




# From the Contemporary Art World to the "Contemporaneity" of Aura: A Literature Review on Media, Technology and Art

Airong Liu 

Faculty of Humanities and Arts, Macao University of Science and Technology, Macao, 999078, China

liuairong1997@126.com

**Abstract.** New technologies, such as digital art, virtual reality and artificial intelligence, have transformed the creation subjects, aesthetic concepts and methods of creation in the art world, and expanded the boundaries of artistic expression and communication. By qualitatively analysing literature and combining the theories and concepts of the art world, 'aura' and cultural capital, this paper explores how new media and technologies change the creation and practice of art subjects, how to find the trace of aura in the contemporary art world, and whether new technologies can provide more people with opportunities for artistic experience and expression. The affordance of technology provides a driving force for innovation in artistic production, and the contemporaneity of aura has been newly interpreted in digital art. Aura is no longer limited to the artwork itself, but exists within the unique experience of the viewer. The development of technology cannot completely bridge the digital divide, and may also create new inequalities under the logic of commerce. The research and attention to art production in the era of digital technology should not stop at 'schockwirkung', but should also pay attention to the issues of cultural power behind it.

**Keywords:** digital media, digital technology, art world, aura, contemporaneity.

## 1 Introduction

This paper explores the contemporary dynamics between media, technology and art practice, and the 'contemporaneity' of aura. Art is a collective activity; the choices made by each member of a collective, including artists, distributors, curators, etc., ultimately result in the finished state of a work of art [1]. Thus, each member of the art practice is part of the 'art world'. According to Actor-Network Theory, everything in society is situated in an ever-changing network of relationships, and non-human actors can act and enter into these networks of relationships [2]. Art is an ever-evolving field that is consistently shaped and influenced by media and technology, in addition to the subjective actions of human actors. The continuous development of new technologies and the emergence of new media have greatly expanded the boundaries of artistic expression,

© The Author(s) 2024

B. Majoul et al. (eds.), *Proceedings of the 2024 3rd International Conference on Comprehensive Art and Cultural Communication (CACC 2024)*, Advances in Social Science, Education and Humanities Research 863,

[https://doi.org/10.2991/978-2-38476-287-3\\_26](https://doi.org/10.2991/978-2-38476-287-3_26)

creation perspectives, and modes of communication and reception. Thus, the functioning and composition of the 'art world' in each era are not only shaped by human actors such as artist patrons, dealers, regulatory bodies and critics, but also by the renewal of the entire system of artistic production in a dynamic relationship with media and technology.

With the advancement of technologies such as digital art, augmented reality (AR), virtual reality (VR), artificial intelligence (AI), and the rise of new media, the contemporary art world is undergoing innovation and change. The key question is how new technologies affect the 'aura' of emerging art forms. The concept of 'aura' was coined by Benjamin as 'the unique manifestation of something that is at a distance but feels so close' [3]. According to Benjamin, mechanical reproduction techniques allow for the mass reproduction and distribution of artworks, thus altering the authenticity, cult value and display value of artworks, and dispersing their 'aura'.

It is worth pointing out here that 'the disappearance of aura' was a key issue in the series of debates between Benjamin and Adorno. Benjamin argued that the disappearance of aura was a necessity, that art existed to serve politics, and that 'the linguistic constraints of the talkies ..... coincided with the fascist emphasis on national interest'[3]. Adorno, on the other hand, argues that aura have not disappeared, but have resurfaced more subtly, entering the logic of commercialization [4]. At the same time, it has also been suggested that aura did not die because of reproducible visual media, but is constantly lost and found, existing in a state of perpetual crisis [5]. How then does artistic production in the contemporary art world reproduce (or disperse) the contemporaneity of aura amid changing media and technologies? This is the theme that this paper seeks to explore.

Based on the above reflections on the interrelationship between media, technology and art, as well as Becker's theory of the art world and Benjamin's theory of aura, this study has launched a qualitative documentation and analysis to answer the following questions:

**Q1:** How do new media and technologies change the creation and practice of art subjects?

**Q2:** How can we find the trace of aura in contemporary art practice?

**Q3:** Can new technologies provide more people with opportunities for artistic experience and expression, leading to the era of ubiquitous aura?

