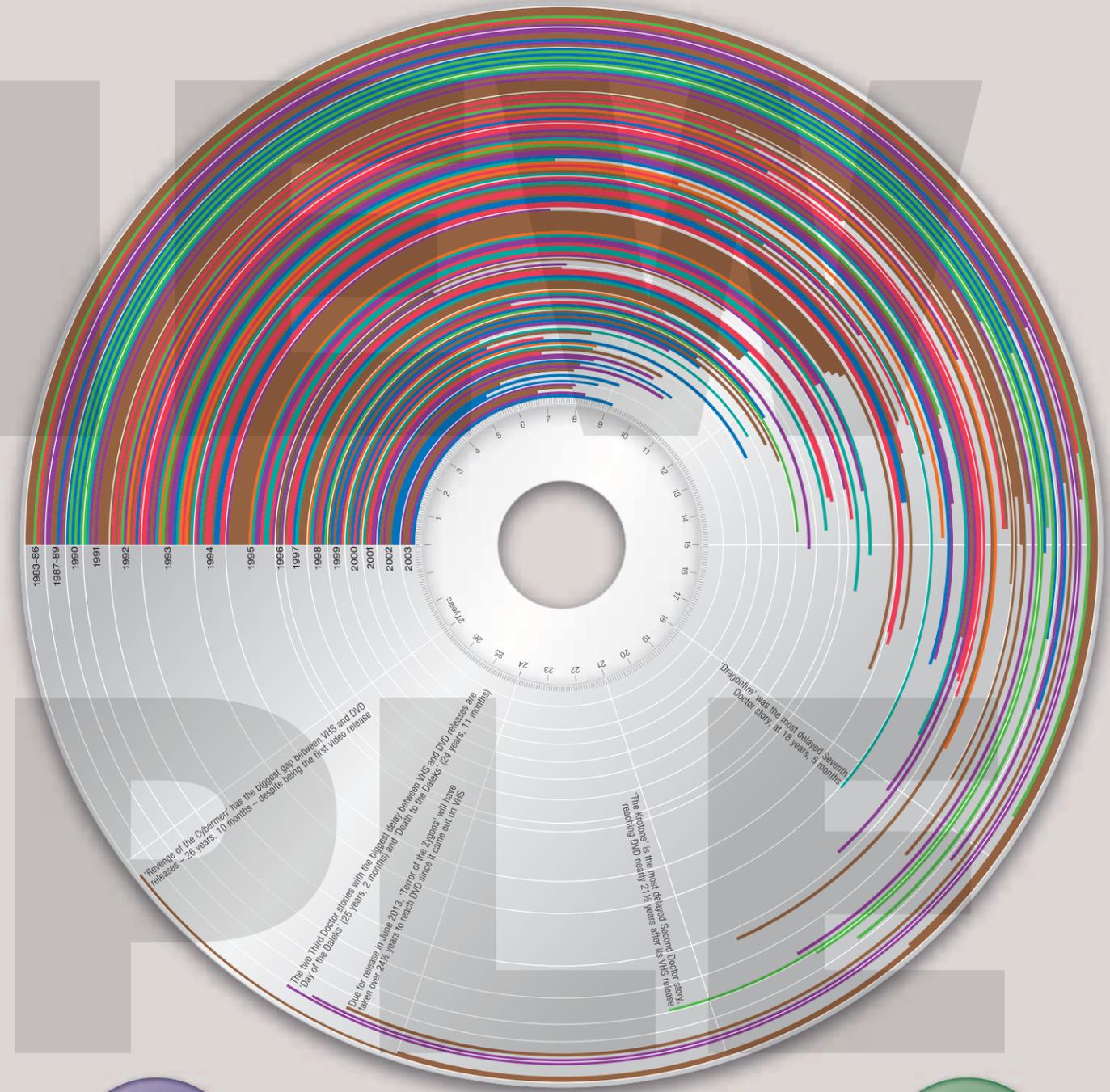
The move to DVD began in earnest towards the end of 2000, overlapping with the tail end of the video releases (although "The Five Doctors" had been included among BBC Worldwide's first water-testing DVD issue in November 1999). As such it might be expected that the earliest stories to be sold on video would be prime choices for DVD. Indeed, if the DVDs had followed the same schedule as the videos, the rings in this chart would be much more even, although gradually shortening owing to the faster release rate of the DVDs overall. In fact, many of the earliest VHS releases took the longest time to make it onto DVD, notably "Revenge of the Cybermen", the very first story on video but a relative latecomer to DVD almost 27 years later.

