

Response to public consultation on AI and IP – UKIPO

Response by University of Nottingham Commercial Law Centre (UNCLC)

7 January 2022

Copyright – computer generated works (CGW)

1. *Do you currently rely on the computer-generated works provision? If so, please provide details of the types of works, the value of any rights you license and how the provision benefits your business. What approach do you take in territories that do not offer copyright protection for computer-generated works?*

N/A

2. *Please rank these options in order of preference (most to least preferred) and explain why.*

Our most preferred Option is 2 (replacing the current protection with a new alternative). Yet, it is important to stress that this option would be considered most preferred only provided that there is sufficient evidence from the stakeholders participating in this conversation that they would refrain from entering the market, should AI-generated output be in the public domain. On previous occasions, when IPRs were introduced, these did not necessarily make the market more competitive (European Commission, 2018a). Furthermore, repealing IPRs is an extremely costly task that comes at the expense of rightholders, users of the system and legislators (Husovec, 2020). This caveat comes in light of the other IPRs that would inevitably be present when AI processes are utilised – among many others, there include the potential copyright protection for the software, database sui generis right in the training data and potentially copyright protection for the final output considering that human intervention is almost always necessary to bring the output to the public and disseminate it (Hartmann et al., 2020).

Next, comes Option 1 (removing protection). There are numerous benefits should AI-generated works remain in the public domain and this is made certain by removing any ambiguity that the CGWs provisions would provide them with protection. Some of these benefits include the creation of new knowledge, free and low-cost access to information. Finally, as least preferred option, we position Option 0 (maintaining the status quo). It must be stressed that Option 0 is not recommended due to the many shortcomings the CGWs provisions suffer from, such as the long duration and the originality requirement, as mentioned in the IA, p.20. Some of these are outlined below in Question 3.

Option 2 – replace the current protection with a new alternative – most preferred option

This option should be adopted only provided that there is evidence from stakeholders that they do actually resort to the CGWs provision. This is due to the fact that, when analysing case law, there has been only one occasion where the provision was tackled and it took place in the context of simple video games (*Nova Productions Ltd v Mazooma Games Ltd [2007] EWCA Civ 219*, n.d.). This could suggest that stakeholders do not understand the mechanics of the provision (Bently, 2018), which in and of itself requires it to be reformed and replaced.

The general idea behind the protection of the CGW provision could be useful in the developing commercial setting. However, expanding it blindly to include the incoming multifaceted wave of AI production of works could have other, not yet in full view but easy to predict, negative repercussions.

Option 1 – removing protection for CGWs – our second-best option

The provisions in the CDPA addressing CGWs suffer from many flaws. For the purposes of the present consultation, we emphasise only those criticisms that are directly relevant to the AI debate.

The most important aspect is the fact that the CGWs provisions were conceived in the 80s. While the term AI was already coined at the time, its significance and substance have since then evolved exponentially (Hoffstater, 2000). This has become even more relevant in the past few years, now that the ubiquity of data, computing power and advancement in computer science have pushed to the surface another more relevant term than AI, namely “machine learning” (ML) (European Commission, 2018b).

Our main position is that AI nowadays does not reflect the technological reality that was in place when the CGWs provision in the CDPA was drafted. At the time, Parliament saw the CGWs provisions as a “precautionary intervention” with respect to future technological developments (Cornish et al., 2019). Yet, technological evolution and the capacity for ML go much beyond the mere notion of computer-generation. ML is nowadays considered the central technology behind AI. This entire process thrives on data, which is fed into the system – this data could easily be copyright protected material, which brings in yet another layer of complexity to the process. This abundance of data trains the system to classify, cluster, generate output by studying the correlations in the datasets. Put simply, the algorithm establishes patterns in the input material it has been fed with and learns to generate new such works on the basis of this data, without being explicitly programmed to do so. Computer-generated works instead are the “stably fixed results of software operation, designed and expected by the programmer” (Lee et al., 2021). On the contrary, AI-generation

is based on a complicated technical process, which in the case of deep neural networking entails training data sets, training algorithm, model architecture, neurons, weights and thousands of layers (Drexl et al., 2019). It is not the purpose of this response to the consultation to dissect the technology behind AI and ML-generated output, but it must be underlined that equating the technological developments behind AI-generated works with a “computer-generated work” is not appropriate. It is correct to classify ML-generated/AI-generated works as computer-generated ones, but this is as far as the analogy goes. The processes employed nowadays are entirely different. Furthermore, typically there are many parties involved in the AI-generation process. Therefore, the CGWs provision is not suitable to address the issues that AI-generated works bring about from a copyright law perspective and as a second-best option we suggest that the provision be repealed. This would remove any ambiguity as to its applicability to the AI process.