## 2 The Contemporary Art World and the Affordance of Media

Becker defines the 'art world' as the network of people and organisations that collaborate in the production of art and the shared practices by which participants coordinate their activities [1]. Individuals and organisations operating within networks of artistic production coordinate through shared conventions that govern artistic practice and provide meaning to the conventions from inception to completion of an artwork. The routinisation of collaboration in the artistic production process allows conventions to be developed as references for future production activities of the same type; conventions are constantly reproduced and become 'entrenched' and 'semi-automated'. Innovative

behaviours that do not follow the conventions are possible, but with additional costs (e.g. time, energy, resources, etc.). Work is thus caught in a tension between conventional ease and success and unconventional hassles and lack of recognition. These interlocking elements replicate the world and guide practice, producing traditionally conservative outcomes.

The technological affordance and interactive affordance of new contemporary media provide additional drivers for innovation in the art world. Firstly, the materiality of new technologies and media is changing the aesthetic experiences and expectations of artists. Halpern and Humphreys used online ethnography and semi-structured interview methods to examine the construction of the art world and the expansion of the aesthetic experience of iPhone photography (iPhoneography) [6]. iPhone photographers (iPhoneographer) legitimise the existence of iPhone photography as an independent art form through the construction of new productive and aesthetic conventions. The ability to take a picture of the iPhone anywhere, anytime, the professionalism of configuring lenses, and the ease of uploading images directly to social media sites are seen as part of the aesthetics of iPhone photography. This portability gives aesthetic significance to the photography of everyday scenes and allows the aesthetics of everyday life to be appreciated by a wider range of people. iPhone is equipped with a variety of filter applications that allow iPhone photographers to additionally edit and recreate their photos using aesthetic programmes and incorporate their own aesthetic experience to give each iPhone photography work a unique character. Each iPhone photography work gives a unique flavour and mood. The new aesthetics of art under the logic of technology is embodied in the emphasis on materiality, routine and process; the completion of a work of art does not imply a static endpoint, but rather a dynamic process of change and continuous development, which constantly produced in the internal transformation of the medium.

While the new media provide the impetus for innovative art forms, they may also create new constraints on the creation of creative works through platform algorithms. The presentation of the creative process as well as individual artworks on new media platforms has become a new way for artists to get paid, thus making new media companies effectively emerging actors in the functioning of the contemporary art world. However, the operational strategies of new media platforms intentionally or practically conceal the overt operation of their coded architectures, and the platforms may accelerate or restrict the dissemination of individual artists' creative content without disclosing the reasons for doing so. There is a significant mismatch of resources between media companies and the platform's artist users. Instagram has played an important role in the mediated operations of the contemporary art world; however, as Cotter has found, like other platforms, Instagram rarely shares details about the platform's algorithmic architecture or how it works [7]. Algorithmic ranking determines who and what gains visibility on social media. By establishing the conditions of social media users' 'visibility', algorithms act as disciplinary bodies that dictate norms of participation. Bishop researched and followed independent artist bloggers on Instagram through online ethnographies and semi-structured interviews [8]. These artist bloggers rely heavily on Instagram to disseminate their personal work attracting more attention from art brokers and dealers, as well as attracting more followers and building their personal brands. As

the livelihood of these artist bloggers is closely related to the attention they receive on the platform, they have been pushed to the forefront as a "testing group" for the platform's algorithm, and are the first to experience the frustration of the platform's lack of transparency. To avoid the risk of being "restricted" or even "limited in account functionality", artists have researched the way the algorithm works through self-experimentation and testing, looking for different ways to deal with the opacity of the platform's algorithm. Continuing to produce content on Instagram that is (perceived to be) more popular with the platform's users may ultimately shape artistic practice.

