Darrell Mann "Hands on Systematic Innovation"

Errata and Q&A (Part 1)

Toru Nakagawa and the Translation Team in Japan, on Aug. 17, 2003

Reply by Darrell Mann, on Nov. 15, 2003.

This is a document of errata, questions, and suggestions from the translation team in Japan to the Author and hopefully include the correspondences from the Author. Following are the notes for reading this documents:

(1) The tables are arranged chapter by chapter and in the increasing order of the place of relevance.
(2) The errata previously sent to us by the Author on June 20, 2003 are also included here for the sake of consistency and readers' convenience. They are marked at the Answer column as 'Mann June, 2003'. When it says 'Mann June, 2003 (Brazil)', reflects the correspondences between the Author and the Translator into Portuguese, Mr. Archimedes in Brazil.
(3) The first column shows: Page, Type, paragraph, and line
Page: all refers to the page number in the published version, as was printed on May 2002.
Type: E: Error.; obvious error; including the errata shown in June 2003.
Q: Question. Including error but being not clear how to change.
Question concerning to the content.
C: Comment.
S: Suggestion. Some proposal for improvement.
Some of them will be adopted in the Japanese version without intending the modification of the English version.
Paragraph: Headings and figures are not counted as a paragraph.
E.g., 3p represents the 3rd paragraph from the top, while
3pb represents the 3rd paragraph from the bottom of the page.
Fig. or Table represents the figure or table in the page.
Line: Line number in the paragraph, usually counted from the top,
whereas line number counted from the bottom is shown as, say, 3b.
h: represents the heading which leads the paragraph.
(4) The second column ('Is') shows the text at present.
The text is shown in black, while some part is shown in blue for your focus.
Some explanation is shown in [ ] in green.
(5) The third column ('Has to be') shows the (proposed) corrected text and various comments.
The text itself is shown in black, while the corrected part is shown in blue.
Various comments and explanations are shown in [ ] in green.

Our Japanese translation version is trying to be as correct as possible to the original texts.
Some points of changes will be made without listing up in this document explicitly as follows:
(6) In the Japanese version, all the headings will be numbered in a hierarchical way.
This numbering is not shown in this document. They will appear in the enhanced table of contents some time later.
(7) For emphasizing words and phrases, various ways are used in the original text (sometimes not in a consistent way). In the Japanese version we will try to reflect most of them but not all because the styles of expressing emphases are often different.
(8) Layout of some parts (especially, some itemized parts) will be changed slightly.
(9) Some words or phrases are inserted for brief additional explanation in [ ].

Chapter 1

Page Type Parag. Line	Is	Has to be (Question/Comment)	Answer
9 title	Introduction	Introduction – TRIZ; Toolkit? Method? Philosophy? An Overview [This is taken from your Table of Contents; and seems to be more informative.]	We will leave the text as it is
12 E 1p; 1-2	that, to varying degrees can be	that, to varying degrees, can be [Insert a comma.]	okay
15 E 2p; 1	If I'm making soup it doesn't matter-I may get	If I'm making soup it doesn't matter – I may get [changed into " – ".]	okay
15 E 4p; 1	The profiles illustrated in Figure 1.2	The profiles illustrated in Figure 1.3	okay
15 E 1pb; 3	illustrated in Figure 1.4.	illustrated in Figure 1.5.	Mann Jun 2003 Correct in 2nd print
15 E	Figure 1.4: Propensity to	Figure 1.5: Propensity to	Mann Jun 2003 Correct in 2nd print
16 E 4p; 1b	made again in Figure 1.5.	made again in Figure 1.6.	Mann Jun 2003 Correct in 2nd print
16 E	Figure 1.5: The Overlap	Figure 1.6: The Overlap	Mann Jun 2003 Correct in 2nd print
17 E 2p; 1	Izobreatatelskikh Zadatch)	Izobretatelskikh Zadatch) [Drop 'a' in the word.]	okay
17 E 2p; 2	As illustrated in Figure 1.1,	As illustrated in Figure 1.2,	okay
17 E 2p; 3	The whole has developed	The whole has been developed	okay
17 S 2pb; 6	solving tools. Although TRIZ is	solving tools. Although TRIZ is [Start a new paragraph here.]	Correct as is
17 Q 2pb; 6b	for any situation users may care to throw at it -	for any situation users may care to throw themselves at it - [Is this an idiom?]	Correct as is (in Japanese edition you may like to use 'may care to direct at it')
18 E 3p; 4	framework – Figure 1.6.	framework – Figure 1.7.	Mann Jun 2003 Correct in 2nd print
18 E	Figure 1.6: General TRIZ Process	Figure 1.7: General TRIZ Process	Mann Jun 2003 Correct in 2nd print
18 E 1pb; 2b	ways of 'eliminating' contradictions',	ways of 'eliminating contradictions', [Drop one ']	okay
19 S 1p; 6	patent database. Used as a problem	patent database. Used as a problem [Start a new paragraph here.]	Correct as is
20 S 1p; 6	may be improved. In addition	may be improved. In addition [Start a new paragraph here.]	Correct as is

20 E 3pb; 2	find a way if using	find a way of using	okay
20 E 1pb; 2	FUNCTIOANLITY,	FUNCTIONALITY,	Mann Jun 2003 Correct in 2nd print
21 E 1p; 2b	Fullfillment	Fulfillment	Mann Jun 2003 Correct in 2nd print

Chapter 2

Page Type Parag. Line	Is	Has to be (Question/Comment)	Answer
23 S title	Process Overview	Systematic Creativity Process Overview [Readers want to know what process. Maybe more preferable than TRIZ Process Overview.]	Correct as is in English edition
23 Q 1p; 4-6	While it might be said (...) that 99 % of the problem comes in the implementation,	[What stages do you mean by 'implementation' here?]	No change required (implementation – turning the solution into a real, validated product)
23 E 2pb; 2b	validated against include	validated against, include [Insert a comma.]	okay
24 E 2p; 5	hat to do with	what to do with	Mann Jun 2003 Correct in 2nd print
24 E 3p; 1	and whether, even if such a thin is possible, whether	and, even if such a thin is possible, whether [Drop 'whether'.]	okay
24 S 3p; 4	in the last chapter	in the previous chapter	okay
24 S 2pb; 9b	process), merely to say that, TRIZ	process), but merely to say that TRIZ [Insert 'but' and delete a comma.]	okay
24 S 2pb; 8b	richness. So much so	richness. So much so [Start a new paragraph here.]	Correct as is
25 S 2p; 9	wrong problem. TRIZ tries to	wrong problem. TRIZ tries to [Start a new paragraph here.]	Correct as is
25 S 2p; 3b	three ... plus one highly recommended activity.	three ... plus one highly recommended activities.	okay
25 S 2bp; 2	navigator icon at the top right hand corner of each page in the book	[We are thinking to put the icon at the top right corner of odd-numbered pages, and chapter number and title at the top left corner of even-numbered pages.]	Okay – we will leave as is
27 S 2p; 1	Ideal Final Result –	Ideality/Ideal Final Result – [So as to match with the Chapter title.]	Correct as is – text should match Figure 2.3
28 S 1p; 2	in the navigation icon	in the navigator icon	Correct as is