In light of this, as the IA correctly points out, removing protection for CGWs would greatly benefit AI Service Providers due to the potential in utilising CGWs in the training process – CGWs would now be in the public domain, enhancing accessibility of works. This would inevitably increase the demand for AI.

Option 0 – maintain the status quo

We do not suggest adopting this approach for reasons explained under Option 1 above. In addition, the IA states that the costs and benefits of maintaining the provision are set to zero. We do not agree with this proposition since, among others, there may be significant costs for users of CGWs in the form of licensing. Considering that AI-generated works would fall within the large family of CGWs, due to the broad scope of the CGWs provisions, users of these works would have to clear the rights in the that output. Furthermore, the benefits for CGW holders are still unclear, ie does licensing of CGWs bring in significant revenues to rightholders? This outcome of this consultation would hopefully provide further insight into this specific point.

3. *If we introduce a related right for computer-generated works, as per option 2, what scope and term of protection do you think it should have? Please explain how you think this scope and term is justified in terms of encouraging investment in AI-generated works and technology.*

The IPR panorama is very rich – many rights overlap and many of the copyright and related rights provisions come with a rather long term of protection. Thus, any newly introduced provision to replace the CGWs provision should have a very carefully crafted scope and duration in order to reflect the balance between protection and a sound public domain.

Academia has already entertained the possibility of introducing a new right for computer-generated works that could be suitable for the AI-driven environment (Ramalho, 2017; Senftleben and Buijtelaar, 2020). This reflects the idea that

there is a difference between creation and dissemination of works, whereby the latter may need an incentive in order to bring AI-generated works to the public. Providing disseminators of works with a positive IPR would incentivise the sharing of such works and would ensure that AI-generated works reach the public. This could be one option to follow, which transforms the CGWs provision into a neighbouring rights provision, so it avoids the originality/authorship conundrum and uncertainties, which are highlighted by the impact assessment attached to this consultation.

Such a line of justification may have some merit as there are several examples of investor categories, namely producers and news publishers, whose main task is that of bringing copyright protected output to the public. Their activities are seen vital from a business perspective. If the use of AI in these processes becomes mainstream and there are no longer naturally flowing, non-IP, benefits of using AI (i.e., the first movers' advantage no longer holds persuasive force), then it is understandable that companies may feel discouraged into disseminating the output of the AI process. If this is the case, with the view of encouraging investment in the AI-generated works and bringing them to the public, a new alternative provision should be proposed.

In order to maintain a balanced system, as the impact assessment documents suggests, only facsimile reproduction of the AI output (work) should be covered in the scope of rights, while adaptations must be excluded. This limited scope is justified considering that AI developers will already be compensated from an IP perspective – the software is potentially protected by copyright law, so if an extra layer of IPRs is introduced, this could run the risk of overprotection (Denicola, 2016; Lee et al., 2021). A suggestion when devising this new neighbouring right has been made by others that the nature of the right should not be exclusive, but, similar to the phonogram producers' right, an equitable remuneration right, i.e. focussing on the payment of a fair royalty fee in a "compensatory nature" (Senftleben and Buijtelaar, 2020). The rationale behind a tailor-made neighbouring right would strike a balance between protection, ensuring that one may recover investment costs, and freedom, ensuring that others can enjoy and build upon those works at acceptable costs. Their proposal models the neighbouring right after Article 15 of the CDSM Directive and thus its protection would be two years (*DSM Directive*, n.d.).

We agree with these propositions that a carefully crafted new right could provide for a balanced protection if the outcome of the consultation demonstrates that there is a genuine imbalance to restore. Yet, the duration of this potential protection must be carefully addressed. AI has the potential of generating a very large amount of works extremely quickly. Attaching to that output a proprietary claim in the form of a neighbouring right lasting for 25 years risks, as per the Ramalho proposal, risks paralysing the public domain as in the near future: considering the speed with which AI systems develop, it is likely that if not most, but at least half of the low-creativity works will be the product

of some sort of AI systems. This is due to the fact that AI is usually capable of generating unsophisticated output, that is nonetheless still difficult to distinguish from human output.

