

Minor edits in the thesis post submission

- Forward slash has been replaced by 'or' wherever relevant, e.g. pages 97, 116, 141,156, 158, 195, 203, 208, 221, 226, 228, 242, 269, 271, 272, 280, 281
- Where relevant, hyphens were replaced by the *En Dash* in the text. In few places, hyphens were inserted as modifiers.
- Thesis title page: Carriage return between 'nano enabled medical' and 'applications' to make the title appear consistent in spacing.
- Shaded the header in the Tables 3.1 and 4.1 in page132 and page 164 respectively.
- Formatted Figure 6.3 to improve presentation.

The table below details other edits in the thesis post submission

Page number	Submitted version	Post submission corrections (shown by underline)	Details of the corrections
<i>Page xiv, List of Abbreviations</i>	International Standards Organisation	International Organization for Standardization	Corrected the expansion of ISO
<i>Page 42, Table 2.2</i>	Cucurmin nanoparticles as a therapeutic agent for improving cognition for schizophrenic patients	<u>Curcumin</u> nanoparticles as a therapeutic agent for improving cognition for schizophrenic patients	Corrected the spelling of curcumin
<i>Page 50</i>	. . . may undergo bio-transformation in the environment to form the parent drug (removal efficiencies in STPs has been reviewed in (Verlicchi et al., 2012b).	. . . may undergo bio-transformation in the environment to form the parent drug (removal efficiencies in STPs has been reviewed <u>by</u> (Verlicchi et al., 2012b)).	Inserted closing bracket and 'by'
<i>Page 75, Figure 2.7</i>	For anti-microbials, if PEC sw : PNEC microorganism < 0.1, TIER B	For anti-microbials, if PEC sw : <u>PNEC</u> microorganism > 0.1, TIER B	Corrected to a greater than symbol
<i>Page 78, footnote 28</i>	Including Food Ingredients that are Color Additives. On 5 August 2015, a guidance document related to the use of nanotechnology in food for animals.	Food Ingredients that are Color Additives, <u>and</u> , on 5 August 2015, a guidance document related to the use of nanotechnology in food for animals.	Inserted ', and,'
<i>Page 84</i>	. . . and hence it necessities that before the technologies are embedded 'in the world', questions on wider societal and future implications are considered.	. . . and hence it <u>necessitates</u> that before the technologies are embedded 'in the world', questions on wider societal and future implications are considered.	Corrected the spelling

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<i>Page 93</i>	In the case of nanomaterial risk assessment, the water is murkier, for example, even if the tests are conducted on nominally the same type of nanomaterials the results. . .	In the case of nanomaterial risk assessment, the waters <u>are</u> murkier, for example, even if the tests are conducted on nominally the same type of nanomaterials the results. . .	Changed to plural
<i>Page 97</i>	The embryonic concept was put into practise by using the concept of a risk register...	The embryonic concept was put into practice by using the concept of a risk register...	Changed the verb to the noun form
<i>Page 103</i>	. . . inter-disciplinary and trans-disciplinary collaboration between scientists, engineers, social scientists and applied ethics. inter-disciplinary and trans-disciplinary collaboration between scientists, engineers, social scientists and applied <u>ethicists</u> . . .	Replaced 'ethics' by 'ethicists'
<i>Page 103</i>	She argues "that "responsibility" can be used in so many different ways.....the word represents a "syndrome" of concepts – i.e. to multiple concepts that share a common word – rather than a single, unitary or generic concept".	She argues "that 'responsibility' can be used in so many different ways.....the word represents a 'syndrome' of concepts – i.e. to multiple concepts that share a common word – rather than a single, unitary, or generic concept".	Removed double quotes
<i>Page 109</i>	. . . broadly adhered to and practiced by pharmaceutical companies	. . . broadly adhered to and practi <u>s</u> ed by pharmaceutical companies	Corrected the grammar
<i>Page 112</i>	The purpose of this chapter is: first, to outline the overall research approach; second, to describe the process of collecting secondary and empirical data; third, the methodological approach to analyse the empirical data and,	The purpose of this chapter is: first, to outline the overall research approach; second, to describe the process of collecting secondary and empirical data; third, <u>to describe</u> the methodological approach to analyse the empirical data and, fourth, to	Inserted words 'to describe'