28 E	Figure 2.4: Eleven Basic Steps of the DEFINE part	Figure 2.4: Eleven Basic Steps of the GENERATE SOLUTIONS part	Mann Jun 2003 Correct in 2nd print
28 S 3p; all	Chapter 10 -	Chapter 10 - [Set indentation of the lines.]	Correct as is
28 E 1pb; 3b	a wrong or fundamental unsolvable	a wrong or fundamentally unsolvable	Okay. Also: It is of course possible that (delete comma)
28 E 1pb; 2b	many experience TRIZ users	many experienced TRIZ users	okay
30 S 5p; h	Problems and Opportunities	PROBLEMS AND OPPORTUNITIES [This is the heading of a big section.]	okay
30 E 3pb; 1	to the question, though is 'yes.	to the question, though, is 'yes. [Insert a comma.]	okay
30 E 1pb; 3	strengths-weakneses-	strengths-weaknesses-	okay
32 Q 1p; 6	how our system and its subsystems and how	how our system and its subsystems work and how [Needs a verb here.]	okay
32 Q 3pb; 3	at any one time, and where/when it is focused, we gain	[I cannot interpret the role of the 'where/when' clause in this sentence.]	..working on at any one time. By plotting where and when each point is situated, we gain another…
34 Q 1p; 3	used to identify both 'good' solutions	used to identify 'good' solutions [Delete 'both'. And insert 'not only' somewhere around. (?)]	Suggest we change 'but' later on in the sentence to 'and'. Also, the figure needs shifting up by one line so that the caption is underneath.
34 S 1pb; 2b	an evolutionary radar plot	an evolutionary potential radar plot	okay
36 Q 1p; 9	either a function ... , or that ...	[Somewhat asymmetrical in the constructs of 'either'.]	Correct as is
36 E 4pb; 2	the full process being espoused here.	the full process being exposed here.	Correct as is

Chapter 3

Page Type Parag. Line	Is	Has to be (Question/Comment)	Answer
39 S Title	Psychology	Psychology of Creativity [The original title is not easy to see what you are going to talk about.]	Correct as is in English edition
40 S 3pb; 2b	integrate 'internal' and external invisibly	integrate 'internal' and 'external' invisibly	okay
40 S 2pb; 2	of the creative process	of the creativity process	Correct as is
41 E 1pb; 4	we will be covered in	we will be covering in	okay

41 S	In Figure 3.4. Design (A nut) Solution	Design Solution (A Nut) [Do not divide the keyword.]	Correct as is
43 E 4p; 2	Chpater 10	Chapter 10	Mann Jun 2003 Correct in 2nd print
44 E 1p; 2	simultaneous application of Inventive Principle 15, 'Dynamic Parts'	simultaneous application of Inventive Principle 1, 'Segmentation', and Inventive Principle 15, 'Dynamics'	okay
45 E Fig	Figure 3.11 (inside) (two keywords lost.)	'change colour with age' 'monkey' [Insert these two keywords in the figure.]	Mann Jun 2003 Correct in 2nd print
46 Q 4p; 3-4	Take a population of ... may well be ... makes any ...	Taking a population of ... may well be ... making any ... [Need to be nouns.]	Correct as is
46 Q	Fig. 3.12 The oval at the right contain the image of Fig. 3.8.	[The oval should contain the image of Fig. 3.9.(?)] [There seems some confusion in the interpretation of this cloud. Is this cloud coming from Fig. 4 or from Fig. 11?]	Correct as is – the figure is drawn as the state before a solution has been generated
46 E 3pb; 3	described in Section 2.0	described in Section 3.1.1 [Or you should write 'in the beginning of this chapter'.]	described in the beginning of the chapter
47 E 3pb; 1	Reference 3.3 discussed	Reference 3.5 discussed	Mann Jun 2003 Correct in 2nd print
48 E 1pb; 1	(Reference 3.5)	(Reference 3.6)	Mann Jun 2003 Correct in 2nd print
50 S 3p; h	White Hat	White Hat (Positive) [Add the brief description.]	okay
50 E 4p; 5	in terms of it (and its sub-systems') position	in terms of its (and its sub-systems') position	okay
50 S 1pb; h	Red Hat	Red Hat (Intuitive)	okay
51 S 2pb; h	Black Hat	Black Hat (Negative)	okay
52 S 2p; h	Yellow Hat	Yellow Hat (Positive)	okay
52 S 3pb; h	Green Hat	Green Hat (Creative)	okay
52 S 1pb; h	Blue Hat	Blue Hat (Process)	okay
55 E 2pb; 2	(Reference 3.6).	(Reference 3.7).	Correct in 2nd print
56 S 3pb; 1	In the context of the finding the right place to begin digging a new hole analogy,	In the context of the 'finding the right place to begin digging a new hole' analogy, [Enclose with '...']	okay
58 E 5p; 1	of information in way which	of information in a way which	okay
60 E 2p; 1	TRIZ and other tools help	TRIZ and other tools to help	okay
60 E	In do so	In doing so	Mann Jun 2003

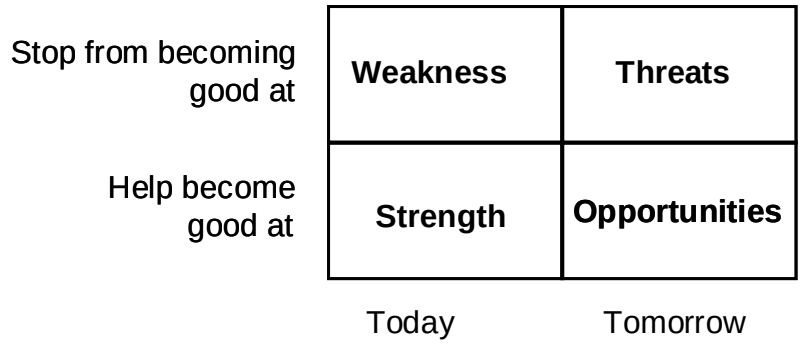
2p; 2			Correct in 2nd print
61 E 1p; 2	(Chapter 6), for example is	(Chapter 6), for example, is [Insert a comma.]	okay
61 E Ref.	5) DeBono, E. 'Six ... 6) DeBono, E. 'The Use ... 7) Care I., Mann D.L. ...	5) DeBono, E. 'Six ... 6) DeBono, E. 'The Use ... 7) Care I., Mann D.L. ... [Reorder the three references.]	Mann Jun 2003 Correct in 2nd print

