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Legal Subjects and Partial Legal Subjects in Electronic Commerce*

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Abstract: Concepts of legal capacity and legal subjectivity have developed gradually through intermediate stages. Accordingly, there are numerous types of legal subjects and partial legal subjects, and ever-new types can develop, at the latest once the law confronts new social and technological challenges. Today such challenges seem to be making themselves felt especially in the field of information and communication technologies. Their specific communicative conditions resulting from the technological networking of social communication have a particularly pronounced influence on legal attributions of identity and action, and hence above all on issues of liability in electronic commerce. Here in particular it is becoming increasingly difficult to distinguish concrete human actors and, for example, to identify them as authors of declarations of intent or even as individually responsible agencies of legal transgressions. The communicative processes in this area appear instead as new kinds of chains of effects whose actors seem to be more socio-technical ensembles of people and things – whereby the artificial components of these hybrid human being-thing linkages can sometimes even be represented as driving forces and independent agents.

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A. Starting Points: Legal Capacities and Partial Legal Capacities

I. Intermediate stages of legal capacity

> Legal capacity can be defined within the meaning of modern jurisprudence as the ability to enter into relations guaranteed by existing law and the opportunity thereby bestowed to enjoy legally protected advantage. But this is a rather vague, vacuous definition. However, it shares this fate with all definitions of basic legal concepts, such as those of property, family, liberty and civil rights. All of these cases, like that of legal capacity, involve social institutions that were not created in one go but look back on a thousand-year history, and continue to bear some of the marks of each intermediate stage of their entire development to the present day. To describe the handiwork on which so many countless generations have hammered and chiseled in a few words is, needless to say, a task that can be performed only in an extremely deficient way. (Ehrlich 1909/1973, p. 1)

Eugen Ehrlich, the author of these introductory words, liberates legal scholars from exaggerated expectations concerning what they can accomplish in their conceptual and systematic work. That basic legal concepts such as legal capacity can be defined unambiguously may be a necessary assumption of legal dogmatics; but when faced with the living law of social relations, this assumption proves to be an illusion. Although one could extend the faith in progress of our technological – in particular, information technological – age to jurisprudence and hope that it has in the meantime found a more precise version, the opposite is more likely to be the case. Also over the course of the century since Ehrlich's work *Die Rechtsfähigkeit* (*Legal Capacity*), jurisprudence has not matured to such an extent that it does not embarrass itself time and again.[1]

What provokes legal embarrassment nowadays in defining legal capacity, however, is not so much the history examined by Rudolf von Jhering (1857, p. 16), but the new technological and social challenges that even millennia of work

[1] It may be true, as Rudolf von Jhering (1857, p. 16) has pointed out, that a "mature jurisprudence" is immune to embarrassment by history. But it nonetheless remains indebted to its social (as well as non-social) environments. See Rudolf Wiethölter 1992, p. 226.

in jurisprudence cannot anticipate. The resulting controversies over the legal status of human life in the peripheral areas of human existence (cf. Gruber 2003, pp. 135-140), the question of the rights of non-human organisms and other entities (cf. Teubner 2006; Gruber 2006), as well as the recent changes in the law of partnerships (Reuter 2007; Beuthien 2011), contribute in different ways to the concept of legal capacity seeming, if anything, even more vague and fragmented than in Ehrlich's time.

In this respect, the recent development of social institutions, in particular of concepts of legal capacity and hence also of legal subjectivity or of legal personality (cf. Reuter 2007, p. 674 and 687-697), seems to represent a continuation of the gradual development through intermediate stages described by Ehrlich. As tokens of these intermediate stages, the concepts of partial legal capacity and, correspondingly, of partial legal subjectivity, which will be examined more closely in what follows with reference to new forms of attribution of agency and identity in electronic commerce, are also part of the currently observable "limits of law." These are shown in the already widely-diagnosed symptoms of disintegration of traditional conceptual dichotomies, in the inadequacies of binary-coded law in the face of the many new challenges of its social environment, and, finally, also in the formation of new legal concepts and constructions in an attempt to cope better with these challenges in future.

II. Participation in the law and legal protection

If we take another, closer look at the opening quotation from Eugen Ehrlich, we can nevertheless already identify two important elements of legal capacity in the definition he describes as "vague" and "vacuous": first, the ability to enter into legal relations, and, second, the possibility of enjoying legally protected advantage or, in other words, legal protection.

The first element, participation in legal relations, points to the well-known premise formulated by Savigny (1840, § 60, p. 1) that every legal relation involves a relationship between one person and another person. This is based in turn on the Kantian definition that a "*person* is a subject whose actions can be *imputed* to him." (Kant 1797/1996, p. 16 [Ak. 6:223]). Even though by "person" and "subject" here are meant, of course, only human beings who are accountable – that is, who are able to act under binding laws of the categorical

imperative – this already involves a functional reorientation of the concept of the person. Subjects are no longer the bearers of their actions without further qualification only because they exhibit certain characteristics such as the ability to reason or simple physical mobility. Rather, they are first *regarded* as authors of their actions and their effects;[2] actions are attributed to them. This shift in perspective to one of attribution opens the legal conceptions of personality and responsibility, and hence of agency and legal capacity, to a functionalist approach for which it has long since ceased to be mandatory that only human individuals should be considered to be bearers of rights and duties (cf. Raiser 1999, pp. 118f.; Teubner 1987, pp. 61ff.; id. 2006, pp. 497ff.; Gruber 2009, pp. 299ff.).