New technologies not only empower or limit the creativity of artists, but may also produce new creative subjects. Along with the development of AI technology, machines, which in the past served as tools, intermediaries, and assistants in the art world, have also acquired "creative abilities," adding to the complexity of the composition of the contemporary art world. Through in-depth interviews, Tan identifies two roles that AI plays in the imagination of creators: the "J.A.R.V.I.S." and the amplifier [9]. "J.A.R.V.I.S." is Iron Man's intelligent assistant, and for this segment of creators, AIs such as ChatGPT are important creative assistants and productivity helpers, demonstrating a variety of application scenarios ranging from assisting with design, generating reports, learning languages, and analysing data, to writing speeches. Some interviewees also see AI "as a tool to make themselves stronger", amplifying their creativity through machine technology to achieve "creations that were once hard to imagine". This is an instrumental and pragmatic perspective. Elgammal and Mazzone found in their study that along with the enhancement of AI technology, human creators are gradually changing their technological imaginings and roles in relation to AI, while AI is also influencing the role of human creators [10]. Human artists must also play a more important role in the feedback loops between themselves and generative systems such as Playform, such as 'acting like curators', making differentiated, judgmental decisions about which images to use and which to continue to develop within the system. Thus, in the creative practice of the contemporary art world, machines are no longer just tools, but also collaborators with human creators, working together with them through powerful algorithms and aggregation capabilities.

The creative ability of machines can make them important collaborators for humans, but whether machine creators have the "creativity" of human artists is a question worthy of further discussion. Natale and Henrickson introduced the concept of 'The Lovelace effect', contrasting it with the more common notion of 'The Lovelace Objection' [11]. The Lovelace Objection" is expressed in the field of computer science as "computers can't produce or create anything, but only do what the programmer instructs them to do." Natale and Henrickson examined the case of an AI-created robot called 'AICAN'. In 2019, HG Contemporary Gallery exhibited paintings created by the AI system AICAN. Visitors began to perceive AICAN's work as 'creative', influenced by the exhibition's infrastructural design, the way the artworks were presented, and art exhibition conventions such as AICAN's creator, Ahmed Elgammal, positioning himself as a collaborator with AICAN [11]. AICAN's creativity is attributed to social and cultural cycles of meaning, which means machine creators are not inherently creative. Technology is always immersed in a cultural and social context; The Lovelace effect shifts the focus from what computers are capable of doing in ontological terms to the perceptions of

the human users with whom they interact, arguing that creativity is the result of human-computer interactions and human perceptions of technology in social and cultural circuits of meaning, rather than an internal function of the computer itself.

While the affordance of media fuels innovation in the contemporary art world, it also has the potential to reshape the practice of artmaking by placing restrictions on the creative behaviour of artists through technological elements such as platform algorithms. The development of technology offers the possibility of a wider range of art-making subjects, yet creativity has always been linked to the human being, and the affordance of technology is only one of the mechanisms that produce this perception.

### 3 The "Contemporaneity" of Aura

Benjamin used "aura" to summarise the most fundamental aesthetic characteristic of traditional art. Benjamin suggested that "aura" means originality, "the immediacy of the original constitutes its originality", which can also be said to be uniqueness [3]. The aura is constrained by the here and now, so the aura of the original cannot be imitated by a copy. Secondly, "aura" also refers to the cult value that underlies traditional art [3]. Art has a high value because it was born in primitive times and is closely related to witchcraft rituals, and "aura" is largely related to this worship value. With the development of history and art, this worship function changed from conscious to unconscious, but it has consistently been accompanied by the production and appreciation of works of art. According to Benjamin, the emergence of mass production brought about by mechanical reproduction has had a great impact on the "aura" of works of art, and the authority and uniqueness of "aura" have been gradually lost in the modern era of mechanical reproduction.

As Adorno proposed, Benjamin only saw self-regulating art as having an aura, and "increasing reproducibility and the consequent disappearance of the aura will lead to the disappearance of self-regulating art". Adorno believed that technological progress was not contradictory to self-regulating art, that art did not have to obey the existing order, and that reproducibility also helped artists enter a state of freedom. He believed that aura is a fundamental part of contemporary art, and essentially does not deny Benjamin's thesis on the decline of aura, but considered his argument to be one-sided and dangerous. In addition to Benjamin and Adorno, other scholars have suggested that aura is not a quality that comes with a work of art, but rather a state experienced by the viewer of the work of art, and that aura does not die with reproducible visual media, but instead continues to die and be reborn in a state of constant crisis in the context of the competition or interplay between new and traditional media [5].