Thus, Senftleben and Buijtelaar's proposal is more plausible in terms of duration as this would seek to minimise the risks of excessive protection. The suggestion is to grant protection for two years, which we believe would strike the right balance between incentivising engagement and dissemination of AI-generated works. This would reflect our position that IP should not be seen and treated as an instrument to regulate markets and encourage investment in a specific industry. The investment narrative may be appropriate for neighbouring rights, only if there is sufficient evidence stemming from this wide public consultation that industries will not enter into the business of generating works through AI systems if their output remains short of IPR protection.

4. *What are your views of the implications of the policy options and of AI technology for the designs system?*

The model advocated above is based on the assumption that in the IP system there are two very valuable creations/innovations that need to be protected in the interest of society and the functioning of the market. That is where patent and copyright protection fit in in their purest form. AI-generated works, especially if in the (near) future they are turned out in great numbers and in quick succession, do not fit into these categories necessarily. Investment and dissemination should nevertheless be encouraged and what the short-term neighbouring style right would do is to create a small amount of artificial lead time for the AI enterprise. (J. Reichman, Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property System, [1995] 13 Cardozo Arts & Entertainment Law Journal 475-520)

That is another type of protection than the one offered by the design system. The design system protects a kind of human creativity that does not fit in with the standards of patents and that whilst it may overlap partially with copyright, it is not served well either by copyright. In doing that, the design system does not offer the artificial lead time system that is required for AI creations. The clearest obstacle is also the duration of design protection, which, whilst shorter than copyright protection, is still much too long for what is needed for AI.

5. *For each option, what are your views on the risk that AI generated works may be falsely attributed to a person?*

One important aspect that needs to be carefully drafted relates to the identification of the rightholder. The CGWs provisions kick in when there is no human author and the rightholder is the person by whom the arrangements necessary for the creation of the work are undertaken. Being a legal fiction, this is clearly a beneficiary extremely difficult to identify in the context of AI, where the technical process involves several parties each undertaking different arrangements necessary for the creation of the work (Pinto, 2019). The absence of case law on this point does not aid the situation as the courts have not had the opportunity to devise a legal test shedding light on the assessment of the beneficiary. In the pre-AI age, two potential beneficiaries were often discussed in this respect – the programmer and the user of the system. Previously, technology operated mainly on the basis of *a priori* setting out the rules. Such an arrangement may lead to a valid copyright claim for either of these two candidates, so the human author is actually present. Following this “binary paradigm”, either the user, a human author, uses the computer (or any other mechanic device) merely as a tool to produce a creative work or the computer (or any other mechanic device) generates output as programmed by the programmers in a predictable manner *a priori* (Gervais, 2019). Nowadays, the issue with AI is its “black box” nature which indeed opens it to manipulation by different parties and thus AI-generated works may be falsely attributed.

With respect to option 0, i.e. making no legal changes, the risk of false attribution is high and more likely with respect to the involvement of the user of the system. A user has a very strong incentive to argue that the final output of an AI process would not have materialised had it not been for their specific arrangements (Samuelson, 1985). This would not however always realistically reflect the complexity of the ML process.

With respect to option 1, ie repealing the CGWs provisions, the risk of false attribution is medium to low. This approach would rightly limit copyright protection only to human creations – an aspect of the current CGWs which has been under attack (Bently et al., 2018). Therefore, when it comes to works generated via AI systems one would be prompted to unpack the technological process and identify whether free and creative choices have been undertaken in order for copyright to subsist, or alternatively whether any other related right protection emerges, such as the one for *sui generis* databases. While there may be some risk of misattribution here, it is significantly lower than if the status quo is maintained.

With respect to option 2, i.e. replacing the current protection with an alternative, the risk of false attribution is high, should the newly proposed provisions adopt the current CGWs setting for rightholder; namely if they name as rightholder the person who made the necessary arrangements for the work to be created.

Despite its numerous flaws, which are not the object of this response, this may be a viable option to resolve the false attribution issue if this same person is made explicitly responsible for any liability issues stemming from that AI-generated output (Gervais, 2019). As the copyright holder, tying that figure to the liability issues could in fact resolve many future issues that this consultation does not address.