The shortest gap between video and DVD releases is for the TV Movie, first released shortly after broadcast in 1996, then on disc in 2003, when a story from each Doctor was issued to celebrate the show's 30th anniversary. "The Time Meddler" has the same 63-month gap, being one of the last stories to come out on video but reaching DVD mid range in 2008. No story has been released on DVD less than five years after its video release, therefore, with the average gap across the range being 13 years and 1 month, which at least is less than half the full span of releases, from the first video in October 1983 to the last DVD, scheduled for October 2013 at the time of writing.

To aid in reading the chart, the VHS release order is given below. This excludes stories that are missing the majority of their episodes and so didn't get their own video, instead having their surviving episodes released either alongside complete stories or combined in sets.

VHS release order

- | | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|---------------------------------|
| 1983 | Planet of the Spiders | The Chase | The Sea Devils | The Space Museum |
| Revenge of the Cybermen | City of Death | Remembrance of the Daleks | Warriors of the Deep | Planet of the Daleks |
| 1984 | The Three Doctors | The Trial of a Time Lord | Paradise Towers | Revelation of the Daleks |
| The Brain of Morbius | The Masque of Mandragora | Resurrection of the Daleks | Survival | 2000 |
| 1985 | The Sontaran Experiment | The Two Doctors | The King's Demons | The Greatest Show in the Galaxy |
| Pyramids of Mars | Genesis of the Daleks | Planet of Evil | The Monster of Peladon | The Invasion of Time |
| The Seeds of Death | The Deadly Assassin | Dragonfire | 1996 | The Edge of Destruction |
| The Five Doctors | 1992 | Arc of Infinity | The Hand of Fear | Time-Flight |
| 1986 | Robot | The Caves of Androzani | The TV Movie | The Tenth Planet |
| The Robots of Death | Logopolis | Castrovalva | The Green Death | Attack of the Cybermen |
| The Day of the Daleks | Destiny of the Daleks | The Tomb of the Cybermen | 1997 | 2001 |
| 1987 | Black Orchid | The Claws of Axos | The Leisure Hive | Delta and the Bannermen |
| Death to the Daleks | The Seeds of Doom | The Twin Dilemma | The Awakening | The Sun Makers |
| 1988 | Shada | The Rescue | Frontios | Four to Doomsday |
| Spearhead from Space | Earthshock | The Romans | The War Machines | Colony in Space |
| Terror of the Zygons | The Aztecs | Kinda | The Happiness Patrol | The Time Monster |
| The Talons of Weng-Chiang | Mawdryn Undead | Snakedance | Full Circle | 2002 |
| 1989 | 1993 | Carnival of Monsters | State of Decay | Planet of Giants |
| The Daleks | Terminus | The Android Invasion | Warriors' Gate | Underworld |
| The Time Warrior | Enlightenment | The Ribos Operation | 1998 | The Ambassadors of Death |
| The Ark in Space | The Dæmons | The Pirate Planet | Timelash | The Creature from the Pit |
| 1990 | Image of the Fendahl | The Stones of Blood | Battlefield | The Invisible Enemy |
| An Unearthly Child | Terror of the Autons | The Androids of Tara | The Mind of Evil | The Sensorites |
| The War Games | Silver Nemeses | The Power of Kroil | Horror of Fang Rock | The Time Meddler |
| The Dalek Invasion of Earth | Vengeance on Varos | The Mark of the Rani | Planet of Fire | The Sunfire |
| The Mind Robber | The Invasion | Time and the Rani | The Ark | The Gunfighters |
| The Web Planet | The Keeper of Traken | Nightmare of Eden | The Ice Warriors | 2003 |
| The Dominators | The Silurians | The Keys of Marinus | Meglos | The Mutants |
| 1991 | The Curse of Peladon | The Face of Evil | The Horns of Nimon | The Invasion of the Dinosaurs |
| The Krotons | | | Invasion of the Dinosaurs | The Reign of Terror |
| The Curse of Fenric | | | | |



20 years 1 month
Time to release all stories on VHS

13 years 11 months
Time to release all stories on DVD

- First Doctor
- Second Doctor
- Third Doctor
- Fourth Doctor
- Fifth Doctor
- Sixth Doctor
- Seventh Doctor
- Eighth Doctor

OPERATION GOLDEN AGE

50th events in the 50-year history of Doctor Who

This chart highlights some of the half-centenaries for various aspects of *Doctor Who* over the last 50 years, based on the topics covered in this book. But how rare is it for a television programme to reach its 50th anniversary and what does that mean for its place in the nation's consciousness?