Somewhat more contentious, by contrast, is the question whether Ehrlich's second, abstractly formulated element of legal capacity – the granting of legally protected advantage – is exclusively a product of the attributions of observers. It is already a different matter, and constitutes an additional qualitative step, if, instead of concentrating on mere participation in legal relationships, one also speaks of the opportunity to enjoy legal advantages. This apparently no longer only concerns the question of being a legal entity, but rather a claim to legal protection that must actually be realized. And this impinges on a particular aspect of legal capacity which is no longer simply a matter of rights, but of "rights to rights" (see Arendt 1955, p. 476) – in other words, protection of dignity, and if necessary legal recognition of personality (Gruber 2013, pp. 417ff.).

One would like to think that such specific definitions of legal capacity are restricted to human beings, or at least to living beings. They alone should be attributed dignity, moreover unreservedly, absolutely. Therefore, it is at first sight counterintuitive also to make this aspect of legal subjectivity dependent on the standpoint of an attributing observer. Note, however, that this only involves a specific aspect of legal subjectivity that exhibits a special relation to human beings qua social beings and simultaneously qua extra-social, living individuals.

[2] See Kant, loc. cit.: "An action is called a *deed* insofar as it comes under obligatory laws and hence insofar as the subject, in doing it, is considered in terms of the freedom of his choice. By such an action the agent is regarded as the *author* of its effect, and this, together with the action itself, can be *imputed* to him, if one is previously acquainted with the law by virtue of which an obligation rests on these."

This in no way contradicts the idea that legal capacity exhibits many different intermediate stages and can also be attributed in corresponding ways to nonhuman subjects. Both the ability to participate in legal relationships as well as the claim to legal protection exist in incremental gradations as regards their content and their scope (cf. Gruber 2013, pp. 417ff.; see also id. 2006, pp. 160ff.).

Eugen Ehrlich (1909/1973, pp. 1f.) refers in this connection primarily to the individual components of human legal capacity, in particular to the variable, historically contingent limitations of political rights, family rights, property rights and personal rights. Entirely new intermediate stages are added with the theory of the legal person (cf. Beuthien 2011, pp. 124ff.; Raiser 1999, pp. 104ff.), and more recently by the rulings on the limited legal capacity[3] and the partial legal capacity[4] of partnerships and associations. The extension of legal capacity in the domain of company law in particular shows the effects of the social practice of treating partnerships as "living law" and how this has led first law-makers and subsequently jurisdiction to reassess legal capacity (Reuter 2007, pp. 674-680). Civil law partnerships and other bodies of persons functioned as collective social actors with their own social address and identity long before the introduction of section 14 (2) BGB (German Civil Code), for example, with its definition of legal partnerships,[5] and before the related rulings on "partial legal capacity" became possible.

However, the concept of "partial legal capacity" is not only applicable to bodies of persons. Corresponding transitional stages can already be found at the limits of the personal existence of individual human beings. Thus, the conceived but still unborn human being is partially legal capable from the moment of conception on in so far as, for example, it is already regarded in this situation as capable of inheriting (section 1923 (2) BGB) and enjoys protection under civil law against prenatal damage to health (section 823 (1) BGB) (cf. Gruber 2003, pp. 135-138). Moreover, with the increasing possibilities of medical technology,

[3] Cf. German Federal Supreme Court (Bundesgerichtshof), BGHZ 146, 341, at 344 ("limited legal subjectivity" of partnerships under the German Civil Code); for further enhancements of legal subjectivity, see BGHZ 148, 291; 154, 88; 154, 370, as well as BGH NJW 2006, 3716; 2007, 995; 2008, 1378; 2009, 594; 2011, 615; 2011, 1958; 2011, 2048; BGH NJW 2007, 2490; 2011, 1595.

[4] BGHZ 163, 154 (partial legal capacity of condominium association).

[5] Section 14 (2) BGB, introduced on 30 June 2000 (BGBl. I 897): "A partnership with legal personality is a partnership that has the capacity to acquire rights and to incur liabilities."

there seems to be a simultaneous increase in the difficulties in defining a clear beginning and end point of the personal existence of human beings, and thus in defining their legal subjectivity. Even the legal treatment of the time of birth is inconsistent. In addition, new findings concerning the prenatal status of human beings, as well as doubts concerning the brain death criterion and uncertainties in dealing with human beings in a persistent vegetative state, are leading to a further multiplication of incremental attributions of personality (cf. Ulsenheimer 2007; Müller 2010; see also Eisenberg 2008; Farah 2008; Varelius 2009).

In this context, it is also becoming apparent that there is not just one, but many legal capacities, whose scope can be more or less restricted. There are correspondingly many types of legal subjects and partial legal subjects, and ever-new types can develop, at the latest once the law confronts new social and technological challenges. Today such challenges seem to be making themselves felt especially in the field of information and communication technologies.

B. Extensions: Legal Subjectivity in Electronic Commerce

I. Legal constructions in the domain of information technology

To date, however, the concept of partial legal capacity does not seem to play any significant role in information technology law. In this area, the dissolution of conceptual dichotomies is more likely to come from the other side of the subject-object dualism: the "partial objectification" of Internet domains is thematized as the mirror-image counterpart of partial legal subjectivity, as it were (Krebs/Becker 2009, p. 934), or also the legal status of virtual objects "in the gray area between real things and pure rights." (Spindler 2011a; see also Berberich 2010) This makes it clear, at any rate, that information technology law seems to be compelled to experiment with new "thing concepts," for example, those of "boundary objects" or "quasi-objects." (cf. Latour 1993, pp. 49 ff. et passim; on these concepts, see Roßler 2008, pp. 76ff.).

Again, the conceptual and constructive innovations can be interpreted as responses to new social challenges to which the law now finds itself exposed in the technologized world of new information technology communications media. These challenges are a result in particular of the fact that meaningful and

technological communication are becoming visibly amalgamated in the information technology media (cf. Vesting 2003, p. 179). This is shown, for example, by the fact that software codes are now virtually indistinguishable from intellectual content (Bullinger/Czychowski 2011, pp. 19ff.), or that intellectual property as well as information technology systems seem to be simultaneously part of social communication and of the personal development of human users[6] – in short, that the clear separation between the "internal" world of the personal legal subject and the "external" world of available legal objects and items of property is breaking down.