Copyright – text and data mining (TDM)

6. *If you license works for TDM, or purchase such licences, can you provide information on the costs and benefits of these? For example, availability, price-point, whether additional services are included or available, number and types of works covered by the licence etc.*

N/A

7. *Is there a specific approach the government should adopt in relation to licensing?*

Current and anticipated advancements in the development and uses of AI technologies in TDM make more convincing the argument of examining the licensing landscape, so to ensure that rights are not undermined while broader economic and social development will not be discouraged. The consultation does not consider only licencing but examines parallel (balancing?) solutions by revisiting the scope for a TDM exception.

Taking a step back, the issue with AI is that it can scan bulks of data faster than humans. How would humans access that data in the first place? If that access is legitimate and authorised via a licence for a human there is, in reality, no point in pursuing particular new regulatory solutions regarding AI and TDM; no need to look into new exceptions. Along these lines, we could argue that law does not prevent AI from using copyrighted data, no more than it does prevent humans to go through bulks of copyrighted data. All the same, the law does not prevent AI from processing and analysing databases any more than it does humans.

The only issue of legal interest, in the end, is what eventually would an AI produce and publish as expression, following automated processing of copyrighted data; that is, whether AI will produce infringing - in terms of copyright - material. Yet, if that is for the eyes only of the authorised human user of the AI, should there be any reason at all to proceed with investigating new legal solutions in view of AI? In similar light we may consider the possibility of infringing interaction between AI and databases. To that end, solving the TDM conundrum and the emerging licensing issues may actually not be best

resolved by focusing on the exception itself, but on the scope of the reproduction and extraction rights (Strowel and Ducato, 2021).

That said, TDM depends on the availability of raw material. If one genuinely wants to invest in a data driven economy, a licence of right system can be envisaged with a set rate of remuneration and collective management. It guarantees on the one hand the IP right of the rightholder and on the other hand it facilitates the operation of a TDM system.

The improved licensing system, whatever form it takes, should legitimately question the extent to which IPRs can be transformed from a means of protecting rightsholders to a means towards increasing the monetisation potential of their rights, beyond what is already established in their favour in law as fair compensation for uses by others.

8. *Please rank the options in order of preference (most to least preferred) and explain why.*

From the range of options offered, it is difficult to side with a specific suggestion by way of ranking them.

Option 1 has a certain appeal by envisaging greater space for negotiating uses and licences and as such projects an ideal illustration of cooperation.

At the same time, it surfaces in line with the concern we raised under Q7 regarding the projected policy. Option 1 – even in the consultation’s text – can be read as reassuring copyright owners that they will benefit through ‘licensing income from data mining by others.’ Should these be income opportunities, additional to those already promoted and protected under the current regime or is this option better seen as a clarifying the status quo? This specific point is not entirely clear from the impact assessment. Licensing under option 1 might lead, by way of not looking into ensuring the parallel development of exceptions, to reinforcing disruptively strong information monopolies in the distribution and use of information and knowledge; or, at least, to not preventing facilitation of disruptively strong monopolies as such. The issue with option 1 is that, although it picks a fair in principle perspective, it stands neutral to potential concentrations of licensing power, while exploring the idea of introducing more profit making. Therefore, while licensing may perform ideally in itself, it cannot entirely guarantee fair market operation. It is possible that, in fairly licensed settings, monopolies or oligopolies would not eventually be of real concern, as far as TDM activity is involved. Yet, this idea may be read as paying lip service to specific sectors that currently feel threatened by the prospect that data mining may generate transformative uses of profit-making, in which they are not otherwise entitled to participate.

Option 4, i.e. adopting a TDM exception for any purpose, without the possibility of an opt-out, suggests a radically opposite prospect. Anticipated enhancement

of TDM through the use of AI and ML is an opportunity to improve research and exploration of information, not an opportunity for rightsholders to capitalise on uses beyond what their range of rights already provides under the current regime. This seems to confer a more measured approach, since 'lawful access would still underpin the exception and licences and subscriptions to allow such access would be permitted.'

Perhaps an alternative optimal approach could be reached through a combination of options 1 and 4, promoting fairness but also inspiring respect to licensing regimes – especially in consideration of the database right.

Of the remaining options, the no-change one is burdened with the general problems that both the consultation and the IA document point to; the position that a change is already required, is convincing. In this respect, even though less favourable than our above considerations, option 2 makes sense in the current context; arguably, however, it is not particularly forward-looking, considering the pace of relevant technological development. On the other hand, whereas option 3 moves largely along the same lines, a careful scrutiny of its opt-out aspect may reveal several problems that are likely to emerge in practice.