Chapter 4

68 S Fig	[In Fig. 4.5 the area shown with square frames only.]	[The areas are shown with squares with three-level shadings.]	Correct as is
69 E 1pb;2-3	What such a time-space map it is trying	What such a time-space map is trying	okay
70 E 3p; 1	This second section	This third section	Okay
71 E 1pb; 3	by 'becoming the problem.	by 'becoming the problem'. [Close the quotation mark.]	okay
73 E 3p; 6	into the word of engineering	into the world of engineering	Mann Jun 2003 Correct in 2nd print
74 E 2p; 4	fast and last impression	first and last impression	okay
76 Q 1p; 4	the third plane should	the third dimension should	Okay
76 Q 3pb; 1	uses first, second, and third person to represent	uses first, second, and third persons to represent [Q: Do these mean 'I', 'You', and 'He/She' ?]	Correct as is
76 E 3pb; 1b	albeit one also beyond the scope of this article.)	albeit one also beyond the scope of this book.)	okay
76 Q 2pb; 3-2b	this means looking at all five levels.	this means looking at all the five levels.	Correct as is
76 S 1pb; h	The Map and the Territory	The Map and the Territory [Insert a blank line after this heading.]	Okay (messes pagination in English edition possibly?)
77 E 4pb; 1-2	'We have an open environment speak up if	'We have an open environment; speak up if [Insert a semicolon.]	Okay
78 Q 3p; 2b	onto the M&S map	onto the M&S territory	Okay
78 C Fig	[Figure 4.16 has about 400KB and significantly slows down the operation.]	[We are going to redraw this figure with a simpler background color.]	Correct as is in our edition
80 E Fig	[In Fig. 4.20, the squares are drawn in black.]	[Draw in white as usual.]	Mann Jun 2003 Correct in 2nd print
81 S Fig	[Fig. 4.21 has 9 SWOT boxes with verbal explanation only.]	[We would like to have an additional figure of a SWOT box as a translation note. See below.]	(no change in English edition – modified version of Japanese footnote included below)
83 E	overall theme of this article	overall theme of this chapter	Okay

2p; 2			
83 E 2p; 3	the system operator. 45 times if	the system operator, or 45 times if	Okay
85 Q 1pb; 2	2) Dilts, Grindler, 'Neuro-Linguistic Programming	[Please supply the initials of these authors.]	

Page 81. Foot note for Fig. 4.21



Chapter 5

88 E 2p; 2	think about the 'where are we trying to get to from a 9-Windows perspective.	think about the question 'where are we trying to get to?' from a 9-Windows perspective. [Close the quotation mark, also.]	okay
90 Q 3p; 1-2	to determine which of the problems the tool eventually ends up helping us define is the 'right' one	to determine 'which of the problems the tool eventually ends up helping us define' is that the 'right' one [This sentence is difficult to parse. Is my understanding correct?]	When we are looking to determine which of the problems we end up defining is the 'right' one, the main thing we will use will be the constraints imposed....
90 S 5pb; 2	The general identification of	The general definition of	okay
90 E 5pb; 4	'evolutionary potential	'evolutionary potential' [Close the quotation mark.]	okay
90 E 4pb; 3	in Figures 5.3 and 5.4,	in Figures 5.4 and 5.5,	Mann Jun 2003 Correct in 2nd print
91 E 1p; 2	on this resource identification activity is that	on this resource identification activity, is that [Insert a comma.]	okay
91 S 1p; 3	used to its maximum effect	used to its maximum potential	okay
91 E Fig	Figure 5.3: Technical Resources	Figure 5.4: Technical Resources	Mann Jun 2003 Correct in 2nd print
91 E Fig	Figure 5.4: Knowledge Resources	Figure 5.5: Knowledge Resources	Mann Jun 2003 Correct in 2nd print
92 E 2p; 3	Figures 5.5 and 5.6 illustrate	Figures 5.6 and 5.7 illustrate	Correct in 2nd print
92 E Fig	Figure 5.5: Technical Constraints	Figure 5.6: Technical Constraints	Mann Jun 2003 Correct in 2nd print
93 E Fig	Figure 5.6: Business Constraints	Figure 5.7: Business Constraints	Mann Jun 2003 Correct in 2nd print

94 E 4p; 2b	by seat wear *and* stem wear improving	by seat wear *and* stem wear, improving [Insert a comma.]	okay
94 E 2pb; 1-2	we say "prevention solutions", or	we say 'prevention solutions', or [Replace double quotes with single quotes.]	Replace with single quotes
96 E 3p; 1	Figure 5.7 presents	Figure 5.8 presents	Correct in 2nd print
96 E Fig	Figure 5.7: Problem Sore-Point	Figure 5.8: Problem Sore-Point	Mann Jun 2003 Correct in 2nd print
100 S 1p; h	[Figure] Sheet 6 - Business Constraints	Sheet 6 - Business Constraints [Figure] [This heading should preceed the figure.]	okay
100 E 1p; 2	here 'present was defined	here 'present' was defined [Close the quotation mark.]	okay
100 E 1p; 4-5	beyond the 6 months' (i.e. 'the future') go to do with business constraints was	beyond the 6 months (i.e. 'the future') go to do with business constraints' was [Shift the position of the closing quotation mark.]	okay
101 S 1p; 1	in Chapter 10 when we examine	in Chapter 10 where we examine	okay