Benjamin used the word "schockwirkung (shock effect)" to describe the main characteristic and effect of modern artworks. With the development of mechanical reproduction techniques, the aura of works of art has been destroyed; at the same time, works of art have adapted to the pace and demands of modern society, producing a shock effect by stimulating the senses and nerves of the viewer. The shock effect is a transient, intense, even violent feeling that frees the viewer from the numbness and tedium of everyday life to experience a new, different, and even dangerous reality.

In Halpern and Humphreys' study of iPhoneography, iPhoneographers compared the use of filter apps to paint; this reintroduces the artist's hand into the creative process, creating a unique artistic 'authenticity' based on personal aesthetic experience [6]. This "authenticity" is based on the creator's personal aesthetic experience; through the beauty of the image itself, the creator conveys to the viewer his or her unique understanding of everyday life, and expects to resonate with the viewer's soul and create a tremor, which is not the same as the stimulating shock effect that fast-food artworks in the age of mechanical reproduction can bring. From Benjamin's literal definition of "aura", there is still an aura in contemporary artworks based on digital technology, which presents highly personalised characteristics of their creators.

The aura is not in the object being created, but in the unique experience of gazing at it, which coincides with The Lovelace effect mentioned above. The Lovelace is not an internal function of the artifact, but is deeply embedded in the socio-cultural circuit of meaning, and is felt in a dynamic relationship of interaction. In literary theory, the reception aesthetics theory believes that a literary text is an open and unfinished structure, which can only realise its meaning and life and become a work of literature through the reading activities of the readers [12]. This theory suggests that the aura of a literary work is not an intrinsic characteristic of the text, but not only the product of the author's creative activities, requiring the interpretation of the readers. The technology allows the public to view and interpret works of art at a time and place of their choosing. This interpretation is governed and influenced by unique factors such as the time and space in which the viewer is located and the viewer's horizon of expectation, and takes on a unique significance, which means the aura of the same work is unique to each viewer.

New media have transformed the ways and forms in which contemporary art is created, as well as providing new online methods for the dissemination and reception of artworks. Mihelj, Leguina and Downey focused on the diverse channels of digital engagement that digital media offers to contemporary consumers [13]. Digital exhibitions can maximise the appearance and details of artworks for audiences who are far away from or inconvenient to travel to museums and art galleries, with complete and detailed curatorial texts, and provide interactive features for comments, so that the general audience can gain more knowledge and experience of art. New forms of communication allow the display and appreciation of artworks to be no longer constrained by traditional physical space, expanding the public sphere of the contemporary art world. The reproducibility of mechanical technology has changed the relationship between the public and art, meaning that those works of art that were once only accessible to the aristocratic elite were mass-produced on production lines, and the relationship between the masses and works of art changed from "the most conservative relationship to the most progressive relationship." As a result, viewers of contemporary art have a unique experience of gazing into a wider public sphere than ever before and gaining a sense of reality. The contemporaneity of aura involves the democratisation of art, whereby the public transcends the artwork, no longer empathising with it, but absorbing it and interpreting it in a personalised way.

## 4 Cultural Capital and the "Aura Divide"

One of the main advantages of digital technology is its ability to reach larger and more diverse audiences, including those who may not have been previously engaged or interested. As the public sphere of art continues to expand through the development of technology and the generalisation of media, the aura has also begun to be 'democratised', gazed upon, experienced and felt by a diverse audience in popular art. However, Mihelj et al. noted that digital technologies have not only dramatically increased the number, diversity, and proximity of cultural offerings, but have also created new opportunities for cultural differentiation, segmentation, and inequality [13]. Due to the specific technological support of digital platforms and their dependence on commercial revenues, digital media may exacerbate rather than ameliorate existing inequalities in access to culture.

Bourdieu put forward the concept of "cultural capital", which is a kind of symbolic capital that can be transformed into economic capital under certain conditions, and can also influence the formation and reproduction of social classes [14]. Cultural capital is used in ways that include differentiation, compartmentalisation and display of difference, referring to the fact that people of different classes maintain and display their class identity by consuming different cultural activities. The upper classes generally prefer 'refined' or 'elite' forms of culture, such as classical music or theatre, while the working classes choose 'popular' forms of culture, including popular music. However, with the development of contemporary digital technology, more cultural content can be accessed in a wider range of contexts, and individuals can often enjoy both "high" and "low" forms of culture at the same time, so the cultural distinction between 'high' and 'low' has become unclear. However, Mihelj et al. argued that this does not mean that cultural capital has lost its importance; on the contrary, the ability to appreciate different forms of culture is a new form of cultural capital that may entrench and perpetuate existing inequalities [13].