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	fourth to inform my positionality which is likely to influence the interpretation of the study data. . .	inform my positionality which is likely to influence the interpretation of the study data. . .	
Page 112	I use numeric data from literature to mathematically estimate prospective . . .	I use <u>numerical</u> data from literature to mathematically estimate prospective. . .	Replaced 'numeric' by 'numerical'
Page 113	The reason for adding the quantitative component was to help address different objectives for the sake of "completeness" and for "improving the usefulness of findings" to the "practitioners" . . .	The reason for adding the quantitative component was to help address different objectives for the sake of 'completeness' and for 'improving the usefulness of findings' to the 'practitioners'. . .	Changed from double quotes to single quotes
Page 115	Here, I am inspired by McCracken's take on quantitative verses qualitative research. . .	Here, I am inspired by McCracken's take on quantitative <u>versus</u> qualitative research. . .	Corrected the spelling
Page 116	. . . and that they are influential for other studies, e.g., operationalising "responsible innovation" in finance, online retail.	. . . and that they are influential for other studies, e.g., operationalising responsible innovation in finance, <u>and</u> online retail.	Deleted double quotes; inserted 'and'
Page 122	An extensive literature search (conducted between Dec 2012 to April 2014) . . .	An extensive literature search (conducted between Dec 2012 and April 2014) . . .	Replaced 'to' by 'and'
Page 123	I consulted relevant experts in the field and the 'grey' literature. Further details on methodology. . .	I consulted relevant experts in the field and the grey literature. Further details on the methodology. . .	Deleted quotes, inserted 'the'
Page 127	Figure 3.2 showed only 5 of the 6 legends		Corrected

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Page 130	I asked them their views on the RI, how it was different from the existing concepts of governing science/technology and how RI could be implemented.	I asked them their views on the RI, how it was different from the existing concepts of governing science <u>and</u> technology and how RI could be implemented.	Replaced '/' by 'and'
Page 136	. . . categories before hand- the categories were the four dimensions of RI (Owen et al., 2013b): anticipatory, reflective, inclusive or deliberative and responsive – and is the governing theoretical framework, and let the others emerge from the data.	. . . categories beforehand – the categories were the four dimensions of RI (Owen et al., 2013b): anticipatory, reflective, inclusive or deliberative, and responsive – and is the governing theoretical framework, and let the others emerge from the data.	Removed space between 'before' and 'hand'
Page 137	I believe in the non-dual philosophy of existence (how much I practice it in everyday life, is a different question) . . .	I believe in the non-dual philosophy of existence (how much I <u>practise</u> it in everyday life, is a different question)...	Changed the noun to the verb form
Page 137, Footnote 73	. . . appealed to me as a concept to present my philosophical stance towards this research study because it can justify my science understanding.appealed to me as a concept to present my philosophical stance towards this research study because it can justify my <u>understanding of science</u> ...	Changed the phrasing
Page 139	This is helpful in some ways that it keeps me free from 'disciplinary' biases arising out of allegiance to a particular discipline. . .	This is helpful in some ways that it keeps me free of <u>of</u> 'disciplinary' biases arising out of allegiance to a particular discipline. . .	Replaced 'from' by 'of'
Page 141	. . . nanomaterials in the various environment and technical compartments such as water, soil,	. . . nanomaterials in the various environment and technical compartments such as water, soil,	Replaced '/' by 'and'