Chapter 6

104 E 2p; 3	that main often key functional relationships	that often key functional relationships	Mann Jun 2003 Correct in 2nd print
104 E 3p; 1b	strategies can be applied and,	strategies can be applied. [Delete 'and,' and put a fullstop.]	Mann Jun 2003 Correct in 2nd print
105 Q 1p; 2b	into a single image, often to the confusion	into a single image, is often to the confusion	Correct as is
106 Q 1p; 4	immediately before, during and after the problem	immediately before, during, and after the problem [How about inserting a comma?]	okay
106 S Fig	[Drawings in Fig. 6.3 are too small to read.]	[We would like to make these drawings larger to be readable.]	The main purpose of the figures is to convey the left-to-right time factor and not the content. In the English version we will keep the figure as is.
106 S 2p; 2	a means of both defining what problems ..., but also ...	a means of defining not only what problems ..., but also ...	okay
107 S 2p; 1	The second stage then	The second step then [Because you talk about the first step in the previous paragraph.]	okay
107 S 2p; 3-4	combining the first stage and this stage,	combining the first step and this step,	okay
108 S 1pb; 2	we have drawn red arrows	we have drawn wavy arrows [Because of the monochromatic printing.]	we have drawn lighter coloured arrows
109 S 3p; 3-4	or double (to denote excessive) line	or double (to denote 'excessive') line	okay

		[Use quotation marks.]	
109 E 1pb; 1	The next thing segmentation strategy	The next thing about segmentation strategy	Mann Jun 2003 Correct in 2nd print
110 Q 2p; 2-3	thinking about these three time issued should cause is to think about	thinking about what these three time issued should cause is to think about [Difficult to understand. Am I right?]	For this lens polishing example, examining these three time issues should cause us to think about whether….
110 E 2pb; 1b	illustrated in Figure 6.10?	illustrated in Figure 6.11?	Mann Jun 2003 Correct in 2nd print
110 E 1pb; 3	Figure 6.11 illustrates	Figure 6.12 illustrates	Mann Jun 2003 Correct in 2nd print
111 E Fig	[In Figure 6.11, labels at the right end:] m1, m2	M1, M2	Correct as is
111 Q Fig	[Pipewall is drawn in Figs. 6.11 and 6.12.]	[Q: What is Pipewall here? Is it the wall of each pipe? or is it a wall with many holes where the pipes are set? How is it physically connected with the compensator? Could you write a sentence to describe the main problem in the steady state shwon in Fig. 6.12?]	No change required in text. For your information, the pipewall is a wall with many holes where the pipes are set
112 thru 114 S	[In Fig. 6.14 and many other places] Constituent A and Constituent B produce the Product.	Material A and Material B generate the Product. [Q: Since you are talking about reactions, I feel these words are more suitable.]	We will stick with 'constituent' since this is a term more used by chemical engineers
113 E 1p; 3	In the Figure 6.13 model,	In the Figure 6.14 model,	okay
113 Q 2p, 2-3	Remember when selecting the times at which FAA models should be driven by when we can identify negative things happening in the system.	Remember when selecting the times for which FAA models need to be drawn, we should be driven by when we can identify negative things happening in the system.	okay
114 E 2p; 2-3	We, having made the necessary points about the recommended conventions defining what happens	We, having made the necessary points about the recommended conventions, have now defined what happens	Change to:- Having made the necessary points about the recommended conventions, we have now defined what happens
114 E 3pb; 3	Let us no take a look	Let us now take a look	okay
115 E Fig	[Figure 6.17 is incomplete, missing arrows and labels.]	[We are going to draw this figure by our selves, but wavy arrows are somewhat difficult to draw. Do you have redrawn this?]	We are leaving as is – the main purpose is to illustrate the hierarchical position of the different components. The figure could be drawn with the arrows in Innovation Suite if necessary

115 E 3pb; 2	asking what with Main Useful Function (MUF) is.	asking what is the Main Useful Function (MUF).	Mann Jun 2003 Correct in 2nd print
116 Q 1p; 1b	will reside somewhere higher up the hierarchical tree.	will reside somewhere either at the same level or higher up the hierarchical tree. [Q: I feel inserting as above is much more natural. What do you think?]	okay
118 S 1p; 3	are understood. To take a crude example	are understood. To take a crude example [Start a new paragraph here.]	Correct as is
119 Q 1p; 3-2b	taking due account to the place time takes in affecting these components	[Q: I cannot parse this sentence well. Please clarify the sentence.]	..taking due account of the importance time has in affecting these…

Chapter 7

122 S 3pb; 1l	qualitatively. The definition of ideality	qualitatively. The definition of ideality [Start a new paragraph here.]	Correct as is
123 E 1pb; 2	positioning of s-curves on the s-curves and	positioning of s-curves on the s-curve graph and	okay
124 Q 1; 1b	principle factor determining	principal factor determining	okay
125 Q 2p; 3	every component within a system has its own family of s-curves.	every component within a system has its own s-curve, forming together a family of s-curves. [Insert a phrase as above.]	okay
126 Q 1pb; 3-2b	the question 'where are we on the 'make tea' s-curve we	the question 'where are we on the 'make tea' s-curve?', we	okay
127 E 2b; 6b	if we are plotting 'perceived' elements exhibit	if we are plotting 'perceived' elements, exhibit [Insert a comma.]	okay
128 S 1p; 4	being strongly correlated	being strongly oppositely correlated	Correct as is
128 E 1p; 6	meaning that that the unit	meaning that the unit [Drop one 'that'.]	okay
128 E 2pb; 1	As already stated, the principle purpose of	As already stated, the principal purpose of	okay
129 S 1pb; 1	in the chapter on trends of evolution (13),	in the chapter on trends of evolution (Chapter 13),	Correct as is
132 E 2p; 4-5	which, as described in the previous section will have	which, as described in the previous section, will have [Insert a comma.]	okay
132 E 3p; 6	for a relative simple system	for a relatively simple system	okay
132 E 3p; 3-2b	the focus of patents on manufacture, cost reduction and/or part count reduction patents is	the focus of patents on manufacture, cost reduction and/or part count reduction is [Drop 'patents' at the end.]	okay
134 S 2p; 1b	at the beginning, end or before or after its point of	at the beginning, end, or before or after its point of	okay

		[Insert a comma.]	
134 S 3pb; 1b	in conjunction with Figures 7.10, 7.12 and 7.13	in conjunction with Figures 7.9, 7.10 and 7.13 [I feel Fig. 7.9 is better to recommend than Fig. 7.12.] I agree!	okay

