Garland Science
Taylor & Francis Group

Guidelines for Creating Illustrations at Garland Science

These notes are intended for prospective Garland authors to outline the steps involved in generating the artwork for a science text and how you can help our illustrators who will produce the final versions. These are not meant to be comprehensive, but represent general guidelines based on the accumulated experience of the illustration team working on successful science texts.

Illustrator's Guide for Authors

HOW WE WORK

The illustrator and editor for your book work closely together to handle the production of hand-drawn and hand-colored originals and the generation of graphics on a computer. The author will need to provide the ideas and the roughs (see suggestions from development editor). This may seem a daunting task, particularly to those authors who feel they less visual than they would like.

PREPARING FIGURES FOR THE ILLUSTRATOR: SOME SIMPLE RULES

1. **Unified illustration program**

   The first point to emphasize is that Garland would prefer to have a coherent and unified illustration program for each book rather than a collection of illustrations drawn piecemeal from preexisting sources, such as journals and other books. This can only be achieved if all the final drawings are produced by the illustration team, so that a common typeface, line width, and set of conventions give the book a clear image of coherence.

2. **Supply illustrations in related batches**

   It is important that illustrations are given to the illustration team as a related batch of figures. Usually, this means chapter by chapter, and it is advisable that this set has been seen, criticized, and edited first by one of your other authors. This is important for two reasons. Most important is that at this stage it allows the authors, together with the illustration team, to go through a *related* set of illustrations and sort out the problems of establishing corrections in those graphics with related elements. This might involve agreeing on a way of drawing a repeating motif–e.g., a formula, ATP, DNA–or, in the case of a book that uses color, setting up appropriate color conventions–e.g., always showing phosphate as yellow. The second reason is that it allows the illustrator to assess the density and scale of illustrations. For example, seven small margin figures in a row will begin to create problems with page layout and will prevent figures from appearing near their mention in the text.

3. **Keep the message clear**

   One of the most common problems with generating figures is the temptation to "tell more than one story." Figures should say what they have to say as simply as possible, and everything in the figure should be there for that purpose. If you feel a figure is getting unwieldy, then it probably means that it should be split into two or more figures, building up related points one by one. For the same reason, labels should be kept to a minimum. You should only use those labels and words on a figure that are

essential for the reader to understand the point you are making. You should bear this in mind particularly when you want to use preexisting illustrations, e.g., from a journal. Very often such figures carry far more material and lettering than is needed for your purpose and for the intended audience.

4. Choose the right scale

Choosing the right scale. By and large the final size of an illustration is determined not by the graphic element but by how much *lettering* is on it. Images without lettering can still be "read" even when very small, but because the typeface used on figures is a constant size, the number of words will dictate the lower limit for picture size. It is useful to think about the page layout when starting to draw a figure, and it helps to have handy a copy of your book's page grid, which Garland will supply.

5. Be consistent

Most figures will be redrawn by the illustrator. It is immensely helpful if some ground rules are followed in preparing your rough sketches. Drawing at roughly twice the scale of the final figure is helpful, as labels and lettering can then be done using ordinary handwriting (2 x printed type). You don't have to produce highly accurate sketches, but you should indicate where elements do need to be faithfully copied. Think about the layout on the page: for example, a figure showing a series of steps might be better accommodated more economically across the page rather than running right down the page.
Using a consistent set of pens/pencils is very helpful. In books with no color this is unimportant but with color it's vital. If you pick up a handy red ballpoint to put some lettering on a figure, then it may get drawn that way, when you actually wanted black– and vice versa!

6. Using color

The use of color is a complex issue, and many aspects of it are very subjective. If your book is using color, the illustration team will spend a lot of time going over the drawing program with you to decide on which color will be used in the case of a two-color book, or what "palette" of colors will be appropriate for the book and its readers in the case of a four-color book. We feel it is important for the "look and feel" of a good textbook that it has a clear and identifiable color style. For all books using color we will produce a "dummy" for you that will include specimen illustrations put into pages and printed to show how they will actually look in the finished book. This, together with the color palette of the chosen colors and their screened versions, are important guides to keep handy when creating your figures. Colors will have both a name and a print reference, and you can use either of these to specify colors on your sketches.

The choice of which color to use for which element in a drawing is complex, but generally you should think of using the brightest or loudest color in your palette for *emphasis*. Such colors do not work in large expanses. Lighter, tinted versions of color can be used for this and, for example, to highlight groups of words in labels. It is good to aim for consistency in this sort of color usage as it helps the student and gives the book a unified style.

7. Photographs

All photographs and micrographs you obtain need to go through the illustrator. They will be digitally scanned and then cropped, labeled, and sized, from which they will be put straight into the page proofs. We can handle photographs as black-and-white prints and as color prints or transparencies, or as digital images, providing the file types and resolution are 300 dpi. When requesting photographs that have already been published, it is important both to let Garland know, so that permission can be obtained for their reproduction, and to request a print *without* any labels, arrows, lines etc., as these

are unlikely to be in the same style as your book. Suggestions from you on how best to crop a micrograph or photograph are helpful, and you should remember the rule about not having anything in a figure that might distract from the point it is making.