9. *If you have experience of the EU exception with opt out for rights holders, how has this affected you?*

N/A

10. *How would any of the exception options positively or negatively affect you? Please quantify this if possible.*

N/A

Patents

11. *Please rank these options in order of preference (most to least preferred) and explain why?*

Option 3 - Protect AI-devised inventions through a new type of protection – together with Option 0 - Make no legal change

[Option 3:]

Looking at the available options with a more open mind, and perhaps with an innovative attitude towards the law's potential development, option 3 presents an interesting challenge. Independent of the patentable subject matter's character and its industrial application scope, those who invest in AI are not expected to have substantial understanding (both practical and of the backdrop of principles) of the relevant state of the art or of what constitutes an inventive step, the way an inventor does. In fact, neither is the AI. Even though, enhanced

with ML, it can most certainly perform inventively and compare the invention it devised against prior art.

This lack of an understanding that is otherwise built on long, actual experiences of substantial knowledge and skill, is good enough reason for not granting the same protection term which the law currently provides for patents. Our suggestion, in this respect, would be protection similar to patents for a term of no longer than 5 years.

While from the viewpoint of investment in AI this might sound unfair, concerns about powerful stakeholders who may monopolise AI and ML developments and, therefore, AI production of patents, can be valid. The issue is already well-considered in the UK IPO consultation and the IA document. Nevertheless, such a short protection term does not necessarily discourage investment: in practice, 5 years may turn into a very long period of exclusive protection in the style of patent rights (the broader context of the race for the development of COVID vaccines shows that much).

[Option 0:]

In this light, we do not see option 3 ranking higher than option 0, but simply as a solution that may gradually be developed next to it – certainly, not to replace the latter. The current law, as it stands, mirrors a concrete legal experience, gradually shaped in courts, patent offices, national and international policy fora. Whereas litigation like *Thaler* (especially where this was repeated in several jurisdictions) forces us to reconsider the standards upon which this law operates, it is still too early for revising the core patent right; even more if such a key revision were to be undertaken exclusively at national level by a G7 country, if impacts on cross-border market and legal harmonisation should be of a concern (we believe they should be).

In other parts of our response, we raise concerns about IP rights becoming perhaps too ‘crowded’. Yet, at the same time, it is difficult to see the alternative options 1 and 2 making their way into the current legal system (and not only into patent law - see below). Option 3 does not undermine the established law (and the long-developed corpus of litigation standards), while it pertains to activating an entitlement of lower legal impact, so to accommodate the desirable market and technological developments which are acknowledged in the consultation. It may pave the way for more ‘earth-shattering’ patent law changes to take place in 30 or 40 years. Yet, at the time being, we lack first the technological and then the legal experience, so to justify any demand towards reviewing fundamentally the letter of the law regarding the patent right and its elements.

Option 1 - “Inventor” expanded to include humans responsible for an AI system which devises inventions

This is subtly suggested in option 1. This points to a significant transformation within the patent market, where investors in traditionally patentable innovation are not the only stakeholders of relevance, but also any other actor who may come into position of making the arrangements necessary for AI to devise inventions. This may also signal a transfer of power within the patent market,

to those capable of investing in, maintaining and monopolising ongoing AI & ML operations. Reflecting upon topical concerns about the negative impacts of Big Tech on competition in the Digital Economy (Digital Competition Expert Panel, 2019), the possibility of patent monopolies through monopolies in AI is not unrealistic. Even where it is probably unlikely that AI inventions could permeate the market that widely, an AI service monopoly or oligopoly, focussing opportunistically on one industrial sector or area of innovation so to automatically proliferate inventions by the numbers and progressively, it could easily abuse the patent monopoly, effectively eroding healthy competition and genuine innovation. The problems of the digital market with dominant Big Tech incumbents, may very well turn into patent market problems and, in this respect, the 20 years protection term becomes excessive.

Option 2 - Allow patent applications to identify AI as inventor

The prospect for Option 2 to remove the need to name a human inventor (IA document, p.32) is undesirable, as it potentially alters not simply the order of patent law (domestically and internationally), but also of the legal system as a whole. Where the legal system operates on the idea of regulating relations between persons (natural or legal), it is not for patent law to introduce legal personality for AI via the backdoor.