To this extent, information technologies can no longer be qualified exclusively as "external," purely technical environments of communication, but constitute beyond that a new kind of social domain. Its peculiarities are already a product, on the one hand, of the actual behavior of human users, who are increasingly bound, both cognitively and emotionally, into information technology systems at a psychosocial level. On the other hand, it is also the special material conditions of information technology communications systems in particular that lead human persons who are under their influence to appear as new functional units composed of body, mind and artificial medium. The networked communication medium "computer" is playing a major role in shaping the conditions of social communication based on its technical specifications in the form of digital codes, programming languages, user interfaces and text formats (Vesting 2003, pp. 179-181).

These specific communicative conditions of social information technologies resulting from the technological networking of social communication have a particularly pronounced influence on legal attributions of identity and action, and hence above all on issues of liability in electronic commerce. Here in particular it is becoming increasingly difficult to distinguish concrete human actors and, for example, to identify them as authors of declarations of intent or even as individually responsible agencies of legal transgressions. The communicative processes in this area appear instead as new kinds of chains of effects whose actors seem to be more socio-technical ensembles of people and things –

[6] See, in particular, German Federal Constitutional Court (Bundesverfassungsgericht) BVerfGE 120, 274 ("Online-Durchsuchung").

whereby the artificial components of these hybrid human being-thing linkages can sometimes even be represented as driving forces and independent agents.

II. Extensions of liability through information technology

Such hybrid linkages between humans and non-human systems can be found not only in the visions of especially future-oriented information technologies, such as the latest developments in the "Internet of things and services" and in the field of "ambient intelligence," "ambient assisted living" or "cyber-physical systems" (Herzog et al. 2009, p. 11). In everyday electronic commerce there are already numerous cases all of which raise the question, in a way that is in principle comparable, of individual liability for technological and for the most part automated processes, thus for communicative processes which, from a human perspective, are scarcely possible to control any more. These cases involve, for example, the abuse of user accounts, Wi-Fi connections, auction platforms or forums by third parties, whose identity cannot be ascertained for the most part. As a result, liability claims for legal infringements can be asserted only against the respective operators.

To what extent the latter can be held liable for damages, injunctive relief and removal in individual cases regularly depends on whether it can be proved that they acted with intent qua accomplices or participants with respect to the infringement. For the numerous cases in which this cannot be proven, however, legal jurisdiction has developed in addition the construct of indirect liability for interference ("Störerhaftung") in the domain of intellectual property law. According to this construct, injunctive relief and removal can be sought also from those operators on the grounds that they are "interferers" who contribute to the legal infringement through no fault of their own, yet in an adequate causal way, by violating a duty to examine. To what extent the operators can reasonably be expected to fulfill such duties to examine and act and to what extent these duties can be considered to be proportionate depends on the details of each case.[7]

[7] Cf., in particular, BGHZ 158, 236 ("Internet-Versteigerung I"); BGHZ 148, 13 ("ambiente.de"); BGH GRUR 2011, 152, 154 ff. ("Kinderhochstühle im Internet"); on the development of the so-called "interferer's liability" ("Störerhaftung"), see Spindler 2011b.

Given the large number of such individual cases that have been adjudicated in the meantime, it is virtually impossible to derive any reliable standards from legal rulings. At any rate, a certain understanding of the technological context is required. Assertions about the reasonableness of duties to examine can be made only on an "expert" basis. Such duties can be judged only within the framework of the existing technological possibilities that are apt to prevent an interference. However, in their assessments of the duties to act that can be reasonably expected in concrete cases, and especially their probability assessments of opportunities for abuse and prevention, the courts often rely on their own expertise and the rules of prima facie evidence based on this (cf. Hoeren 2008, p. 2618). This shift in liability law to the assessment of evidence and case-by-case decision-making by judges means that the corresponding attributions of agency and responsibility for the conduct of third parties can occur within a wide latitude of "adequate causality".

But even beyond these extended liability standards, the courts are continually finding new, constructive paths of attribution. In the case of anticompetitive practices[8] and now also of infringements of intellectual property,[9] jurisdiction has even taken to dealing with the responsible operators as direct infringers, and hence as perpetrators of the violations of competition law and property rights committed by third parties. According to the so-called "Halzband" decision[10] of the Federal Court of Justice (BGH) of 2009, the duties of care of holders of eBay member accounts are especially far-reaching. In the case in question, the Latvian spouse of the defendant had offered her necklace at a minimum bid of 30 euros through his eBay account, among other things, with the garbled words: "SSSuper ... Tolle ... Halzband (Cartier Art)" and "... Halzband, Art Cartier ... Mit kl. Pantere, tupische simwol fon Cartier Haus ... [SSSuper ... great ... necklace (Cartier style) ... necklace, Cartier style ... with small pantere, tipical simwol fron Cartier house ...]" The court took the view that the defendant had committed a breach of duty by failing to adequately protect the secrecy[11] of his login data. This represents an independent ground of

[8] Cf. BGHZ 173, 188 ("Jugendgefährdende Medien bei eBay").
[9] Cf. BGHZ 180, 134 ("Halzband").
[10] BGHZ 180, 134.
[11] The defendant had kept his personal access data in his desk which was also accessible to his spouse.

attribution compared to the principles of liability for interference in the area of intellectual property law as well as duties of care in competition law:

> If a third party uses another member's account on eBay, having come into possession of the login data to this account because the holder of the account failed to protect them sufficiently against access by third parties, the holder of the member account must be treated as if he had acted himself. …The reason for the liability of those who have failed to keep their contact information secure resides … in the danger they create that confusion could arise for commerce over which person has traded under the eBay member account, and that as a result the possibilities of identifying, and if necessary bringing an action against the agent (whether for injunctive relief or for damages), may be significantly impaired.[12]

If one takes the Federal Court of Justice at its word, then inadequate protection of user account login data automatically entails a fiction of perpetration according to which holders of membership accounts whose access has been abused by third parties are to be treated as if they had acted through this access themselves. Because of the very general terms in which it is formulated, this fictive agency for unsecured eBay accounts seem to be applicable not only to the case of infringements of competition and intellectual property law decided here, but also to numerous other contractual problem cases in electronic commerce in which third parties make declarations of intent and conclude contracts through other people's user accounts. At any rate, the justification presented for the judgment at first sight suggest this in so far as it is not based, for example, on an increased risk of legal infringements, but instead on the interest of those engaged in legal transactions in being able to ascertain clearly the identity of the person acting under the user account in each instance.[13]

It makes sense that those engaged in legal transactions have a particular interest in being able to identify potential business and contractual partners at all times. The identity of the contracting parties belongs as a matter of principle to the essential preconditions of a contractual agreement. If a third party acts under an assumed name, or correspondingly under another person's user

[12] BGHZ 180, 134, 139.
[13] BGHZ 180, 134, 140.

account, a liability of the account holder in accordance with principles of prima facie liability comes into consideration (Oechsler 2008).[14] However, liability is ruled out – as the Federal Court of Justice itself noted in the justification of its ruling[15] – in particular if the account holder was not at least able to recognize the action of the unauthorized person, and also if the contractual partner is not worthy of protection, for example because he or she recognized the abuse or negligently failed to recognize it. However, the Federal Court of Justice no longer wants to accept this caveat of a consideration of the protection-worthy interests of both parties for the case of tort liability for violations of property rights. Specifically, individuals who in breach of their duty fail to keep the login data of their eBay accounts secure should not be able to appeal from the outset to an interest that overrides the protection of the legal interests in question.[16]

This weighting of the respective interests may at first sight seem to be irreproachable – breach of duty on the one side, violation of intellectual property rights and rights based on ancillary copyright law on the other side. It is questionable, however, whether this should even turn on the transactional interests, in particular the interests of the parties to a civil liability case. For the evaluation of the legitimate interests of those engaged in legal transactions relating to the identifiability of the actors rests primarily on legal transactional reasons and not on tort-based reasons. What is at stake is in fact the identity of one's contractual partner, because without it no contract can be concluded. In contrast, the identifiability of tort liability opponents against whom actions are to be brought in future is more a matter of the general requirements of preventive prosecution (cf. Leistner 2010, p. 6f.). It may be doubted, therefore, whether a conception of liability for the fraudulent use of user accounts by third parties, comparable to the principles of (legal transactional) prima facie liability,[17] can be applied in the area of torts, and – in the absence of a balancing of interests – whether it can even be extended considerably further in that area. Against such misgivings, the Federal Court of Justice ultimately also cites the interests of the public:

[14] For a different view, see BGH VersR 2011, 932 = NJW 2011, 2421.
[15] BGHZ 180, 134, 140f., with further references.
[16] BGHZ 180, 134, 141.
[17] For such a comparison, see BGHZ 180, 134, 140 f.; cf. also Rössel 2009, pp. 453ff.; for a more skeptical view, see Leistner 2010, p. 7.

> The liability model presented above does not burden the defendant in a disproportionate manner. It merely updates to take account of the new technological developments the principle that persons to whom a legally protected area is allocated for use and, where applicable, also to make a profit are liable within the bounds of their responsibility for this area for legal infringements if they fail in their duty to provide safeguards in the interest of third parties or of the general public.[18]

Thus the response of the Federal Court of Justice to the new technical developments consists in justifying spheres of responsibility and liability that should correspond in scope to the areas of activity of the user. The court identifies such an area of activity in the access to the eBay user account that, based on monitoring data and password protection, serves as "a special means of identification" whose "identification function … goes far beyond the use of stationery, a name or an address, for example, where it is known to those engaged in commerce that these can, if necessary, be imitated or improperly used by anyone."[19]

There are good reason for doubting whether the Federal Court of Justice makes an accurate assessment of the knowledge of those involved in legal transactions concerning the possibilities of identity fraud using eBay accounts, which can easily be set up at any time under false names and addresses (cf. Hartmann 2011, p. 92). Of much greater import, however, is the constructive step that the court makes at this point by founding a new sphere of technological responsibility. The eBay account holder is liable as the perpetrator of a violation of competition and property law, not, for example, because he has done something, but because an action has been performed in a technical area assigned to his identity.

III. "Indirect" perpetrator of the actions of others?

The trends in jurisdiction described towards extending the scope of liability, which have reached a provisional climax in the "Halzband" ruling, suggest that the ascription of responsibilities to individual human beings is becoming

[18] BGHZ 180, 134, 143 f.
[19] BGHZ 180, 134, 139 f.

increasingly difficult and must sooner or later give rise to an aporia. The aporia is that the perpetrators no longer appear only as the personally responsible authors of their own actions in the traditional sense, but are also at the same time blamed for the deeds that they have not performed, but have been performed by third parties (at their own initiative) – in short, they become perpetrators of the deeds of others.

The looming paradox could be seen at first sight as an exaggerated extrapolation of the problem familiar from discussions in criminal law of the single perpetrator concept in the case of negligence offenses, which does not allow any differentiations with regard to the incrementally different contributions to degrees of completion and to forms of duties of care (cf. Renzikowski 1997, pp. 154ff.). In parallel to this, tort imputation in civil law[20] also seems to have difficulties in dealing with the multiple linkages between actors and concerned parties that it encounters especially in the social information technologies as "indirect legal infringements" (Leistner 2010, pp. 1ff.).