While *Doctor Who* isn't the only show to keep going for 50 years, of course, it is in rare company. (Although it hasn't been on television for all that time, even during the 15 years it was off our screens it persisted in other media. And this wasn't just niche markets for dedicated fans — books, videos and other merchandise were on the shelves of major high-street stores, new stories were transmitted on BBC Radio and online, and even on television there were four noteworthy retrospectives: *Resistance is Useless* in 1992, kicking off a run of repeats; more repeats, the documentary *30 Years in the TARDIS* and *Dimensions in Time*, a 3D mini-adventure starring all five surviving Doctors (and featured on the cover of *Radio Times*) to celebrate the programme's 30th anniversary in 1993; *Doctor Who Night* took over BBC2's evening schedule on 13 November 1999 (and gained another *Radio Times* cover); and for its 40th birthday in 2003 there were not one but four *Radio Times* covers, forming one long image, followed by *The Story of Doctor Who* in December, this time on BBC1 thanks to the announcement a few months before of the show's return. Plus, of course, the brand new TV Movie in 1996. Not bad for a series that hadn't been in regular production since 1989.)

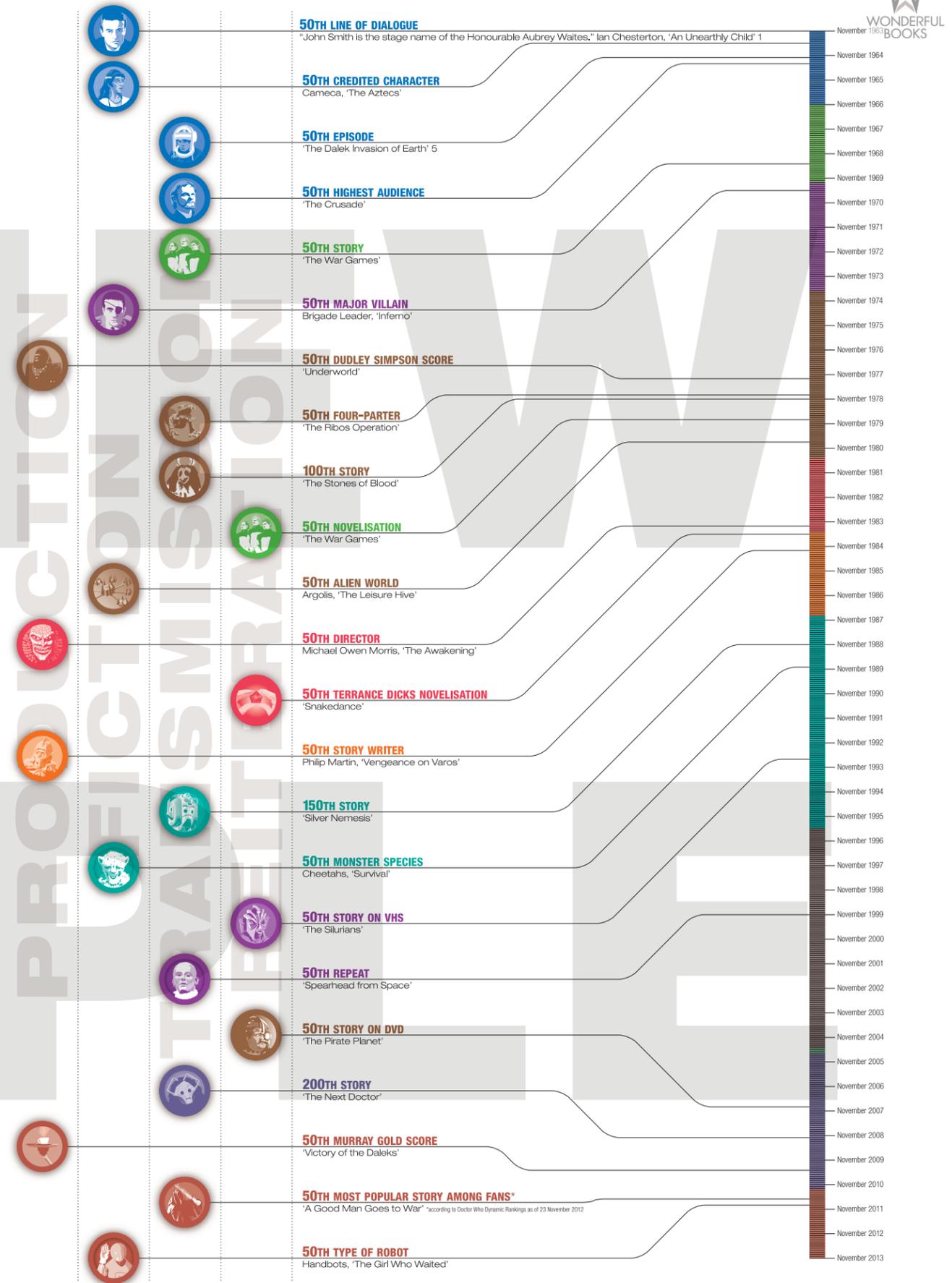
Certainly among UK television drama serials it's unique, its nearest rival being children's drama *Grange Hill*, which ran for 30 years from 1978 (thus beating *Doctor Who*'s initial run). Of current ongoing dramas, BBC stalwart *Casualty* is still going strong after 26 years. The real long-runners among drama series are the soaps, of course, headed on UK television by ITV's *Coronation Street*, which celebrated its own half-century at the end of 2010. The nearest BBC rival is the Welsh-language soap *Pobol y Cwm*, which has been telling stories about life in the Valleys since 1974. But for real soap longevity you need to look to radio, where that "everyday story of country folk" *The Archers* has been on air for over 60 years, since 1951.