12. *Would the changes proposed under Options 1, 2 and 3 have any consequential effects on the patent system, for example on other patentability criteria?*

The Impact Assessment document anticipates that ‘the change in law brought by policy options 1, 2 and 3 could change the incentive of AI service providers to seek ownership of intellectual property right with parties using their services’ (p. 28). This may arguably turn into a rather problematic prospect, by eventually generating disproportionately more IP claims than what the patent system and the law can observe and support – simply because advanced AI can intensify invention production and its pace. In addition, the more sceptical (and purist) of critics may plausibly raise the question of whether such a service provision of a tool for developing inventions, no matter how sophisticated that tool might be, should be considered equal, under the law, to inventing.

At the end of the day, a task to assess an inventive step (and included innovation tests), before submitting a patent claim regarding an AI-devised invention for registration, should always be undertaken in practice by someone from the applying side who is essentially knowledgeable; who comprehends the developing state of the art and the context (including utility) within which the AI-devised invention is intended to be applied. Options 1, 2 and 3 appear largely falling short of that. However, of the categories suggested under option 1, people who recognise applications of the output of the AI could perhaps be considered for counting as inventors, for law’s purposes. Yet, this is rather far from condoning the scope for realising option 1.

In the consultation it is argued that it is not clear whether option 0 'is optimal to incentivise research, development, and deployment of AI.' We find such expressions problematic and concerning. The purpose of patent law is not to incentivise research, development, and deployment of AI, since this is an interest external to patent law: patent law is interested in incentivising research and development of invention, not of the tools that are used towards advancing the process of inventing.

For options 1 and 2:

13. If UK patents were to protect AI-devised inventions, how should the inventor be identified, and who should be the patent owner? What effects does this have on incentivising and rewarding AI-devised inventions?

As discussed under Q12, the only suggestion from those offered under options 1 and 2 that we could consider would be that of equating with human inventors (assumingly under s.7 Patent Act 1977) the very specific category of people who recognise applications of the output of the AI. However, our approach to this is rather strict. Such individuals should be essentially knowledgeable, in the sense of comprehending the developing state of the art and the context (including utility), within which the AI-devised invention is intended to be applied. Such a potential consideration within the law should be almost identical to that reserved for human inventors, the difference being that a patent could be granted to someone that could have been the inventor, but did not have the 'light bulb' moment without the use of the AI. The significance of accepting such people as responsible for an AI system which devises inventions is that they could defend the patent in practice and in litigation (i.e. covering liability – the remaining alternatives under options 1 and 2 do not provide for that).

This might have a positive effect on incentivising AI-devised inventions, by supporting their compatibility with the law, but also with the set of values behind patent law.

Under the above conditions, patent ownership would remain as it is.

14. In considering the differences between options 1 and 2, how important is it that the use of AI to devise inventions is transparent in the patent system?

As indicated under Q13, it is vital in defending the genuineness of a patent and it should be demanded in litigation.

15. Would the UK adopting option 2 affect your global patent filing strategy, if so, how?

N/A

For option 3:

16. What term and scope of protection should a new right offer?

As proposed under Q11, a new right should be similar to patent, yet the term of protection be significantly limited - no longer than 5 years. The right could most likely be attached to entities that under the current law have the capacity to patent ownership, yet the provision of a short term could also justify naming as inventors those who have invested in the AI itself, rather than e.g. a company being served by AI provision.

There is, however, a market (and legal) risk: this right would operate within the same setting and context that the standard patent right does. This means that holders of this new right and (traditional) patent holders, all would need to share the same standards regarding patent requirements and would also subscribe to the same dispute resolution mechanisms. This inequality within equality could generate currently unpredictable dissonance, on many different levels (to speculate a few, market imbalances between R&D and digital technology sectors, the development of inconsistent case law, and so on). Yet, this might be, perhaps, the reason why the conditions for grant in relation to this right should be at least similar to those required for human-devised inventions: as far as the law can, it should provide a solid and reliable point of reference for all involved market and R&D stakeholders.

17. What should the criteria for grant of a new right be and why? Particularly should it:

a) Replicate the current requirements for a patent?

This will be necessary. The idea is that a right in view of AI-devised inventions should not be 'new', in the sense of placing on the map another separate, novel IP entitlement, that would end up making the law more complicated. It ought to be a 'patent-lite' right, attending to the standard requirements which are established in patent law, yet mirroring the faster pace of technological and market developments in relation to AI. As already suggested, the reason behind this is the need for legal compatibility with standard patents (as well as not to create two different standards for protecting inventions).

b) Set a different bar for inventive step?