Thus, the precise legal basis for extending the liability of perpetrators in the "Halzband" case remains unclear to date (Hartmann 2011, p. 92). Strictly speaking, it cannot be based on a violation of extended duties of care (cf. Peifer 2009; Hecht 2009; Leistner 2010), since at the time of the breach of duty – that is, of the inadequate protection of the login data against abuse – a concrete threat of a violation of property rights did not even exist as yet. In any case, the Federal Court of Justice did not want to justify the duty to safeguard login data in terms of an increased threat of legal infringements, but instead in terms of a threat to commerce posed by the potential confusion concerning the identity of the actor.[21] But a corresponding classification as "prima facie tort liability" (Rössel 2009, p. 454) seems unconvincing, especially as the liability is supposed to be affirmed regardless of whether the identity of the actor in fact remained unclear or not for those engaged in commerce (cf. Leistner 2010, p. 6f.). Just as little as the justification of an extended liability for security of commerce can an extended concept of prima facie liability establish an adequate link between the duty to safeguard login data and the danger, which

[20] Civil liability, especially tortious liability of multiple tortfeasors (according to section 830 BGB), is essentially based on the rules developed by criminal law: cf. BGHZ 63, 124, 126; 89, 383, 389.

[21] Cf. BGHZ 180, 134, 140.

arises – if at all – only later, of a violation of legally protected interests that cannot count as endangered at the time of the breach of duty (cf. Ungern-Sternberg 2010, p. 392).

In light of this, it seems more plausible to appeal to the legal idea of the special statutory rules for imputing liability to the owners of a company or a business for their employees or agents (section 99 UrhG [German Copyright Act], section 14 (7) MarkenG [German Trademark Act], section 8 (2) UWG [German Unfair Competition Act]) (see Ungern-Sternberg, ibid.). Owners should indeed use the division of labor within their company or business to make a profit, but not to shift responsibility for actions to dependent third parties, or even to spread it over the whole collective. The Federal Court of Justice seems to be concerned with a very similar prevention of the delegation or confusion of responsibility in its "Halzband" decision. Here, too, holders of the eBay accounts are not supposed to be able exonerate themselves with the claim – certainly often cited in cases of "indirect" legal infringements – that it was not they themselves but a third party who acted through the access (cf. Ungern-Sternberg, ibid.). Succinctly put, as users of the technology they are also liable for the technology.

However, the newly-contrived reason of the Federal Court of Justice for attributing responsibility to eBay account holders who fail to take sufficient measures to protect their login data goes well beyond entrepreneurial liability, since the latter is confined to company- or business-related actions (cf. Leistner 2010, p. 6). In contrast, the liability of eBay account holders is supposed to exist independently of their specific actions and modes of use, based solely on the high "identification function"[22] of the account. As a "legally protected area," this seems to be allocated to the account holder not only, as the Federal Court of Justice points out, "for use and, where applicable, also to make a profit," but also even represents an IT extension of the entire identity of the account holder.

The ever more broadly construed attributions and imputations of responsibility for "indirect" infringement can be justified at first sight only in terms of increasingly extensive duties of care and practical duties or of a prima facie obligation that refers in a peculiar way to commerce in general, or even of an

[22] BGHZ 180, 134, 139.

analogy to other special statutory forms of accountability for actions in collective contexts. But behind this there presumably ultimately lurks a far more profound change in a little-questioned basic concept of civil law. According to this, it is no longer individual human beings alone qua isolated subjects to whom actions, intentions, declarations of intent, responsibilities and ultimately rights and duties are ascribed. Rather, their identities augmented by IT artifacts are also prone to lead to a new, extended conception of legal capacity and legal subjectivity.

IV. Legal subjects associated through information technology

The problems and deficiencies of tort action attribution and their systematic classification make it clear that the traditional model of imputation that takes the individual human being defined as "self-determined" as its point of departure loses its persuasiveness to the extent that – instead of being able to refer back to objective causal relationships and subjective intentions – it increasingly has to contrive breaches of duties and prevention opportunities on a case-by-case basis just in order to identify perpetrators. To all appearances, the individualistic perspective no longer finds any indigenous subjects of action specifically in the increasing interdependencies of information technology in particular, but must first bring its subjects to the action.

Even though "indirect" liability as a perpetrator for actions that are not one's own may also be a mere fiction, such fictions are the "crutches of thought" in Josef Esser's (1969, p. 200) sense. At any rate, they are always at the same time the harbingers of future legal realities. However, future novel constructions of agency and responsibility are almost impossible to capture adequately in terms of the traditional terminology; what is required, therefore, are new concepts that do better justice to a new legal reality marked by the interdependencies of social information technologies.

From such a perspective, no longer only the human individual identifiable by its self-determined actions and volitions counts as a legal subject. Rather, the person in the IT medium is henceforth also identified with artificial entities, in the "Halzband" case with a password-protected eBay account. Persons can no longer liberate themselves from this widening attribution of identity and action. For example, they can no longer free themselves from the attribution of responsibility for the eBay account by – as in the case of liability for interference

– satisfying other reasonable duties to examine directed to a possible prevention of abuse.[23]

Of scant importance here is also whether it was the account holder him or herself or instead a third person who abused the access in order to commit infringements of property rights and breaches of competition law.[24] Once again, it is the attributions of social observers – here of electronic commerce with its specific requirements on the identifiability and addressability of persons – that constitute the legal subject. They determine the degree to which and the limits within which the human person qua subject of liability and attribution is extended. And these extensions reach such a level in the interdependencies of communication and information technologies in particular that human persons are increasingly represented, beyond the boundaries of their biological bodies and their supposedly self-determined will, also as a fixed linkage of human being and things – or, in the words of Bruno Latour, as an "association of humans and non-humans" (Latour 1993, p. 4; see also id. 2005, p. 43ff.).

