1

Introduction

1.1 THE PARADIGM OF THE ABSTRACT IP OBJECT

Intellectual property (IP) law is based on a specific notion of reality. According to this understanding, there exist immaterial objects which are exclusively assigned to a rights holder.¹ Unlike corporeal objects (‘things’),² these immaterial objects cannot be touched, nor can their physical existence be measured as with intangible, yet still physical data or software.³ They are also not identical with specific exemplars of a copyrightable work (e.g. a book or a digital file), with products, mechanical or other technical processes, with product signs on packaging or advertising material etc. Instead the objects protected by IP law are merely accidentally embodied in these manifestations. The work, the invention, the design, the distinctive sign etc. exist strictly separated from their instantiations as immaterial (‘intellectual’), abstract objects (in the following: abstract IP objects).⁴ Thus, three types of objects can be...

¹ Kohler, Autorenrecht, i–2; Klippel, 6 ZGE, 443, 453–54 (2014); Art. L.111–1, 111–3 CPI (‘propriété incorporelle’); Merges, in Dreyfuss & Pila (eds.) The Oxford Handbook of Intellectual Property Law, forthcoming (‘assets’).
² Cf. Section 90 of the German Civil Code (Bürgerliches Gesetzbuch, BGB), available in English at www.gesetze-im-internet.de/englisch_bgb/ (‘Concept of the thing – Only corporeal objects are things as defined by law’).
³ ‘Other objects’ according to Section 453(1) alt. 2 of the German Civil Code (BGB) (‘The provisions on the purchase of things apply with the necessary modifications to the purchase of rights and other objects’).
⁴ Inventions: Sections 1, 9 German Patent Act (PatG); Godenhjelm, 45 GRUR Int., 327, 328 (1996); Zech, 119 GRUR 475 (2017). Copyrightable works: Art. 2(1) Mari, Section 44 German Copyright Act (UrhG), 17 USC § 101 (‘embodied’); BGH 27 February 1962 Case no. I ZR 118/60, GRUR 1962, 470, 472; BGH 15 November 2006 Case no. XII ZR 120/04, NJW 2007, 2394 paras. 16–17; BGH 10 July 2015 Case no. V ZR 206/14, NJW 2016, 317 para. 20 with further references; Microsoft Corp. v. AT & T Corp., 550 US 437, 447–48 (2007) (‘Software, the ‘set of instructions, known as code, that directs a computer to perform specified functions or operations’, can be conceptualised in (at least) two ways. One can speak of software in the abstract: the instructions themselves detached from any medium. (An analogy: The notes of Beethoven’s...
Introduction

distinguished under German private law: the movable or immovable tangible thing (Section 90 of the Civil Code); other intangible yet physically measurable, material objects such as electric energy, a digital file or a computer program embodied on a data carrier (Section 453(1) alt. 2 of the Civil Code); and the immaterial, abstract IP object.  

The idea that immaterial objects exist separately is the prerequisite for considering them capable of being owned according to the model of real property ownership. Private property regulates who may do what with regard to a certain object. This applies to both real property (Sacheigentum) and intellectual property (geistiges Eigentum), which therefore have the same legal structure. These are exclusive rights that negatively exclude all unauthorised persons from certain uses of a physical thing or an immaterial object, and at the same time positively place these uses at the discretion of the rights holder. Interference in the scope of protection of such a primary exclusive right is, in principle, unlawful, and entails secondary remedies. The exclusive rights are transferable at least to a limited extent by legal disposition. Their constitutional basis is also the same – namely the fundamental right to property according to Article 14 of the Basic Law (Grundgesetz, GG), and Article 17 of the Charter of Fundamental Rights of the EU (CFR).

The philosophical justifications of real property and intellectual property law also run largely in parallel. The focus is on the recognition of, and incentive for, personal work and performance. This activity-related justification goes hand in hand with analogies between processed things (in particular cultivated land) and immaterial

Alexander Peukert, Translated by Gill Mertens
Excerpt
More Information
products of labour. Conceptual loans of this kind also dominate the economic analysis and justification of IP rights. Orthodox property rights theorists simply attribute the same economic effects to IP rights as to real property rights. All these property rights are intended to ensure an efficient allocation of the resources concerned. Other economists emphasise the contrast between corporeal things as private goods and immaterial IP objects—the use of which, unlike corporeal objects, is non-exclusive and non-rivalrous. However, this theorising also assumes that there are assignable IP objects for which, in addition, regular use is made of examples taken from physical reality, such as lighthouses and public roads.