This is reasoned in the consultation, where a stricter test of inventive step would balance the fact that 'AI may invent in ways that human inventors would not deem obvious'. It is a plausible suggestion, with which we agree. It might not be necessary, however, where an application for granting the right would first anyway involve a review of the AI product by a human of relevant skill and familiar with prior art (see below, under [c]).

c) Be an automatic or registered right?

Registration would be necessary, not only to comply and interoperate with the standard patent right but also to filter AI-devised inventions: to make sure these are compatible and comply with the ecosystem of patented inventions. It is important to keep track of AI production, precisely where this might not be so transparent, in order to prevent undesirable overflows of potentially undeserving subject matter protection of automated outputs.

General

18. What role does the IP system play in the decision of firms to invest in AI?

N/A

19. Does the first mover advantage and winner-take-all effect prevail in industries adopting AI? How would this affect the impact of the policy options proposed on innovation and competition?

The first mover advantage in industries adopting AI has already had an important effect from the point of view of innovation and competition. One insight comes from journalism, where AI systems have been employed in the generation of short reports which rely on large amount of data and numbers (Fanta, 2017). Companies in this respect seem to be incentivized in being the first ones to utilize AI systems in the generation of works as that leaves human creators more time for genuinely creative tasks, where the AI is helpless, while at the same time covering wider range of topics and satisfying readers' needs – when an event takes place, one usually immediately seeks journalistic reports and the AI is ready to produce these extremely quickly and thus, liberating human authors from tedious tasks. This innovative approach gears companies with a competitive edge. Yet, the reality is that AI is still only accessible to large companies. SMEs would usually not resort to the development of own AI systems, but would typically licence these externally. Hence, those few entities that have managed to develop good AI technologies would not only benefit from the first mover advantage, but would then benefit from further licensing revenues and turn into a 'winner-take-all'.

20. How does AI adoption by firms affect the economy? Does the use of AI in R&D lead to a higher productivity? and 21. Do the proposed policy options have an impact on civil society organisations? If so, what types of impacts?

The proposed policy options affect the economy and extensively impact on civil society organisations. The following responds to questions 20 and 21 together.

The consultation uses at various points expressions such as 'patents and copyright must provide the right incentives to AI development and innovation, while continuing to promote human creativity and innovation.' Likewise, the IA document suggests that 'the question is whether the current IP system strikes the appropriate balance to encourage the development of AI and its use across the UK economy' (p. 11). In other parts of this response, we have argued that,

whilst the law should always be able to adapt best to the needs and realities of its contemporary setting, it is not the performance, nor the purpose of copyright and patent law to incentivise AI development and innovation, and certainly neither should be placed under such imperatives. Instead, we believe that such concerns ought to be ‘reversed’ and perhaps pushed towards the direction of asking how AI development and innovation could be regulated so to serve best the responding contexts of copyright and patents, as well as the aims behind them.

There is also another pressing question regarding the potential contributions of AI, looming in the background of the consultation, yet not fully coming into focus: the question of liability. Copyright laws have both established and expanded liabilities, tortious and (crucially) criminal. Human infringers have arguably some self-awareness of their own liability; AI does not – as a matter of fact, *cannot* (for now) be self-aware. Therefore, the real challenge to work on is not whether we can find ways to establish protection for AI-devised works and products, but how should relevant liabilities be drafted and organised.

In general, policy drafting should consciously consider the risk of jumping on the bandwagon of hype surrounding the extent to which AI is to be used. Several of the consultation options look eagerly into setting up novel proprietary rights. These will need to be additionally reviewed from that perspective, where they inevitably interoperate with other parts of the larger, interconnected domestic legal system as a whole - i.e. not simply within IP law – and may force currently undesirable alterations in other areas of law (e.g., tort liabilities, premature developments in relation to what may count as legal personality). Of course, legal systems have their own internal defences, and may silence newly introduced regulatory elements that cannot comply harmoniously with the whole. Yet this would eventually also render pointless the outcomes of an initiative such as this consultation. Therefore, the wider legal viability of future IP protections is a matter that has to be examined in advance.