Of course, these extensions are not cited as such in the legal justifications – and it would be very surprising if they were. Legal dogmatics remains firmly rooted in a conceptual tradition that still speaks of natural persons, self-determination and declarations of intent – in spite of the fact that it should have long since become clear that persons are communicative constructs, that self-determinations rest on attributions by others (cf. Luhmann 1995, pp. 82ff., 107ff., 255ff., 313ff.) and that declarations of intent without the willingness to enter into formal contractual relationships[25] hardly deserve the name.

In order to maintain a semblance of preserving the individual assignment of rights and duties, therefore, the extensions of liability are justified with extended duties to examine and safeguard, and various kinds of prognoses concerning imputability and probability are made. This form of attribution of responsibility is almost impossible to calculate and predict, however, especially since it continues to depend to the extent described above on assessments by judges in individual cases (see Peifer 2009; cf. also Hoeren 2008).

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[23] BGHZ 180, 134 ,141.

[24] This question finally becomes relevant, of course, when it comes to claims for damages and compensation: see BGHZ 180, 134 ,142.

[25] On the dispensability of the so-called "Erklärungsbewusstsein" see, in particular, BGH NJW 1995, 953; cf. also Habersack 1996, pp. 585; Eisenhardt 1986, pp. 878ff.

The old individualistic concepts are unlikely to provide a way out of the associated legal uncertainty. What is required, therefore, is in the first place a description of social actors and their actions that is adequate to the IT reality and – on this basis – new legal constructions that can meet the challenges of this reality. Only if legal attention focuses more clearly on "living law" – which in this context means, on the inherent rationalities of social communication and information technologies – can the relevant problems in civil and intellectual property law be brought closer to a systematic solution.

V. Parts of legal subjects

IT systems can be represented from this perspective as new, artificial components of legal subjects to which correspondingly extended responsibilities are imputed. But they appear to this extent only as dependent parts of subjects, not as partial legal subjects in the sense described at the beginning. They are communicatively coupled with human individuals by virtue of social allocation, so that they form an "association", "assemblage" – in other words, a new socio-technical unity – with the latter.

Evidently, eBay accounts and other IT artifacts can be imputed in such a way that they are already attributed to the sphere of the legal subject, but without need of any other "subjective" self-determinations or volitions on the part of an individual human being. Even if independent or even autonomous actors – wives, children and other family members – become involved and they abuse these artificial extensions to commit legal infringements, that hardly seems to affect the unity of the socio-technical subject of attribution.

The legal subject "human being" originally founded, but also limited, by its psycho-physical integrity and capacity for autonomy is thus extended by a non-human part, namely, IT access via eBay. As part of the extended legal subject, this artifact forthwith gives rise to the extensions of attributions of agency and responsibility described. In this sense it becomes an "agency of changing effectiveness" (Latour 2005, pp. 43ff.; cf. also Schulz-Schaeffer 2008a, p. 706; id. 2008b, pp. 108ff.), which is manifested here specifically as an agency of changes in legal reality. At the same time, the association of human and non-human parts of an extended legal subject also leads people to modify their artificial subject parts, for example, by establishing new technological

monitoring options and access restrictions in response to extended imputations of responsibility. But the reciprocal influence exercised by the associated parts alone would not be sufficient to justify speaking of a new socio-technical unit of attribution. Rather, it is the further aspect of the joint constitution of a new, independent actor, of a "hybrid actor" (cf. Schulz-Schaeffer 2008b, pp. 120ff.), that turns the human being-thing association of user and technical access into an extended legal subject.

At the same time, however, the limits of this formation of a unity out of heterogeneous associations should be borne in mind. Not every human-technological interaction inevitably leads to the emergence of new actors. On the contrary, in most cases, it is likely to remain merely a matter of changed role definitions under the reciprocal influence of human being and technology. Only in cases that no longer exhibit any plausible individualizable action responsibilities, but instead involve inseparable human-technological spheres of responsibility, can there be any question of extended legal subjects.

Although it is certainly doubtful in the "Halzband" case whether the association between user and user account should in fact be regarded as inseparable, or whether the numerous possibilities of identity fraud and interventions by third parties do not suggest the contrary, the Federal Court of Justice at any rate assumed such inseparability.[26] As a result, it contrived a legal subject augmented by IT access that can be held responsible both for the consequences of the self-determined, autonomous action of an individual human being as well as for the effects of its associated technological artifacts.[27]

C. Differentiations: Partial Legal Subjectivity in Electronic Commerce

I. Information technology actors

With this, a conceivable and in the meantime even commonplace solution option in dealing with recent phenomena of increasingly independent

[26] This inseparability based in particular on the assumed function of the eBay account as "a special means of identification": see BGHZ 180, 134, 139.

[27] Therein lies a conceptual similarity to the legal principle of entrepreneurial liability as mentioned above [sections 99 UrhG, 14 (7) MarkenG, 8 (2) UWG]. In the "Halzband" case, however, the association of human individuals and technological artifacts is more than a merely communicative network: As a substantial coupling of users and their identifying accounts or, more generally, of biological organisms and external resources, it literally forms part of an *information technological incorporation*.

information technologies has already been mapped out. As in cases of the imputation of liability for legal infringements, the concrete expression of will or self-determination on the part of individual human beings could recede into the background also, for example, in the use of software agents and autonomous programs in electronic commerce (cf. Gitter 2007, pp. 29ff., 159ff.). This would pave the way in future for a range of possibilites for no longer imputing electronic declarations of intent in the first instance subjectively, but instead objectively, whether under aspects of prima facie liability (Gitter 2007, p. 180; Oechsler 2008, pp. 568ff.) or in accordance with more abstract risk considerations and prognoses relating to the controllability of the technical procedures (Wiebe 2002, pp. 156ff., 216ff.).