Even attentive observers such as Jefferson, Kant and, more recently, Drahos, Lemley and Drassinower are unable to escape the impact of the dominant thinking in terms of abstract IP objects that can be owned. They refer to the peculiar dynamic properties of IP and its inseparable connection with speech and other communication acts. Ultimately, however, their analyses also revolve around the question of the correct regulation of the handling of a good as an object capable of being owned in principle. In the meantime, the object-oriented approach even prevails in trademark law, which up to the end of the twentieth century was still predominantly seen as a part of unfair competition law.

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9 For example, Le Chapelier’s report (1791), in Bently & Kretschmer (eds.) Primary Sources on Copyright www.copyrighthistory.org; Hegel, Elements of the Philosophy of Right § 69; Shiffrin, in Goodin et al (eds.) A Companion to Contemporary Political Philosophy 653 et seq.; Merges, Justifying Intellectual Property. See also Peukert, in Drahos et al. (eds.) Kritika 1 114, 116 et seq.; Nazari-Khanachayi, Rechtfertigungsnarrative des Urhrechterei 27 et seq.

10 Demsetz, 12 Journal of Law and Economics 1 (1969); Kitch, 20 Journal of Law and Economics 265 (1977); Landes & Posner, Economic Structure of IP 11; Posner, 19 Journal of Economic Perspectives 57, 59 (2005)’ (Whereas the “pure” economist (…) is likely to approach the question of optimal regulation of intellectual property from the standpoint of the economics of innovation, public goods and marginal-cost pricing, the economic analyst of law is more likely to begin with the parallels between intellectual and tangible property’); Epstein, 62 Stanford L. Rev. 455, 461 (2010)’ (The basic principles of property law are alive and well, and they are capable of reasonable extension to all forms of intellectual property’).


12 Cf. Jefferson, in Kurland & Lerner (eds.) The Founders’ Constitution ‘(That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation’); Drahos, Philosophy of IP 156 et seq., 212, Scotchmer, Innovation and Incentives 32 (‘For information goods, the template is the information itself, for example music …’); Lemley, 90 N.Y.U. L. Rev. 90, 460, 468 (2005)’ (In effect, the point of IP laws is to take a public good that is naturally nonrivalrous and make it artificially scarce, allowing the owner to control how many copies of the good can be made and at what price’); Pottage & Sherman, Figures of Invention 4. On the concepts of the public domain and the commons see Peukert, Gemeinleistung 8 et seq., 44–46 with further references; critical also Barron, in Bently et al. (eds.) Copyright and Piracy 95 et seq.

13 See Sections 1.5, 3.2.1, 3.2, 5.1.1.1.
1.2 irritations: differences between real and intellectual property law

As self-evident and internationally codified as ownership and object-oriented thinking may be in IP law, Le Chapelier’s assessment that patent and copyright law are not only the ‘most sacred’ example of ownership, but at the same time ‘une propriété d’un genre tout différent des autres propriétés’ proves to be stubbornly true. The dominant perspective is able to justify the more numerous – and also in substance more extensive – limitations to and exceptions from IP rights by reference to the more intensive social embeddedness of the ‘public’ goods concerned, without having to relinquish the uniform ownership doctrine. Other conspicuous features, however, can no longer be made plausible on the basis of the prevailing doctrine. Only IP rights are subject to a maximum term of protection or – in trademark law – tied to a use requirement; conversely, the numerus clausus of admissible dispositions only governs the law of real property; the calculation of damages with a view to restoring the position that would exist if the IP infringement had not occurred, which is codified as the normal case in Section 249(1) of the Civil Code (BGB), is of no practical relevance in IP law. The fact that these are not marginal details, but rather characteristics of IP rights, is confirmed by US constitutional law, which provides for separate federal competence norms for patents and copyrights on the one hand and for trademark law on the other. The fundamental rights status of real property and intellectual property rights in Europe, which at first glance appears homogeneous, also shows considerable differences on closer inspection. In particular, in the case of IP rights there are systemic conflicts with fundamental rights of third parties, which wear away the apparently sharp boundaries of the exclusive rights in the course of a permanent balancing of interests. Only ownership of real