Chapter 8

136 Q 1p; 7	by the pragmatic demands a given problem situation	by the pragmatic demands in a given problem situation	okay
138 E 1pb;1-2	seeing what these yellow innovation flashes	seeing what these innovation flashes	Mann Jun 2003 Correct in 2nd print
140 E 1p; 5-6	what is the next smallest step back I could teak?'	what is the next smallest step back I could take?'	okay
140 S 1pb;2-3	on psychological aspects of TRIZ, it is	on psychological aspects of TRIZ; it is [Replace a comma with a semicolon.]	okay
141 QS Fig	2) What is the Ideal Final Result outcome?	2) What is the Ideal Final Result (outcome)? [Enclose in ( ). At the first cycle, this question is simply 'what is the IFR?', but in the later cycles this becomes 'what is the IFR outcome?'. Could you provide us a foot note about this point, especially what you mean by 'outcome'. Maybe we should refer to the descriptions in the next page, but it is somehow not clear enough.]	No text change required in English edition. (In the Japanese edition, you may wish to drop the 'outcome' word completely as it does not add a lot to the desired understanding)
141 EQ 4pb; 1b	'deliver the function/final-aim/benefit with zero cost or harm.	'deliver the function/final-aim/benefit with zero cost or harm'. [Close the quotation mark.]	Mann Jun 2003 Correct in 2nd print
		[Q: May we understand that the function, final aim, and benefit are all interchangeable in this context?]	yes
142 E 4p; 1	The first instance, is equivalent	The first instance is equivalent [Drop a comma.]	okay
142 C Fig	[Fig. 8.8 is composed of many miniturized slides, and takes much time to display.]	[This slide should be remade with simple schematic representation of the mini slides.]	No change in English edition – the point of the figure is simply to show that the number of possible ideas increases as we step back from the IFR
143 E 1p; 4	between the first and second objectives being that	between the first and second objectives is that	okay
143 QS Fig	2) What is the Ideal Final Result outcome?	2) What is the Ideal Final Result (outcome)? [Same as in Fig. 8.7]	Correct as is

143 S Fig	[In the last line of 7).] Alternative; disposable clothes.	Alternative: disposable clothes. [Replace a semicolon with a colon.]	okay
148 S Fig	[In Fig. 8.15, the cover page of a patent is shown but too small to read.]	[How about showing the top part, title, inventors, (and skipping in between) abstract, and the figure in a larger, readable scale? We are going to try this in the Japanese version.]	We can try! I think it serves its purpose as is.
150 E 1p; 3	and second it recognise that	and second it recognises that	Mann Jun 2003 Correct in 2nd print
150 E 3pb; 4	Conducting and IFR assessment of	Conducting an IFR assessment of	Mann Jun 2003 Correct in 2nd print
151 S 3pb, 1	Example; Whilst I might have	Example: Whilst I might have [Replace a semicolon with a colon.]	okay
152 E 2p; 1	('lock wheel onto safely and reliably onto axle')	('lock wheel safely and reliably onto axle')	Mann Jun 2003 Correct in 2nd print

Chapter 9

155 E 3pb; 1	Again, there is no absolutely unique logical involved	Again, there is no absolutely unique logic involved	Mann Jun 2003 Correct in 2nd print
155 Q 1pb; 1b	with the problem – is on its current s-curve.	with the problem – on its current s-curve.	okay
156 Q 1p; h	Limiting Contradiction?	Limiting Contradiction [Q: In what meaning do you use the question mark in this heading? Please make consistent in some sense with other headings in this chapter.]	Okay; drop the question mark
156 S 2p; 4	to examine the chapter on Knowledge/Effects (15)	to examine the chapter on Knowledge/Effects (Chapter 15)	Correct as is
156 S 2p; 6	While this is certainly not 'wrong' it does	While this is certainly not 'wrong', it does [Insert a comma.]	okay
157 E 1p; 4	polymer chain' (harmful) should suggest	polymer chain' (harmful)) should suggest [Insert a ')'.]	okay
157 S 1p; 4-5	a physical contradiction linked to a desire for temperature which is both high and low.	a physical contradiction (linked to a desire for temperature which is both high and low). [Enclose in parentheses.]	Correct as is
157 S 2pb; 6b	The presence of insufficient actions	The presence of insufficient actions [Start a new paragraph here.]	Correct as is
158 E 1p; 2	other ways of delivering the function.	other ways of delivering the function). [Close the parenthesis.]	okay
158 Q 4p; 2	chances are that the function you are going to deliver does not exist yet.	chances are that the system with which you are going to deliver the function does not exist yet.	okay
158 Q 5p; 2	the best suggestion would be to don a black hat,	the best suggestion would be to put on a black hat,	okay

158 Q 1pb; 1b	contradiction solving and the design methods technology evolution trends.	contradiction solving and the design methodologies technology evolution trends.	okay
159 Q 1p; h	Reduce First Cost?	Reduce First Cost [Why do you use '?' here?]	Okay – delete ?
159 E 1p; 5	Ideal Final Result tool (Chapter 18) in with the trimming tool.	Ideal Final Result tool (Chapter 18) with the trimming tool.	Correct as is
159 E 2p; 2b	of evolution in the reference section at the end of Chapter 17	of evolution in the reference section at the end of Chapter 13	Okay
161 E 1p; 3	Claim 1 and so if we cab design	Claim 1 and so if we can design	okay
161 E 1pb; 2	that build-on an existing patents	that build-on existing patents	Mann Jun 2003 Correct in 2nd print
161 Q 1pb; 2-1b	The main tools to help us to make sure we have the opportunity to protect the possible improvements to a basic invention	[Q: This phrase is not clear to me. Is the word 'protect' suitable here?]	Correct as is (meaning for Japanese – protect in this context = obtain patent protection)
162 Q 1p; 2	and consideration of the 'opportunities' aspect	and secondly the consideration of the 'opportunities' aspect [Somewhere you need to insert 'secondly'. Probably this is the place.]	okay
162 QC Fig	Figure 9.6: Schematic Difference Between 'Innovation' and 'Optimization'	[This caption is the same with the one for Figure 9.7. Maybe we should have a caption which fits better for this figure.]	Figure 9.6: Mapping Different Solutions Onto Attribute Graphs
163 E 3p; 4	A useful way of visualizing the optimization process is connects back to	A useful way of visualizing the optimization process connects back to	okay
163 S 3pb; 1	(Read more about this analogy in Reference 9.2).	[Move this whole note to the end of the preceding paragraph.]	okay
163 S 2pb; 2	exercise, nevertheless it is	exercise; nevertheless it is [Replace a comma with a semicolon.]	okay
164 S 2p; h	Don't Know	Don't Know? [Attach a question mark.]	okay
164 E 2p; 1	If, having been through the preceding problem definition steps you cannot	If, having been through the preceding problem definition steps, you cannot [Insert a comma.]	okay
164 QS 3p; 2-3	first help clarify that you are solving the right problem,	first help clarify the right problem you are going to solve, [Original sentence seems to me somewhat wrong. The above is my suggestion.]	If you have tried all of the recommended strategies for your given problem situation and have not generated any viable solutions, consider using the Psychological Inertia tools to help re-frame your thinking. These tools force problem solvers to take different perspectives on

			their problems. One or more of these alternative perspectives will present useful new solving routes.
164 S 1pb; h	Tool Selection Summary Table	[Move this heading upward to contain the preceding paragraph.	okay
164 S 2pb, 2-3	until you meet a description matching your situation:	until you meet a description matching your situation; and then try the listed solution tools one by one in the priority order as shown.	okay
164-165 S Table		[We are going to add a column at the left-most position for the section number and to insert chapter numbers for the solution tools for easier reference. See below.]	Good idea!