However, the outlook for this kind of imputation, which already seems to be framed especially broadly in the "Halzband" ruling, is poor. Such an extension of the attribution of agency and will through ever broader commercial, examination and security duties, which represent a continuous extension of the human subject of responsibility, will lead sooner or later to excessive demands on human beings as presumptively self-determined individual beings. Put bluntly, the constantly changing imputations of responsibility under information technology law with regard to risk management and threat prevention possibilities become increasingly unreasonable if the responsible subject is supposed to bear ever more liability for third parties through the mediation of information technology.

To be sure, jurisdiction has again limited the implications of "Halzband" liability, for example by not applying its standards to the case of copyright infringement via Wi-Fi[28] and in particular by not applying them to cases involving legal transactions.[29] But – as already indicated – the interests that must be constantly reassessed in ever new single-case trade-offs between "objective" prima facie liability and "subjective" mental elements of the offense are unlikely to make a significant contribution to enhancing legal expectations and certainty.

Instead of determining people's responsibility for their associated IT artifacts in virtually every new constellation via the detour of individual case-based

[28] Cf. BGHZ 185, 330, 333ff. ("Sommer unseres Lebens"): The IP address of a Wi-Fi connection does not have an identification function comparable to that of eBay accounts.

[29] Cf. BGH VersR 2011, 932 = NJW 2011, 2421 (no contractual liability for unauthorized access to an eBay account); for a critical comparison with the "Halzband" decision, see Stadler 2011.

commercial, examination and security duties based on the personal opinions of judges, a systematic solution would have to endeavor to define human and technological spheres of responsibility within clear limits, which deserve general recognition as such with reference to the normative standards observable in electronic commerce.

Then it is quite conceivable – albeit within distinctly narrower limits than those drawn by the “Halzband” ruling – that, for example, the legal acts or violations performed through IT access would be objectively imputed to a correspondingly extended legal subject. This imputation would then be general in nature, however, and would not depend on the breaches of duty and subjective transgressions of the human users that would have to be repeatedly reexamined in individual cases. Those who on this basis are aware from the outset that they are liable in general for a certain part of their IT system can decide for themselves to take additional control and security measures, or to establish a liability fund for possible damages, or also to seek other forms of insurance.

The limits of this imputability of an IT artifact to an extended human-artificial subject are already exceeded, however, in the case of software agents or autonomous programs for generating and transmitting declarations of intent. Software agents and other “autonomous” programs are increasingly turning out to be dynamically operating actors that are likely to count as less and less manageable under risk aspects (cf. Gitter 2007, pp. 174f.; Wiebe 2002, pp. 216ff.). Therefore, they can form at best a loose “human-thing association” with their “agent principals” – an unstable connection that is also continually disrupted by their independent and obstructive behavior. In this regard, a comparison with interpersonal relationships may be much more informative. Could the software agent be more than part of a legal subject after all, perhaps even a partial legal subject?

II. Autonomization of partially legally capable actors

When software agents and autonomous programs are used in electronic commerce to conclude contracts, it is almost impossible to attribute their legal behavior to an intention to make a declaration or to perform an action of a concrete human being. Even more so than at the level of liability law, the

specific challenge for information technology law is also to grasp the new phenomena of electronic, agent-mediated legal transactions with suitable concepts and to do justice to the associated legal problems by means of corresponding constructions. The central question is: To what extent can such autonomous agents still be attributed to human individuals as their quasi-personal components – and under what conditions do they have to be assigned to other risk spheres, and possibly even be regarded as partially legally capable subjects? (cf. Teubner 2006, pp. 515f.)

Granted, it may already seem unusual enough to regard people and IT systems as associated parts of an extended human-artificial legal subject. Then the idea that the artificial parts could acquire a separate legal subjectivity of their own under certain circumstances may appear even more peculiar. But here one should continue to bear in mind that legal capacity exists in numerous intermediate stages and does not depend directly on any intrinsic properties of an entity, but is instead ascribed on a functional basis.

If software agents no longer operate merely in accordance with predictable programs, but increasingly act in flexible and self-steered ways, if they no longer only operate "automatically" but also in a specific sense "autonomously" – in short, if they act as "autonomous machines" (Gruber/Bung/Ziemann 2014) – why should their legal classification not increasingly fall back on concepts that are already geared to the interventions of independently acting third parties? Consideration should be given especially to the statutory right of representation in German civil law in sections 164ff. BGB, which could also be applied in corresponding ways to software agents as representatives of the human user or "agent principal" (cf. Teubner 2006, pp. 507ff., 520f.).

The application of the rules of representation is generally dismissed out of hand on the grounds that software agents, like other programs, are not autonomously acting legal subjects, and hence are not legally capable, let alone to some limited extent legally competent, and thus lack the preconditions of representation from the beginning (cf., for instance, Cornelius 2002, p. 354f.; Gitter 2007, p. 178; in contrast, fundamental arguments for the personhood of artificial agents are articulated by Solum 1992, pp. 1231ff.; Allen/Widdison 1996, pp. 35ff.; Weitzenböck 2001, pp. 209ff.; Wettig/Zehendner 2004, pp. 122 ff.; Andrade et al. 2007, pp. 361 ff.; Teubner 2006, pp. 505ff.; Sartor 2009, pp.