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14 Le Chapelier’s report (1791), in Bently & Kretschmer (eds.) Primary Sources on Copyright www.copyrighthistory.org.
15 Penner, Idea of Property 120; but see Breakey, in Howe & Griffiths (eds.) Concepts of Property 137, 152–53.
16 Renonard, Traité des droits d’auteur 438 et seq. Regarding the use requirement in trademark law, see Art. 15(3), 19 TRIPS; Art. 16 EU Trademark Dir.
17 Jänich, Geistiges Eigentum 234 et seq., 357; Peukert, in Grundmann & Möslin (eds.) Vertragsrecht und Innovation, 69 et seq.
18 See Art. 15 EU Enforcement Dir.; Wimmers, in Schriker & Loewenheim (eds.) Urheberrecht Section 97 German Copyright Act (UrhG) paras. 265–66; Rause, Dreifache Schadensberechnung 340 et seq.
19 See on the one hand Article I, Section 8, Clause 8 US Constitution (‘Congress shall have power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.’) and on the other hand Article I, Section 8, Clause 3 US Constitution (‘Congress shall have power . . . To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes’) as well as In re Trade-Mark Cases, 100 US 82 (1879).
property has the purpose and hard kernel to guarantee the owner the expectation of undisturbed enjoyment of his or her movable things and land, which, in and of itself does not necessarily affect the fundamental rights of third parties – think about, for example, the ability to read a book at the desired time.\(^2\) All these differences are an expression of diverging fundamentals on which the law of real property on the one hand and intellectual property on the other are based. The absence of possession and ownership of tangible objects is conceived of as a temporary exception. Anyone can acquire an ownerless chattel by taking possession of it and then owning it as their property; in the case of real estate, the right of appropriation is vested in the state.\(^3\) In contrast, immaterial objects are and remain in the public domain, unless they are allocated to a person by means of IP rights limited in terms of time, territory and subject matter. Therefore, the starting points of real property and intellectual property law differ. Whereas all chattels and real estate are owned or can be reappropriated, abstract IP objects belong to no one.\(^4\)

At second glance, the legal-philosophical parallels between the two areas also prove to be fragile.\(^4\) In this context, ontological differences between ownership of real property and intellectual property also come into play.\(^5\) This is because the justification of real property ownership is predominantly based on the protection of a de facto possession which was legitimately acquired by first acquisition or by labour and which is then to be protected in its existence by exclusive ownership. The reference to the legitimate possession of an object may suffice to justify the protection of trade secrets and unpublished writings – but not to explain IP rights such as patents, copyrights and trademark rights, which arise in the first place (or at least become practically relevant) when the invention, work or sign in question has reached the public and is thus in fact beyond the control of the inventor, author or entrepreneur. Accordingly, the two most influential philosophers of modern times – John Locke and Immanuel Kant – did not apply their general property doctrines to works and inventions, but formulated special justifications for them.\(^6\)

\(^3\) Sections 926(2), 938, 872 German Civil Code (BGB); Geulen, in Gephart (ed.) Rechtsanalyse als Kulturforchung 509, 317.
\(^5\) Drahos, Philosophy of IP 212 (‘The analogy between intellectual property rights and other kinds of property rights is only superficial’); Wilson, 93 The Monist 450, 451 et seq. (2010); Sherman & Bently, The Making of Modern Intellectual Property Law 32 et seq.
\(^6\) Therefore against the term ‘intellectual property’ (geistiges Eigentum) Kohler, Handbuch des deutschen Patentrechts 57, 70 et seq.; Kohler, Urheberrecht an Schriftwerken und Verlagsrecht 26–27; see also Jänich, Geistiges Eigentum 28 (significant differences).