Meanwhile, contemporary digital media follow the logic of operating for commercial profit, with many content products requiring paid access and search engines embedded with commercial advertising. Cultural markets operating in this environment seek to tailor products for niche markets, following the principle of market segmentation and no longer aiming at the general satisfaction of the public interest. As a result, each contemporary cultural consumer needs to be able to organise his or her own cultural interests, selecting and integrating cultural products from different market segments according to personal interests, to form a personalised 'programme list'. On the surface, the segmentation approach can fully respect each individual's personalised needs. However, the ability to select, organise and curate one's own 'list of programmes' amid a vast amount of digital content requires specific skills and knowledge. This is also a form of cultural capital, which means that groups that lack digital skills and knowledge and are traditionally at the weaker end of the digital divide are still less likely to benefit from the growing cultural choices offered by digital media.

In addition, the ability to appreciate aura is itself a form of cultural capital. Cultural products such as popular music and online novels, which can be copied in large quantities and widely disseminated, can be interpreted differently by different audiences,

releasing a unique "aura". However, not everyone has the unique ability to interpret them. Borrowing the concept of "reader expectation horizon" in literary theory, before reading a literary work, readers, as the receptive subject, tend to have preexisting thinking and conceptual structure based on personal and social complexity, and the established mental schema according to which they read the text is the expectation horizon of reading experience [15]. This mental schema is affected by multiple factors such as readers' previous reading experience and existing knowledge level. Therefore, even if the current digital technology can promote the opening of ubiquitous aura to all audiences, there are still differences and inequalities in the appreciation by individuals.

There is invisible discrimination against creators by cultural power in media platforms. Christin and Lu found that social media metrics were racialised by paying influencers of colour less than white influencers through a mixed analysis of 1,082 posts from the Instagram account @InfluencerPayGap; and that, compared to white webcasters, coloured Netroots are less likely to receive monetary compensation or negotiate successfully with brands [16]. The unequal pay for digital labour reproduces racial domination and undermines collective action among social media influencers. At the same time, the consumer market's demand for "authenticity" makes it imperative for artists to document their authentic art-making process while also manifesting an "authentic" artistic identity. Who has the time, resources and means to shape and continuously express their artistic identity on social media platforms? Artist bloggers who are located at the "head" of the media platform's traffic pool and have more resources will benefit more from it, while artists who lack resources will be further "invisible" on the platform. This also means that in the contemporary art world, the resource gap between creators is further widened by the commercial logic of digital technology and the algorithms of media platforms, and cultural capital remains in the hands of those who have the upper hand.

## 5 Conclusion

This paper examines the relationship between media, technology and art, and analyses the contemporary nature of aura in the light of Becker's theory of the "art world", Benjamin's concept of "aura", and Bourdieu's concept of cultural capital. The development of digital technology has brought about new interactions between the subject and the medium, technology and art, constructing a dynamic and open art practice in the contemporary art world, as well as new perspectives on aura and creativity. However, the opaque mechanisms of platforms and algorithms, the unequal distribution of cultural capital, and the invisible discrimination of cultural power have also deepened the inequality gap in the existing experience of aura.

Nowadays, most of the Chinese domestic studies on art practices in the digital media era remain at the level of "the shock effect" and theoretical discourse, such as focusing on the materiality of the new media and the "cyber-aura" [17], re-examining the concept of aura [18], and focusing on the reshaping of aura by emerging forms of art products [19], with less attention paid to the mechanisms and power behind them. The methodology is also relatively homogeneous, focusing on discursive approaches and case



studies. Examining aura and artistic practices, Mihelj et al. used a quantitative paradigm to analyse secondary data on culturally engaged behaviours; Halpern and Humphreys' iPhone photography study, and Bishop's Instagram art world study, both used online ethnography and semi-structured interview methods; and Natale and Henrickson utilized historical analysis and case study of AI creation. The literature collated and analysed in this paper can provide a highly referential research paradigm for the Chinese domestic study of the relationship between media, technology and art production at present.