Table 9.1 Tool Selection Summary Table (abbreviated)

Section No.	Problem/Opportunity Situation	1st Choice	2nd Choice	3rd Choice	4th Choice
9.1.1	Limiting Contradiction	Phys. Cont. (11)	(10)	(13)	(15)
9.1.2	Other Contradictions	Phys. Cont. (11)	(10)	(13)	
9.1.3	Physical Contradictions	Phys. Cont. (11)			
9.2.1	Insufficient Actions	Knowledge (15)	(13)	(12)	(10,11)
9.2.2	Excessive Actions	Trends (13)	(15)	(12)	(10,11)
9.2.3	Missing Actions	S-Field (12)	(14)	(18)	
9.3.1	System Doesn't Exist	IFR (18)	(15)	(12)	
9.3.2	System Improvement/'No Problem'	IFR (18)	(17)	(10,11)	
9.4.1	Measurement Problem	S-Field (12)	(18)	(15)	(10)
9.4.2	Reliability Problem	Subversion (20)	(18)	(10,11)	
9.4.3	Cost Reduction	Trimming (17)	(18)	(10,11)	
9.4.4	'Disruptive Shift' (system level)	IFR (18)	(15)	(13)	
	(sub-system level)	IFR (18)	(13)	(15)	(10,11)
9.4.5	'Zero Risk'	Knowledge (15)	(14)		
9.5.1	Designing around a Patent	Knowledge (15)	(17)	(10,11)	(12)
9.5.2	Strengthening a Patent	Trends (13)	(15)		
9.6.1	Opportunity Finding	Knowledge (15)	(13)		
9.6.2	'Optimization'	Optimiz. (9 Ref.)			
9.6.3	'Don't Know'	ARIZ (16)			
9.6.4	'No Solutions'	PI Tools (19)			

[The section numbers are set hierarchically, according to my understanding of the Author's intention.
The section of 'Physical Contradiction should be inserted in this table, as shown above.]

Chapter 10

171 E 2p; 3b	(You will often find	You will often find [Delete the open parenthesis.]	Mann Jun 2003 Correct in 2nd print
171 S 3bp	[No title at the top of the table, though is placed at the bottom of the table on	Table 10.1: Explanation of the 39 Parameters of the Contradiction Matrix	Correct as is in our convention in the book

	page 173.]	[The title is reset at the top of the table.]	
171 S 3bp, 2bp	Moving objects - ... Stationary objects - ... [These two paragraphs appear as ordinary texts.]	Moving objects - ... Stationary objects - ... [These toe paragraphs are set as the notes set below the title of the table with some indentation, just before the table itself.]	Correct as is
171 Q Table	1 ... The mass of or gravitational force exerted by a moving object.	1 ... The mass of or gravitational force exerted by an object. [Drop 'moving' so as to match the explanation for Parameter 2.]	okay
171 E Table	18 Illumination intensity/Brightness	18 Illumination intensity/brightness [Use lower case letters.]	Okay
171 E Table	21 Loss of Energy	21 Loss of energy [Use lower case letters.]	okay
171 E Table	24 Loss of Information	24 Loss of information [Use lower case letters.]	okay
171 E Table	25 Loss of Time	25 Loss of time [Use lower case letters.]	okay
173 QS Table	30 Object Affected Harmful Factors	30 Harmful factors affected on the object [Q: The original naming of this parameter sounds not grammatically correct and is confusing. At least needs some clarifying explanation.]	Object affected harmful factors
173 QS Table	31 Object-generated harmful factors	31 Harmful factors generated by the object [S: This naming should match with the preceding one.]	Object generated harmful factors
173 E Table	31 ... Aspects of an object or system that produce and adverse effect	31 ... Aspects of an object or system that produce an adverse effect	okay
173 E Table	31 ... ...noise as well as things like things like vibration	31 ... ...noise as well as things like vibration	Mann Jun 2003 Correct in 2nd print
173 E Table	32 ... Issues related to manufacture, fabrication and assembly issues associated	32 ... Issues related to manufacture, fabrication and assembly associated	okay
173 S Table	39 ... ... The time per unit function or operation. Useful output per unit time. Cost per unit output, or amount of useful output.	39 ... ... The inverse of the time per unit function or operation. Useful output per unit time. The inverse of cost per unit output, or amount of useful output. [So as to make the directions consistent in a parameter.]	okay
174 E 1p; 1-2	'why is there no 'cost' parameter.	'why is there no 'cost' parameter?'. [Insert a question mark and	okay

		close the quotation.]	
174 Q 2pb; 2	in terms of both the amount of	in terms of the amount of	okay
175 QS 1pb; 4-5	Loss of Substance, Harmful Side Effect, and Reliability	Loss of Substance, Object Generated Harmful Factor, and Reliability	okay
176 QS 1p; 3	Convenience of Use	Ease of Operation [Please use the same wording with the one in the Parameter Table. Or add this wording in the explanation column.]	okay
176 Q 1p; 4	or possibly even productivity.	[The Productivity parameter (39) means the production by the object and is not suitable here. The Ease of Manufacture parameter (32) is appropriate here because it means the easiness in producing this object. Since you list 'Ease of Repair' (34) afterwards, you seem to be thinking the productivity of the service person, which is already covered by 'Convenience of Use'. Anyway, I am afraid your wording here may cause some confusion.]	..or possibly ease of repair.
176 Q 2p; 1	Translating all of the other relevant contradiction parameters	Translating all the relevant contradiction parameters	okay
176 E 6p; 3	Flexible Shells and Thin Films	Cheap Disposable	Mann Jun 2003 Correct in 2nd print
176 E 4pb; 3	with examples reference section	with examples in the reference section	okay
178 E 4pb; 5	or 5 'length of moving object'.	or 3 'length of moving object'. [Correct the parameter number.]	okay
178 E 4pb; 3b	As stated at the top of Table 3.1,	As stated at the top of Table 10.1,	okay
178 Q 3pb; 1b	'object generated harmful effect'	'object-generated harmful factor' [Insert a hiphen.]	okay
179 E 1p; 1	to solve this kind conflict	to solve this kind of conflict	okay
179 E 1pb; 4	the designers, for example have	the designers, for example, have [Insert a comma.]	okay
179 S 1pb; 4b	'help high-speed cornering'. In either instance,	'help high-speed cornering'. In either instance, [Start a new paragraph here.]	Correct as is
179 E 1pb; 2b	squeezed the bag in to areas, we have	squeezed the bag in one place, we have	Mann Jun 2003 Correct in 2nd print
180 S 2p; h	3) A Better Wrench	3) A Better Wrench Open-End Wrench [Insert this sub-title in order to make parallel with the later section.]	Correct as is – the example features both open and closed wrenches