\(^{22}\) Cf. Kant (1785), in Bently & Kretschmer (eds.) Primary Sources on Copyright www.copyrighthistory.org. On Kant, see Schefczyk, 52 DZPhil 739, 745 et seq. (2004); Wilson, 93 The Monist 450, 452–53 (2010); but see Jacob, Ausschließungsrechte an immateriellen

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**Irritations**

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Kant was rewarded with sharp rejection from leading IP law academics for his pertinent work on the illegality of reprinting books. In the middle of the nineteenth century, Bluntschli said that Kant gave an ‘immature’ portrayal of the topic. And the doyen of German IP law, Josef Kohler, who was not otherwise embarrassed by clear words, defamed Kant as a ‘formalistic cozy schematist’ whose text on the unlawfulness of reprinting books was an ‘adventurous spawn of a non-jurist’s mind’. Kant’s exclusion from the circle of relevant IP theorists – which was unusually vehement even by Kohler’s standards and had a long-lasting effect in the German-speaking world – becomes understandable when one realises that Kant does not base the prohibition of reprinting books on the protection of the work (opus) in an object- and property-oriented manner, but as a condition of a functional, enlightening discourse in which authors use the services of publishers for the mediation of their autonomous speech (opera), whereas publishers require a certain, purely instrumental legal protection in order to amortise their investments.

The economic analysis of real property ownership on the one hand and IP rights on the other also ultimately revolves around the idea of scarcity. While the former is primarily considered in the context of the sustainable efficient use of existing resources, intellectual property rights are generally considered to serve the coming into being of goods that do not yet exist. In other respects, too, publicly accessible IP is almost the counter-example to tangible property. It is de facto non-exclusive and non-rivalrous; its use does not generate negative but positive externalities (e.g. learning progress among pupils), which is why its public availability does not lead to a tragedy of the commons. And, finally, the concept of scarcity can only be applied in a modified form to IP, since these immaterial objects can potentially be reproduced indefinitely and are therefore not scarce once they have been produced.

Mark Lemley, one of the leading IP scholars, even predicts the end of intellectual property rights as we know them. One reason is that the very scarcity that patents, copyrights and other IP rights are considered to ensure does not base the prohibition of reprinting books on the protection of the work.
Internet, 3D printing and robotics, an abundance of innovative products can be expected precisely when the artificial scarcity caused by IP rights will be eliminated.  

The list of differences between real and intellectual property rights could be continued. Only three striking observations shall be mentioned here. First, IP rights in their present form are a much younger phenomenon than real property ownership – hardly more than 250 years old. Second, although they are now practically recognised worldwide, IP rights are at the same time politically much more controversial than the ownership of movable and immovable things. Thirdly, it is noticeable that the relationship between ‘is’ and ‘ought’ is particularly unstable in IP law. Historians argue about whether the concept of the abstract IP object was only discovered by the law, or whether this idea was actually brought about by the law. And quite a few theorists believe that in IP law it is ultimately impossible to distinguish between reality and the rules of law, since the protected objects are defined in the course of the application of the relevant laws and thus constituted at the same time as elements of legal reality. Paradigmatic for these difficulties is the current state of patent law, which generates its object from itself – namely from highly formalised patent documents.

1.3 REACTIONS

According to the prevailing view, all these divergences are merely the expression of gradual differences resulting in different scopes of protection, but do not change the fundamental characterisation of both real and IP rights as exclusive property titles that assign an object to an owner. The pertinent legal theory revolves around the purely legal question of whether copyrights and industrial property rights are to be understood as property rights or as the regulation of competitive behaviour. Even

34 See Section 3.2.
35 Peukert, St RabelsZ 158 et seq. (2017).
37 Madison, 56 Case Western Reserve L. Rev. 581, 465 (2005) (“factual” and “legal” things are identical; once rules governing protection and infringement are applied, the legal right is coextensive with what the right owner in fact created, invented, or made distinctive’); van Dijk, Grounds of the Immaterial 30 (“insurmountable problem of correspondence between these concepts and supposed extra-legal things”).
38 For more details see Section 5.4.2.
40 Cf. Hirsch, 36 UFITA 16, 47 et seq. (1962) (’Werkbemachtigung’); Jänich, Geistiges Eigentum 85 et seq.; Peukert, in Basedow et al. (eds.) Handwörterbuch Europäisches Privatrecht 648 et seq.; Ohly, 58 JZ 545 et seq. (2003); Renouard, Traité des droits d’auteur 441 et seq.; Pfister, 205 RIDA
Introduction

authors who – like Felix Cohen and Alf Ross – belong to the legal realist camp and are therefore sceptical in principle about abstract concepts, aim their criticism at legal concepts such as the subjective right or the fairness of competition and the effects of these legal ways of speaking and thinking about the regulation of reality.41