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	sewage treatment plants, and incinerators, was also done with care/ deep thinking. . .	sewage treatment plants, and incinerators, was also done with care and deep thinking. . .	
Page 144	The following chapter is in its entirety (except some sentences and one figure) is published in the 'Journal of Nanobiotechnology' as:	The following chapter is in its entirety (except some sentences, <u>one table</u> , and one figure) is published in the 'Journal of Nanobiotechnology' as:	Inserted 'one table'
Page 151, Figure legend 4.1	Overflows from STPs, leakage from sewer pipes will likely result in flow of Au-NP to surface water and sub-surface soils respectively, and will possibly impact aquatic organism. . .	Overflows from STPs <u>and</u> leakage from sewer pipes will likely result in flow of Au-NP to surface water and sub-surface soils respectively, and will possibly impact aquatic organism. . .	Inserted 'and'
Page 166	. . . incidences of Venous Thomboembolism for the UK.	. . . incidences of Venous Thromboembolism for the UK.	Corrected the spelling
Page 190	. . . arguments that in the case of uncertainty and ignorance, risk assessment is not full-proof. arguments that in the case of uncertainty and ignorance, risk assessment is not <u>fool</u> -proof. . .	Corrected the spelling
Page 208	And s/he added " <i>I would be worried if they weren't any such protocols. . .</i> "	S/he added " <i>I would be worried if they weren't any such protocols. . .</i> "	Deleted 'and'.
Page 208, footnote 89	SS 01 is a well-known scientist involved in the deliberations of science and innovation governance. . .	SS 01 is a well-known scientist involved in the deliberations on science and innovation governance. . .	Replaced 'of' by 'on'
Page 210	. . . and it seems responsibility can be easily attributed (or passed to someone else).	. . . and it seems responsibility can be easily attributed (or passed) to someone else.	Changed position of brackets

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Page 223	. . . along with the empirical data and re-conceptualise it so that can be made operable in everyday lives.	. . . along with the empirical data and re-conceptualise it so that can be made operable in everyday <u>life</u> .	Plural to singular
Page 267	The Figure is presented with the aim to start a discussion regarding operationalising RI for nanomedicine and to thrash out or fine tune translation of RI into <u>practise</u> so that shared...	The figure is presented with the aim to start a discussion regarding operationalising RI for nanomedicine and to thrash out or fine tune translation of RI into <u>practice</u> so that shared...	Changed the verb to the noun form
Page 270	The proposed approach to RI integration also recognises that larger enterprises are already practicing some forms of the normative concepts, such as, sustainable development, thereby facilitating enterprise buy-in to the additional aspects.	The proposed approach to RI integration also recognises that larger enterprises are already <u>practising</u> some forms of the normative concepts, such as, sustainable development, thereby facilitating enterprise buy-in to the additional aspects.	Changed the noun to the verb form
Page 272	Similarly, if an organisation chooses to report using accountability standards, they need to report on how the firm <u>practices</u> inclusivity...	Similarly, if an organisation chooses to report using accountability standards, they need to report on how the firm <u>practises</u> inclusivity...	Changed the noun to the verb form
Page 286	Another important development has been the publication from Andrew Maynard (2015) suggesting. . .	Another important development has been the publication <u>by</u> Andrew Maynard (2015) suggesting. . .	Replaced 'from' by 'by'
Page 287	When I started my research in autumn 2010 there was only one scientific publication on	When I started my research <u>in the</u> autumn <u>of</u> 2010 there was only one scientific publication on	Inserted 'in the' and 'of'

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	environmental risks of nanomedicine. . .	environmental risks of nanomedicine. . .	
<i>Page 354</i>	. . .if $L(E)C_{10} \square L(E)C_x < L(E)C_{50}$ and a factor of 10 was used to derive NOEC if $L(E)_{50} \square L(E)C_x \square L(E)C_{100}$. . .if $L(E)C_{10} \leq L(E)C_x < L(E)C_{50}$ and a factor of 10 was used to derive NOEC if $L(E)_{50} \leq L(E)C_x \leq L(E)C_{100}$.	Inserted the symbols and subscripts