181 Q 2p; 3b	to the 'manufacturability' parameter	[Here, I think, with the word of 'manufacturability' you are talking about the 'Ease of manufacturing' (Parameter 32). But when using the Matrix you seem to look up the box of 31/29, where the worsening parameter is Manufacturing precision (Parameter 29). (We need higher precision, but the precision does not get worse by the trial of removing the harmful side effect.) Unfortunately the box 31/32 is empty. Probably, we should point out this confusion in a footnote and leave the text as it is.]	Replace 'MANUFACTURABILITY' with 'MANUFACTURING PRECISION' (we want to reduce the precision for cost reasons, but this reduction in precision makes the harmful effect worse – hence, I think, the two are in conflict)
182 E 2p; 3	overcome the objective generated harmful factors	overcome the object-generated harmful factors [Replace 'objective' into 'object', and use a hyphen.]	okay
182 S 3pb, 1b	what we are trying to improve is TENSION, PRESSURE.	what we are trying to improve is STRESS OR PRESSURE. [For the sake of consistency in the parameter name.]	Okay
182 Q 2pb; 2	with the previous open-ended wrench discussion in that, we see	with the previous open-ended wrench discussion in that we see [(?) Delete a comma.]	okay
184 Q 3p; 4	4) identify which of these elements is in contradiction with	4) identify which elements in these solution directions are in contradiction with	okay
184 S 4p; 1	From this red-eye example, we might follow these stages	For this red-eye example, we might follow these stages	okay
184 E 1pb; 4b	- separation - increased separation means the camera and lens may no longer	- separation - increased separation means the flash and lens may no longer	okay
185 S 2p; 1b	- amount of light --> 'Illumination Intensity'	- amount of light --> 'Illumination Intensity/Brightness'	okay
185 S 1pb; 1b	associated with illumination intensity,	associated with illumination intensity/brightness,	okay
188 E 1pb; 2	to deploy the 'asymmetry solution -	to deploy the 'asymmetry' solution - [Close the quotation mark.]	okay
189 E 1p; 6	clusters identified in Figure 10.17	clusters identified in Figure 10.18	okay
189 S 2p; 1	If we were doing this for real of course, we	If we were doing this for real, of course, we [insert a comma.]	okay
191 E 2p; 5-6	we might make connections to Harmful Side Effects,	we might make connections to Object Affected Harmful Factor, ,	okay
191 E	Now, we could chose to look	Now, we could choose to look up	okay

2p; 7	up		
192 Q 2p; 2	something like the system under evaluation.	something like the system under consideration.	okay
192 E 2p; 2-3	patent search engine is, ' has anyone developed	patent search engine is, 'has anyone developed [Delete a space after the quotation mark.]	okay
192 Q 2pb; 5b	The general point being that here we're making	[I cannot understand what you mean with this initial clause.]	The general point being that we are hopefully making…
193 E 2p; 3	The red line on the graph	The characteristic line on the graph	okay
193 E 2p; 6	we saw Parameter A as 'leakage performance'	we saw Parameter A as 'sealing performance'	okay
193 E 2p; 5b	a balance between adequate leakage performance and	a balance between adequate sealing performance and	okay
193 E 2p; 2b	finds the point on the red line	finds the point on the characteristic line	Okay
193 E 2pb; 3	the contradiction between leakage performance and	the contradiction between sealing performance and	okay
193 Q 2pb; 3b	for improving the red-line characteristic.	[Need to change the text, but how?]	..for improving the relationship..
193 E 1pb; 1b	- i.e. a new red-line is	- i.e. a new characteristic line is	Mann Jun 2003 Correct in 2nd print
194 E 2p; 4	a new (hopefully better) red-line	a new (hopefully better) characteristic line	Mann Jun 2003 Correct in 2nd print
195 Q 2p; 4-3b	in the bag (think of the fluid as something bad we are trying to get rid of and that we have achieved our ideal final result when all of the fluid has been removed.	in the bag (think of the fluid as something bad we are trying to get rid of and that we have achieved our ideal final result when all of the fluid has been removed).	Okay
196 Q 1p, 1	2) Contradictions come in both 'discrete' and 'continuous' types.	[Q: You are saying the these types are the types of contradictions when they are coming. But I think they are the types of their being disposed. The same contradiction of the bicycle saddle can be solved different ways, resulting in discrete type solution and in continuous type solution.]	Correct as is in text. (more on the 'continuous' versus 'discrete' subject in CRREAX newsletter article coming up next year.)
197 S Fig	[Right side of the figure.] Segmentation Preliminary Action	'Top 8' Inventive Principles: Segmentation Preliminary Action [This heading can show your intention much clearer.]	okay
197 S 3pb; 5	improving feature types physical, performance and	improving feature types, i.e., physical, performance and	okay
197 S 3pb; 5b	in the system under evaluation	in the system under consideration	okay
198 E 7p; 1-2	Principle 11 - .... non-desirable affect	Principle 11 - .... non-desirable effect	okay
199 E	'Increasing Principles'	'Increasing Principles'	Correct in 2nd print