But this inner-juridical criticism falls principally short of the mark. The differences between the legal characteristics of real property ownership and IP rights cannot be explained by precisely these legal characteristics.42 Anyone doing so goes round in legal circles and tends to take legal concepts (‘the’ property, ‘the’ subjective right etc.) in the tradition of conceptual jurisprudence from meanings that they themselves have given them. The worldwide discussion about whether patents, copyrights etc. may or may not be regarded as Eigentum/property/propropriété, which is completely out of proportion to the result, bears eloquent testimony to this.

The hypothesis presented here is, instead, that the differences between real property ownership and IP rights are the expression of a categorically different way of existence of the legal objects concerned. This shifts the interest in understanding from the law to the reality of the law. The reality of current IP law seems to be the abstract IP object: the invention, the work, the design, the logo etc. as assigned to the rights holder. If the peculiar character of IP rights cannot be fully explained on the basis of the prevailing paradigm of the abstract IP object, then this ontology must be critically examined.43

Attempts in this direction have been surprisingly rare.44 The overwhelming majority even of theoretically ambitious writings on IP proceed without further doubt from the existence of abstract IP objects capable of being owned, without further questioning this assumption.45 Those who, like Alexander Elster, Heinrich Hubmann, Alois Troller and Nicolas Druey, comment on the ontological status of

41 Cohen, 35 Columbia L. Rev. 809 et seq. (1935); Ross, 58 Tidsskrift for Rettsvitenskap 321, 352–51 (1945); Ross, On Law and Justice 172–73, 178. See also Jhering, Scherz und Ernst 245 et seq.
43 Pottage & Sherman, Figures of Invention 4; van Dijk, Grounds of the Immaterial 2–5.
44 Pottage & Sherman, Figures of Invention 4 (‘… normative and political debates … have effectively eclipsed the question of what kinds of things ideas are in the first place’); Wreen, 93 The Monist 433, 435 (2010) (‘Both the law and philosophy are virtually silent on the matter’); Hick, 51 British Journal of Aesthetics 185 (2011) (‘And unfortunately, while copyright law assumes some metaphysical basis to its objects, this basis tends to go largely uninvesti- gated’); Chin, 74 University of Pittsburgh L. Rev. 265, 268 (2012); van Dijk, Grounds of the Immaterial 1; Wadle, in Wadle (ed.) Beiträge zur Geschichte des Urheberrechts 11, 15.
45 Zech, Information als Schutzgegenstand 36; Pottage & Sherman, Figures of Invention 4 (‘too obvious to require any explanation’); Tamura, Nordic Journal of Commercial Law 1 (2012); Teilmann-Lock, The Object of Copyright 143; George, Constructing Intellectual Property 97 (‘The intellectual property object is, in effect, a legal delineation of the part of the ideational object over which intellectual property law provides a monopoly’); critical Alexander-Katz, in Festgabe Wilke 3, 6.
immaterial objects or information do so by briefly reconstructing the prevailing understanding that these abstract objects exist as something ‘intellectual’, independent from their instantiation in books, digital files, industrial products etc.\textsuperscript{46} In 1955, Alois Troller wrote that

\begin{quote}
[\ldots] all jurists \ldots agree that the work of literature and art is not a physical, but an intellectual thing, that it is his work of the mind, an intellectual work. This is an ontological statement: the work is recognised as having independent existence. Its essence is determined as intellectual. Furthermore, no one doubts, and cannot do, that the work has arisen from the mind of the author (through his intellectual achievement); likewise it is certain that the work, as soon as it has been made physically perceptible, is separated from the author and has its own existence. It is independent, objective mind.\textsuperscript{47}
\end{quote}