282ff.). But here it is worth referring once again to Eugen Ehrlich's remarks on legal capacity: there is not just "the" (one) legal capacity. As a social institution, it also exists today – perhaps more than ever – in the plural. Ehrlich already demonstrated emphatically how diverse are the semantic artifacts that we encounter in social and legal communication, whether as more or less limited in their legal capacity or as extended legal subjects, as parts of legal subjects or as partial legal subjects, as persons or as partial persons.

Therefore, it is not at all misconceived to attribute partial legal capacity to software agents and autonomous programs, a legal capacity that is at first limited, to be sure, to the ability to issue legally binding declarations of intent as (quasi-)representatives. In addition, however, they can certainly be conceivably assigned other aspects of legal capacity if need be – for example, the ability to own property – in order to have sufficient recoverable assets available even before a "risk-inclined" use in electronic legal transactions (on the concept of a so-called "electronic Person," see Wettig/Zehendner 2004, pp. 127ff., with further references; on further issues raised by the tortious liability of "intelligent artifacts," cf. Wein 1992, pp. 111ff.). Of course, in this regard other concepts – for example, forms of compulsory insurance modeled on other technological risk domains – must also be considered (cf. Karnow 1996, pp. 193ff.). It can also be conjectured that a right of representation of software agents will develop as a new "special right" in a somewhat different direction from the traditional "human" right of representation (Teubner 2006, pp. 520f.).

D. Prospects: Limits of Legal Capacity

In so far as IT systems, on the one hand, and new externalized domains of human personality development, on the other, give rise to new social actors, it might even seem conceivable in principle in the light of what has been said to attribute personality to non-physical, non-living, IT artifacts as well under certain circumstances. However, limitations arise here from the fact that IT systems, in spite of their complexity and communicative capacities, are still not regarded as a general rule as conscious, thinking, perceiving, socially capable beings capable of imitation, let alone as living beings. It must be assumed at any rate that artificial actors will continue to be "personified" in the law differently from

living human beings, namely, in ways that correspond to the technological medium.

Here, independent protection of personality and dignity certainly presupposes more than mere legal capacity in the restricted sense envisaged for software agents. It may already be the case that IT systems can no longer be qualified exclusively as purely technical artefacts, but instead simultaneously as social media, and occasionally as independent actors who participate in communication as complex, autonomously operating, possibly even self-willed "agents." They may also be capable of making declarations of intent and of concluding contracts, and should in this respect be considered to be (partially) legal competent. However, this is by no means sufficient to turn them into legally protected entities equipped, for example, with basic rights – not even if they should one day exhibit similarly intelligent behavior to human beings.

Only if artificial entities should succeed in the course of their future development in being integrated into human society as members would recognition of their quasi-personal intrinsic worth also come into consideration. But this presupposes first and foremost a certain social proximity to human beings. If human beings are to adopt a personal stance (fundamentally: Strawson 1962) towards non-human, artificial artifacts, the latter would not only have to act intelligently, but would also have to be perceivable as being similar to human beings. Therefore, they would have to exhibit a certain mental as well as physical identity and, like living creatures, strive for recognition, or at least for attention. Furthermore, they would have to be at least partially socially competent and capable of mutual understanding (cf. Gruber 2006, pp. 119ff.). Only if they fulfill these conditions do they have any prospect of being admitted into human society as beings to whom sympathy and compassion, care and protection, and in particular legal protection of their – to that extent personally grounded – dignity, should be granted.

Personal recognition in human society can be represented accordingly as a "coming-to-the-social-world." It can also be described as a moral and legal birth that presupposes in the first place a social development process in the course of which a being only gradually develops into a member of human society and then ultimately obtains legal personality. The "completion of birth" as a condition of "human legal capacity" (section 1 BGB) is, contrary to appearances, by no

means definable in purely empirical terms, but requires first and foremost a normative determination of who belong to the genus “of” human beings and from what point in time their membership in human society is supposed to begin (Gruber 2013). Sufficiently human-like beings, therefore, have a real prospect of one day being treated like human beings, or even of being regarded as human beings.

But similarity to human beings presupposes, in addition to cognitive abilities, also certain bodily features. These can at any rate no longer be considered in isolation from each other. In particular, thinking cannot be reduced, in accordance with older functional, in particular computational, ideas about the human mind, to software and programs that could operate within an in principle arbitrarily configurable hardware (see e.g. Putnam 1960, pp. 148ff.; Block 1995, pp. 377ff.; id. 2007, pp. 27ff. and 141ff.). Rather, thinking is conceivable only on the basis of the “wetware” of a living body (cf. Bray 2009). For a thinking being differs from a merely programmed being precisely in virtue of the fact that its thoughts were not just “programmed into” it by someone else but acquired their meaning through an independent developmental and life history that is the product of autonomous, bodily experience, and as such is authentic.

That in particular also complex cognitive skills can now be understood only as embodied processes is also shown not least by the recent findings in neuroscience on the involvement of the motor nervous system in the neural transformation processes that enable people to locate objects spatially in their environment and perform related movements as actions (Gallese 2005, pp. 23ff.), but also to perceive the actions of other human beings and recognize them as interaction partners (Rizzolatti/Sinigaglia 2008, pp. 79ff.). Therefore, at least human or living bodies are needed that are capable of empathizing, based on their visual and sensorimotor life history, with the actions of their counterparts as though they were actions of their own, and ultimately are able to construct a shared phenomenal space of action through reciprocal observation (cf. Gruber 2012, referring, among others, to Merleau-Ponty 1962).

But this does not rule out that in the distant future an IT system in the bodily form of a more or less humanoid robot might not succeed after all in being regarded as a living being, and even as human-like, despite its artificial origin, because human beings can empathize with its actions like actions of their own

and because they perceive it sympathetically as a being with similar experiences, feelings and vulnerabilities – in short, because people feel connected, related, and close to it. However, this would mark the beginning of a new form of legal subjectivity.

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