What about beyond drama? Some form of daily evening News has been broadcast almost since the start of television, and on radio before that, of course. As for specific programmes, *Newsnight* has been analysing the day's top stories since 1980, but is beaten by that innovation of presenting news to children without talking down to them — *Newsround* — first fronted by John Craven in 1972. Outdoing both, however, is *Panorama*, which has been broadcasting since 1953 and is the world's longest running public affairs programme, and the oldest of all BBC television programmes.

Quiz shows can last a long time, too. *University Challenge* began testing UK students' breadth of knowledge in 1962 and is still doing so today, although on a different channel and with Jeremy Paxman proving an even sterner question master than Bamber Gascoigne. But a seven-year absence from 1987 to 1994 knocks it back to 43 years on air. The oldest quiz show on UK television is *A Question of Sport*, kicking off in 1968 and playing regularly ever since. But to top that half-century we must turn again to radio, where *Brain of Britain* has been quizzing our country's very brightest since 1953, making it the longest running quiz programme in the world.

The most long-lived programme in all of British broadcasting, and worldwide if you exclude news, is BBC Radio's *Desert Island Discs*, created by Roy Plomley in 1942 and hosted by him for its first 43 years. It has now been on air for 71 years and there's no reason why it should ever run out of people to select their eight most indispensable music tracks. Just five years behind is *Gardeners' Question Time*, which emerged from the wartime push for people to grow their own produce and whose longevity proves the Brits' love of their gardens. And if we allow *Doctor Who* its off-screen break and revival suitably modernised, we must credit *Come Dancing* not just for its 46 years from 1949 to 1995 but also its 21st Century reincarnation as *Strictly Come Dancing*, taking it to 63 years and counting since it began. Music has also kept *Top of the Pops* on our screens for 49 years, appearing weekly from 1964 to 2006 and as occasional specials since. Two other notable series topping the 50-year mark are more closely related to *Doctor Who*. *The Sky at Night* has been charting the Doctor's playground since 1957, all but one edition presented by the esteemed Patrick Moore until his sad passing in December 2012. The other is *Blue Peter*, a long-time advocate of *Doctor Who*, featuring many items on the programme in its 54 years.

What all these programmes have in common is not necessarily their popularity keeping them going — *Doctor Who* isn't the only one to have had periods when audience sizes were in decline — but that they have, often quite quickly, become part of the national consciousness. Like Big Ben or The Beatles, they're instantly familiar to everyone, even if they haven't actively watched or listened in a while, if ever. Whether they last because they're loved, or they're loved because they've been around for decades, some programmes get to the point where to take them off air would seem a tragedy, that some part of our essential Britishness had been lost. This was notable when the BBC first tried to cancel *Doctor Who* in 1985 and felt the full strength of the support it had not just from a legion of fans but from the general public too. And while it did eventually succeed in taking the programme off air, it was always with the desire, if not the drive, to bring it back refreshed and recuperated. It took a while, but the huge success of the revived series has proven it never left the British public's heart and that even if it's not on for another 50 years solid, there'll always be a place for *Doctor Who*.



TIME & SPACE VISUALISER

DOCTOR WHO AS YOU'VE NEVER SEEN IT BEFORE!

Approaching its 50th anniversary, *Doctor Who* is one of the longest running television programmes in the world. And probably no other is as well documented. Ever since followers of the show started forming fan groups in the 1970s, they have sought to learn every last detail about not only the Doctor's adventures but also the making of the programme itself.

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With analysis of the data and its context, these visualisations provide a whole new way of looking at both the fact and fiction of a television series.

TIME & SPACE VISUALISER A FRESH PERSPECTIVE ON THE STORY AND HISTORY OF DOCTOR WHO



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The story and history
of **Doctor Who** as
data visualisations

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Full list of charts

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About Wonderful Books

Wonderful Books is the imprint established by Paul Smith for the self-publishing of *Doctor Who* and related titles. While seeking employment following redundancy in 2011, Paul is pursuing his love of producing printed material and extending his knowledge of publishing. In 2011 he wrote and produced *The Wonderful Book of Dr Who 1965*, a pastiche of BBC Books' *Brilliant Book of Doctor Who*. It was followed this year by a light-hearted celebration of the modern series, for which he commissioned new artwork and comment. Further self-published commercial titles are planned for later this year.