Fig.	1, 8, 9, 10, 11	1, 7, 8, 9, 10, 11	
199 Q Fig	Figure 10.25: Influence of Problem Type on Inventive Principle Selection	[Q: This figure caption is a reproduction of the one for the previous figure, perhaps in mistake. Give a more suitable one.]	Figure 10.25: Relationship Between Inventive Principles and Complexity Evolution Characteristic
200 E 1p; 1	for many newcomers, however is that	for many newcomers, however, is that [Insert a comma.]	okay
200 E 2p; 3b	by making symmetrical instead of asymmetrical, we	by making symmetrical instead of asymmetrical', we [Close the quotation mark.]	okay
201 E 5p; 4b	contradiction by changing function,	contradiction by changing function?', [Insert a question mark, and close the quotation mark.]	okay
201 E 1pb; 2-1b	| 5S [These are shown nearly at the right end of the lines.]	| 5S [Print these at the center of the lines.]	Better if the 'CONTRADICTION' word fits on the same-line as the other words; then the 5S part sits underneath it.
202 Q 4p; 3	possible Principles to be evaluated,	possible Principles to be examined,	okay
202 Q 1pb; 4	4) Mann, D.L., 'Assessing the', TIZ Journal	4) Mann, D.L., 'Assessing the .....', TIZ Journal [Please supply the full title of the article.]	'Assessing The Accuracy Of The Contradiction Matrix For Recent Mechanical Inventions'
203 Q Pr 2A	- Inflatable car passenger	- Inflatable car passenger bag [Is this the air-bag for safety?]	Correct as is
204 Q Pr 3D	- Sharp and blunt end of a drawing pin	- Sharp and blunt ends of a drawing pin	Correct as is
205 E Pr 5A	- Bo-focal lens spectacles	- Bi-focal lens spectacles	okay
205 E Pr 5A	- Catarmaran/trimaran	- Catamaran/trimaran	okay
205 E Pr 7	Principle 7. "Nested Doll"	Principle 7. 'Nested Doll' [Use single quotes.]	okay
206 E Pr 10A	A. ... (either fully or partially before	A. ... (either fully or partially) before [Close the parentheses.]	okay
207 EQ Pr 12	Principle 12. Equipotentiality A. If an object or system requires or is exposed to tension or compression forces, redesign the object's environment so the forces are eliminated or are balanced by the surrounding environment.	[Q: This explanation seems to be a part of Principle 11 (maybe Principle 11B ?) and not appropriate for Principle 12. Please supply the explanation of Principle 12.]	Correct as is
211 Q Pr 19B	- Washing machine/dish-washer water injection operates uses	- Washing machine/dish-washer water injection operates/uses different cycles	..operates using...

	different cycles		
211 E Pr 22A	A. ... so that the deliver a positive effect.	A. ... so that they deliver a positive effect.	Mann Jun 2003 Correct in 2nd print
212 Q Pr 25A	A. Enable andobject or system to perform functions or organise itself.	A. Enable an object or system to perform functions by itself or organise itself.	okay
214 E Pr 28D	- Electro-theological fluids	- Electro-rheological fluids	okay
215 Q Pr 31B	- Dessicant in polystyrene packing materials	- Desiccant in polystyrene packing materials	Correct in 2nd print

We feel we have to study much more on the examples of the Principles, since many of them are quite new and we don't know what they are. There are many new terminologies and commercial names which may not be translated properly. Could you suggest us how to survey them effectively? CREAX website – free-resources, TRIZ, 40 Principles

Chapter 11

219 Q 2p; 2	the different properties laying at the heart of the contradiction.	the different properties lying at the heart of the contradiction.	okay
219 QS 2p; 7-8	we want the two different attributes hot and cold.	[The word 'attribute' is used to mean sometimes a category of property and some other times a (qualitative) value of such a category of property. The Author does not seem to describe such a difference explicitly. In Japanese version we are going to distinguish them as much as possible.]	Correct as is (Japanese edition – by all means change as required)
219 S 2pb; 1b	used it in the last one	used it in the previous one	okay
220 E 5pb; 2b	This leaves us with he option of	This leaves us with the option of	okay
220 S 4pb; 1	Having established that the separate in space solution route is	Having established that the 'separate in space solution' route is [Enclose with quotation marks.]	okay
220 S 3pb; 1	and the separation in space problem type,	and the 'separation in space' problem type, [Enclose with quotation marks.]	okay
220 S 2pb; 3	how the 11 separate in space solution triggers	how the 11 'separate in space' solution triggers [Enclose with quotation marks.]	okay
220 Q 1pb; 2b	you may wish to use keep this table	you may wish to use and keep this table	okay
221 S Table; h	Table 11.1 Physical Contradiction ... [This title is placed at the bottom of the table.]	[Place the title at the top of the table.]	Correct as is in our book convention
221 E Table	[Separation in Time] 10. Prior Action	10. Preliminary Action [So as to match with the Principle name in Chapter 10.]	okay

221 E Table	[Separation in Time] 9. Prior Counter Action	9. Preliminary Anti-Action [So as to match with the Principle name in Chapter 10.]	okay
221 E Table	[Separation on Condition] 28. Mechanics Substitution	28. Mechanics Substitution/Another Sense [So as to match with the Principle name in Chapter 10.]	okay
221 E Table	[3. Transition to Alternative System] 27 Cheap/Short Living	27 Cheap Short Living Objects [So as to match with the Principle name in Chapter 10.]	okay
221 E Table	[4. Transition to Inverse System] 13. Other Way Around	13. The Other Way Round [So as to match with the Principle name in Chapter 10.]	okay
223 E 1p; 2	can also seen in	can also be seen in	Mann Jun 2003 Correct in 2nd print
224 S 3p; 1	from this separate in time strategy,	from this 'separate in time' strategy, [Enclose with quotation marks.]	okay
224 S 3p; 3	we did for the separate in time category,	we did for the 'separate in time' category, [Enclose with quotation marks.]	okay
224 E 5pb; 2-3	Some people – particularly in their early experience with TRIZ find	Some people – particularly in their early experience with TRIZ – find [Insert a dash.]	okay
224 S 4pb; 1b	three key words are when, where and if;	three key words are 'when', 'where' and 'if'; [Enclose with quotation marks.]	okay
225 Q 3p-4p	1) WHERE do I want characteristic A and where do I want characteristic -A	[Q: Author uses the word 'characteristic' here, but uses 'attribute' in Page 219, and 'condition' in Page 220 in the similar context. May we understand that they are essentially the same?]	Correct as is (Yes – they are interchangeable in this context)
226 E 1pb; 1b	Q. When do I not want a small socket	Q. When do I not want a speed hump	Mann Jun 2003 Correct in 2nd print
228 E Fig	[Direction of the Performance Metric axis is not shown.]	[Insert the words 'bad' on the top and 'good' at the bottom of the axis.]	Correct as is (direction of good and bad could be different in different situations)
229 E 4p; 5	and lowest CO emissions at another.	and lowest CO emissions at another). [Close the parenthesis.]	okay
229 E 6p; 3	This optimum is typically actually the best compromise	This optimum is typically the best compromise	okay