THE PRODUCTION SIDE

Once you have generated a set of rough sketches, usually a chapter's worth, you will receive back a color "proof." These will be in the actual size they will finally appear. Following a cycle of corrections, the artwork, is sent to the Production Department, where they will be incorporated into the first set of proofs. As these are page proofs, they cannot be done until *all* the illustrations for a chapter, including photographs, have been delivered. At this stage, reworking of figures, additions, deletions, and rearrangements are all still possible. After this, and with text corrections, a new set of pages is produced, and at this stage it is important that only very minor corrections be made, e.g., word-for-word corrections, as this set of proofs will be used for final book layout and assembly and for indexing.
When proofing figures, it is good to remember that it's *not* only factual errors you are looking for, but, things like consistent use of symbols and color, size and layout in relation to your page grid, and the absolute scale of figures. For example, a figure might be factually correct but still be perfectly legible and much neater at half the size. Figures need to "sit well" with each other.

THE AUTHOR AS ILLUSTRATOR

Many authors profess their inability to draw, but our experience is that authors can with practice produce clear, thoughtful, conceptual, and pedagogically useful sketches. It's partly a matter of confidence, but it's also a question of the function of illustrations and of understanding the way in which they are generated. The more thought and effort you put into producing the roughs, the better the job we can do in producing the final artwork for you.

Development Editor's Guide for Preparing Illustrations

OVERALL

Original roughs, hand drawn or prepared with an illustration program, are preferred, as the illustrator then knows that what is on the rough is what you want - no more, no less.

If drawing by hand, remember that the illustrator can only copy <u>exactly</u> what you have drawn. If you want an object to look slightly different or more detailed, but your artistic skills aren't up to it, supply additional source material - photos, diagrams from other books, etc., and make it clear which item you want the artist to use for what on your own diagram. Once a style for recurring elements has been established (see below - Icons) this will become easier.

LABELS

Please make sure that written labels are legible, especially when using words that will be unfamiliar. Spell out in capital letters if necessary but be clear how the label should appear e.g., initial cap, italic etc.

INSTRUCTIONS

In an ideal world, the artist should be able to look at your figure and see clearly what they have to do to it, without continually having to refer to legends or lengthy written instructions elsewhere. With a completely new book this isn't always possible. But write simple instructions on the diagram itself, when that is all that is needed. Circle instruction text so that the illustrator doesn't include it.

If supplying Xeroxes of figures you want adapted, please mark clearly <u>on the figure itself</u> what is to be omitted or changed. Cross out elements not needed, write new labels where necessary, and circle any words that are not to be actually included in the figure. If you are familiar with the proofreaders marks for deletion and insertion, you can use those where appropriate.

ABBREVIATIONS

Please give a key <u>on the figure itself</u> to <u>all</u> non-standard abbreviations used in labels, axes of graphs, etc., especially when using figures taken from journals. Consider rewriting a label on a graph axis if it uses technical language or jargon that will not be used in the book. You can leave any abbreviations that will be allowed in the book - DNA, sec. RNA, etc. The illustrator shouldn't have to have to read the legend to puzzle out what abbreviations represent (sometimes they are not even defined in the legend), and they won't know abbreviations that are only standard in a particular field.

ALL ELEMENTS VS. UNNECESSARY ELEMENTS

If not already labeled, please make sure that all the elements to be illustrated are labeled <u>on the figure</u> itself. Again, the illustrator shouldn't have to read the legend to puzzle out what is what, and they may not be able to recognize what it is from the figure alone. If the item will not need the label on the final drawn figure, circle it to show the illustrator they don't need to set it.

SIMPLICITY

Individual figures should not try and present too much information. Complicated multipart figures are off-putting for the reader and can make layout difficult as they often also need long legends. You'll want the text callout and the figure to be on the same page, or at least the same double spread, wherever possible. A series of smaller, simpler figures with short legends can often be more effective and easier to accommodate. Do not continually use large figures to replace text in an attempt to 'save space' - as in the

printed book you will simply run out of text to go round them or figures will end up unacceptably far away from their callouts.

ICONS

If there are numerous diagrams with recurring elements in the book (such as protein kinases in signaling diagrams), Garland likes to identify such elements by a consistent shape, so that diagrams taken from different sources look consistent, and pathways don't end up as featureless masses of colored ovals and circles. Using shape as well as color to distinguish the different elements makes diagrams easier to follow. See for example, *Janeway's Immunobiology* 7, diagrams throughout chapter 6, for the use of icons.

If the authors can identify a few such elements that will be used repeatedly, such as protein kinases, or the depiction of particular types of nerve or synapse, etc., the illustrator will draw them up and you will both then have a 'sample book' to refer to when giving instructions to adapt an illustration.

Depending on the subject matter of the book, 'icons' can encompass anything from individual molecules to a conventional way of drawing a particular type of cell, nerve ending, synapse, etc. which the illustrator can then use throughout the book and adapt as necessary. It means he/she doesn't have to reinvent the wheel for each diagram.

It is important to think about how icons work in context. For example an icon representing an element might appear in several places throughout the book. It may be the focus of one particular chapter and then reappear as a supporting player in other chapters, so it's important it can do both without conflicting with other icons it appears along side of. This may mean considering two or more versions of the same icon with different levels of detail.

For this to work, however, the author must ensure that all such elements are clearly labeled on the figure rough so that the artist knows what to use.