Investigations into how copyright protection is to be adapted in order to accommodate AI should also not overlook the broader tapestry of copyright uses and reuses across society, and to address accordingly concerns in relation to (1) end users and (2) user-generated content. This introduces in important questions of fundamental rights, such as freedom of expression (Quintais et al., 2019; Senftleben et al., 2018). The impact of AI is predicted, on the one hand, where digital publics employ AI creatively in their everyday online activities of content creation and, on the other, where the bulk of commercial AI creative (over)production, expected to be protected somehow through rights simulating copyright, will populate common cultural and knowledge spaces. One way or the other, protection of AI-generated works will need to be adequately developed (and justified in the form this is going to take) in anticipation of broader social, economic and cultural disputes, where opposite to the public’s access to artefacts of knowledge, information and culture will not stand anymore the morally defensible quality of the human author, creator,

performer, or even creatively attuned producer, but an investment in automated (massive) reproductions of creative patterns.

We should also be concerned with AI overproduction and the role which law may play in encouraging it. The consumer market cannot necessarily absorb all “creative” and “innovative” outputs that AI may in practice generate. Arguably, we already have overproduction by human creators. Multiplying that, by investing in machines that do not get tired and do not stop, could lead to oversaturated AI inputs and an overwhelming load of “creative” and “innovative” output (of, maybe, lower cultural or aesthetic quality). Depending on the character they should eventually take, the relevant regulatory accommodations which anticipated statutory drafting will pursue for AI-developed creative production, could contribute to developments such as the above, and it might be too difficult even for market forces to mitigate the impacts of laws in this vein.

Finally, with regard to TDMs, concerns about licensing are essentially concerns about access: it should not be an issue whether AI will access licensed data and undertake activity with content if its human user is entitled to do so in the first place. Unless this entire concern in the consultation is about a rather deep technicality, where while the law is tolerant to the human eye accessing and going through data, it is not equally tolerant to AI, which in order to ‘see’ and ‘think over’ data needs to proceed into acts of copying and altering digital code. This is reminiscent of the reasoning behind developing Internet caching exceptions, back in the early 2000s. It is indicated in the consultation that ‘TDM usually requires copying of the material to be analysed’, yet it does not explicitly draw a distinction between human users and AI where a copyright licence is already acquired.

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Section B: Respondent information

A: Please give your name (name of individual, business or organisation).

University of Nottingham Commercial Law Centre (UNCLC)

The bulk of the contribution was prepared by [REDACTED]
[REDACTED] contributed as well, even though to a smaller extent.

B: Are you responding as an individual, business or on behalf of an organisation?

Organisation – University of Nottingham Commercial Law Centre (UNCLC)

C: If you are responding on behalf of an organisation, please give a summary of who you represent.

The University of Nottingham Commercial Law Centre (UNCLC) is home to leading experts on commercial law, with a commitment to research excellence. Our research makes a positive impact on commercial law reform and development both nationally and internationally.

D: If you are an individual, are you?

- 1) General public
- 2) An academic
- 3) A law professional
- 4) A professional in another sector – please specify
- 5) Other – please specify

E: If you are responding on behalf of an organisation, are you?

- 1) **An academic institution**
- 2) An industry body
- 3) A licensing body
- 4) A rights holder organisation
- 5) Any other type of organisation - please specify

F: If you are responding on behalf of a business or organisation, in which sector(s) do you operate? (choose all that apply)

- 1) Agriculture, forestry and fishing
- 2) Mining and quarrying
- 3) Manufacturing – Pharmaceutical products
- 4) Manufacturing – Computer, electronic and optical products
- 5) Manufacturing – Electrical equipment
- 6) Manufacturing – Transport equipment
- 7) Other manufacturing
- 8) Construction
- 9) Wholesale and retail trade; repair of motor vehicles and motorcycles

- 10)Transportation and storage
- 11)Information and communication – Publishing, audio-visual and broadcasting
- 12)Information and communication – Telecommunication
- 13)Information and communication – IT and another Information Services
- 14)Financial and insurance activities
- 15)Real estate activities
- 16)Scientific and technical activities
- 17)Legal activities
- 18)Administrative and support service activities
- 19)Public administration and defence
- 20)Education**
- 21)Human health and social work activities
- 22)Arts, entertainment and recreation
- 23)Other activities – please specify

G: How many people work for your business or organisation across the UK as a whole? Please estimate if you are unsure.

- 1) Fewer than 10 people
- 2) 10–49
- 3) 50–249**
- 4) 250–999
- 5) 1,000 or more

H: The Intellectual Property Office may wish to contact you to discuss your response. Would you be happy to be contacted to discuss your response?

Yes.

I: If you are happy to be contacted by the Intellectual Property Office, please provide a contact email address.

[REDACTED]

J: Would you like an acknowledgement of receipt of your response?

Yes