## References

1. Becker, H. S. (1982). *Art worlds*. Berkeley, CA: University of California Press.
2. Wu, Y., Lu, Y., Chen, J., & Wang, Y. (2008). Reorganizing Society with Actors: Latour's Reorganizing Society: A Theory of Actor Networks. *Sociological Studies*, 0(02), 218–234. <https://doi.org/10.19934/j.cnki.shxyj.2008.02.011>.
3. Benjamin, W. (2002). *Ji xie fu zhi shi dai de yi shu zuo pin* (=Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit). Beijing: China City Press.
4. Adorno, T. W., & Horkheimer, M. (2015). *Culture industry: selected essays on mass culture*. London: Routledge. (Original work published 1991).
5. Bolter, J. D., MacIntyre, B., Gandy, M., & Schweitzer, P. (2006). New Media and the Permanent Crisis of Aura. *Convergence: The International Journal of Research into New Media Technologies*, 12(1), 21–39. <https://doi.org/10.1177/1354856506061550>.
6. Halpern, M., & Humphreys, L. (2014). Iphoeography as an emergent art world. *New Media & Society*, 18(1), 62–81. <https://doi.org/10.1177/1461444814538632>.
7. Cotter, K. (2019). Playing the Visibility game: How Digital Influencers and Algorithms Negotiate Influence on Instagram. *New Media & Society*, 21(4), 895–913. <https://doi.org/10.1177/1461444818815684>.
8. Bishop, S. (2023). Influencer creep: How artists strategically navigate the platformisation of art worlds. *New Media & Society*, 0(0). <https://doi.org/10.1177/14614448231206090>.
9. Tan, X. (2023). Unfolding AI Imaginaries: the Coexistence of Technological Optimism and Powerless Subjects—A Focus on the Socio-technical Imaginaries of ChatGPT by Ordinary. *Journalism and Mass Communication*, 11(0), 52–64+96. <https://doi.org/10.15897/j.cnki.cn51-1046/g2.20231213.002>.
10. Elgammal, A., & Mazzone, M. (2020). Artists, Artificial Intelligence and Machine-based Creativity in Playform. *Artnodes*, 00(26). <https://doi.org/10.7238/a.v0i26.3366>.
11. Natale, S., & Henrickson, L. (2022). The Lovelace effect: Perceptions of creativity in machines. *New Media & Society*, 0(0). <https://doi.org/10.1177/14614448221077278>.
12. Yao, W. (2020). A Reexamination of Acceptance Aesthetics from the Productive Criticism Paradigm. *Social Science Front*, 0(05), 156–157. cnki:SUN:SHZX.0.2020-05-018.
13. Mihelj, S., Leguina, A., & Downey, J. (2019). Culture is digital: Cultural participation, diversity and the digital divide. *New Media & Society*, 21(7), 1465–1485. <https://doi.org/10.1177/1461444818822816>.
14. Bourdieu, P., & Bao, Y. (1997). *Wen hua zi ben yu she hui lian jin shu: Bu'erdi'e fang tan* (= Pierre Bourdieu). Shanghai: Shanghai Ren Min Chu Ban She.
15. Li, Y. (2015). Literature Cognition's "Form Perception Model" and "Expectation Horizon". *Qilu Journal*. *Qilu Journal*, 0(05), 154–157. cnki:SUN:QLXK.0.2015-05-027.

16. Christin, A., & Lu, Y. (2023). The influencer pay gap: Platform labor meets racial capitalism. *New Media & Society*, 00(0), 146144482311649. <https://doi.org/10.1177/1461448231164995>.
17. Chen, K. (2023). Gazing at the “Cyber Aura”: Material Obsession and Temporal Questioning in the Pursuit of High Resolution. *Contemporary Cinema*, 0(10), 127–136. cnki: SUN: DDDY.0.2023-10-020.
18. Li, J. (2023). The Meeting of Wyes and The Return of Aura: A Re-examination of Benjamin’s Photographic Theory. *Social Scientist*, 0(09), 122–127.
19. Jin, P., & Liu, Y. (2023). Reconstructing Aura: The video game Canal Towns in the perspective of Cross-media Theory. *Qilu Realm of Arts*, 0(02), 93–100. cnki: SUN: QLYY. 0. 2023-02-015.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