By and large, this assessment still accurately reflects the current state of the jurisprudential debate. The only difference is that works and other IP objects are no longer described as \textit{objektivierter Geist} (objectified mind), as they were during the idealistic renaissance of natural law in post-war Germany, but are referred to as types, which are manifested in various tokens.\textsuperscript{48}

At the same time, there is ample evidence that the notion of the abstract IP object has remained unclear and obscure. The reprint debates of the eighteenth century in the United Kingdom and Germany focused to a large extent on the subject matter of the new rights or prohibitions.\textsuperscript{49} And even after the abstract IP object had established itself as the dominant paradigm, the fundamental uncertainty about the ontological basis of the entire body of law occasionally surfaced. According to an oft-quoted saying of the influential justice at the US Supreme Court Joseph Story, patent and copyright cases concern the ‘metaphysics of the law’.\textsuperscript{50} His equally famous successor Oliver Wendell Holmes Jr. said about copyright that ‘[t]he right to exclude is not directed to an object in possession or owned, but is in \textit{vacuo}, so to speak’.\textsuperscript{51} This observation in turn strongly resembles a statement made by his contemporary Josef Kohler, who assumed that the immaterial object ‘floats’ above the earth’s surface.

\textsuperscript{46} Elster, 6 RabelZ 903, 913 (1932); Hubmann, \textit{Das Recht des schöpferschen Geistes} 46–48. Regarding similarities between Hartmann’s general ontology and Ingarden’s ontology of artworks see Bertolini, in Petersen & Poli (eds.) \textit{Philosophy of Nicolai Hartmann} 171 et seq. See also Troller, \textit{Immaterialgüterrecht} 55 et seq.; Merkl, Der Begriff des Immaterialgüterrechts 72 et seq.; Drrey, \textit{Information als Gegenstand des Rechts} 3–4.

\textsuperscript{47} Translated from the original German. Troller, 50 UFITA 385, 389 (1967); Troller, \textit{Immaterialgüterrecht} 55 with note 11.

\textsuperscript{48} Shiffrin, in Goodin et al. (eds.) \textit{A Companion to Contemporary Political Philosophy} 653, 654. Chin, 74 University of Pittsburgh L. Rev. 265, 275 (2012) See also Section 2.1.1.

\textsuperscript{49} See infra Section 3.2.2.2 and Hubmann, 106 UFITA 145 (1987).

\textsuperscript{50} Folsom v. Marsh, 9 F. Cas. 342, 344 (C.C.D. Mass. 1841) (Story, J.); Hogg v. Emerson, 47 US 437, 485–86 (1848); Chin, 74 University of Pittsburgh L. Rev. 263, 268 (2012) with further references.

without, of course, ‘growing together’ with it,52 which prompted one critic to make the derisive remark that ‘the abstract work [is] in a sense the astral body of the work, if I use this image from the concepts used by spiritualists’.53 More recently, there has been talk of a ‘somewhat airy’ object,54 a corpus mysticus,55 and a ‘spooky entity’.56 In one of the rare cases in which the ontological status of IP was considered to be relevant, the US Supreme Court ruled in 2007 that a distinction had to be made between abstract software and its embodiment on data carriers, whereby abstract software was more comparable with ‘notes of music in the head of a composer’ than with a ‘roller that causes a player piano to produce sound’.57

Some writings with albeit very different theoretical backgrounds and normative approaches tend to regard IP law less as an allocation of static objects than as a regulation of behaviour with regard to dynamic objects. Thus, Immanuel Kant’s philosophy of enlightenment does not regard written statements as a finished work (opus), but primarily as an activity – namely as the author’s speech to the audience (opera) within the framework of an enlightening discourse.58 Thomas Jefferson also understood ideas and inventions as ‘the action of the thinking power’, which by their nature cannot be the ‘property’ of a person.59 Post-structuralist literary studies decompose the idea of the work as a fixed object with an unambiguous meaning and clearly defined boundaries – replacing it with the authorless, fluid ‘text’, which is only constituted in discourse through the act of reception and its possibly transformative further use, and which only exists as an element of a large inter- and hypertextual context.60 Another social science-inspired theory considers works,