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On the Distinctiveness of QR Code Symbols for the Purposes of Trademark Law

O zdolności odróżniającej symboli kodów QR w prawie znaków towarowych

ABSTRACT

The contactless new normal dictated by the global pandemic has re-introduced the nearly three--decade-old QR codes as a new standard of conveyance of information. Not only are they now ubiquitous to the general public but also inseparable to social, commercial and bureaucratic life. Recent history has been witnessing plenty of technical and artistic effort to make these normally abstract and unattractive clusters of dark and light quadratic shapes more eye-catching. In commercial terms, this is particularly motivated by the aim of rendering the code symbols a point of attraction as such, thus securing a more engaging customer interaction. Customized QR codes, having often been associated with brand images and commercial identities, are observed to come closer to the proximity of trademark law. However, the ubiquity and the technically necessary format standards of QR symbols tend to root against the primary premise of the trademarks: distinctiveness. This article seeks to answer whether the signs consisting of or incorporating QR symbols could fulfill the distinctiveness requirement within the framework of the EU law. Given the lack of jurisprudential apprehension of the question at hand, the article, first, sets about reasoning a distinctiveness test on the face of the EU trademark law and that of the relatable jurisprudential interpretations. Secondly, it goes on to administer this test on the signs that consist of or incorporate QR symbols. In the latter respect, limited jurisprudential hints from the Member States and the EUIPO practices shall be put in perspective and compounded with the imperatives of substantive law. The article, consequently substantiates that there is no one-fits-all formula to the question at hand and that OR symbols shall not be excluded as trademarks merely because they are essentially standardized.

Keywords: standard of conveyance of information; QR codes; trademark; distinctiveness

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INTRODUCTION AND BACKGROUND

Having been invented in 1994 primarily for production control in the Japanese automotive industry, the quick response codes (QR codes in short) have been around nearly for three decades which makes them hardly any novelty. Though their implementation gradually exceeded the peripheries of the automotive industry, their come into disposal of a greater audience, hence the relevance to the casual life, is largely perceived to be owed to two recent and consecutive occurrences. First, with the proliferation of individual means of decoding, particularly add-on and then built-in scanning software for smartphones, the implementation of and everyday encounters with QR codes became widespread.¹ The second and visibly more dramatic milestone has coincided to the recent outbreak. Conveyance of information and processing of transactions which conventionally required human interaction or their contact with object was now to be managed by touchless means. That was when this rather senior invention took a whole new turn of shining and, soon, they were observed to make an astounding come back such as to saturate to a great area of commercial, official and social exploitation.²

Thanks to their versatility and data density, their area of utility is abundantly large. Not only has this paved a way to a modality shift in the presentation of information and/or content – such as the transition from handheld menus at restaurants to QR menus, from physical contact cards to QR-based ones, touchless payment methods processed through QR codes, etc. – but also brand-new artefacts like vaccination passports and infection tracking apps have been largely (if not exclusively) architected upon the QR construct. The same versatility enables them to contain an ample variety of data including text, which could in turn incorporate any text-based data, be that a short message, a digital brochure, product information, contact details, verification codes for online transactions such as online payments, identity verification, authenticity check for official documents and the like, URLs to websites or multimedia content, coordinates on a map.³ Access to all these being as effortless as pointing a mobile device camera at the QR code symbol, their use is observed to provide better engaging service to customers than other traditional

¹ Significant in that respect is the implementation by Apple® of a built in QR code scanner into mobile device cameras in a 2017 update. The trend was later followed by some other manufacturers. See D. Etherington, *iOS 11 Is a Second Chance for QR Codes and NFC to Hit It Big*, 13.9.2017, https://techcrunch.com/2017/09/13/ios-11-is-a-second-chance-for-qr-codes-and-nfc-to-hit-it-big (access: 18.8.2022).

² I. Gostin, *How the Pandemic Saved the QR Code from Extinction*, 25.3.2021, https://www. forbes.com/sites/forbescommunicationscouncil/2021/03/25/how-the-pandemic-saved-the-qr-code-from-extinction/?sh=bd5cb1b69056 (access: 18.8.2022).

³ H. Crompton, J. LaFrance, M. van't Hooft, *QR Codes 101*, "ISTE Learning and Leading with Technology" 2012, vol. 39(8), p. 22.

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advertising media.⁴ It is therefore presumable that this alternative human-to-human and human-to-object contact which once was (and still is) coerced, seems now to gradually translate into desirable conveniences in the course of social, commercial and bureaucratic life.

Though it is for the medical and public health professionals to opine on whether we are going back to the old normal at all, what is of fundamental relevance for our purposes is the observation that QR codes are now a settled and indispensable part of the commercial practices both at the industrial and end-user level for a great variety of reasons.

The second observation is equally hinged upon their widespread use in the course of commercial practices. The implementers of QR codes were prompted to put out less boring visual representations and tend to bring such representations in line with the image of the brands to which they are appendant. In that, towards recent, there emerged a phenomenon widely addressed as "designer QR code"⁵ whereunder the limits of rather narrow playroom between the creativity and technical functionality have been persistently tried and pushed. On the one hand, customized and enriched visual representation of such codes results in certain distinctiveness that could help their spectator identify the commercial origin of the goods and services. On the other hand, the customization options, thus the possibility of a distinctive impression, are still significantly tampered by the essential format requirements mandated by their technical function, i.e. encodability and de-codability.

On the trademark front, the rudimentary functional *raison d'être* is to distinguish the goods and services of one undertaking from those of others; this function could be fulfilled only to such an extent that the sign in question is distinctive. What is referred to as QR code beautification, as far as it translates into "distinctiveness" as regards the commercial origin of corporeal goods and services, could bring the visual representation of these code symbols closer to the proximity of trademark law. The objective possibility of attaining the distinctiveness is, however, immediately curtailed by the format standards. Against that background and having argued against any *ex-ante* answer, this article reflects on the feasibility of QR codes as trademarks, particularly on the axis of their distinctiveness.

⁴ C. Teuta, P.S. Patel, T. Sakaguchi, *QR Code: A New Opportunity for Effective Mobile Marketing*, "Journal of Mobile Technologies, Knowledge and Society" 2013, p. 2.

⁵ K. Berisso, *Designer QR Codes: Ensuring the "Beep" (White Paper)*, "IDC 100 Archives, Special Collections and University Archives, Stony Brook University Libraries" 2013, p. 1; H. Bamoriya, *QR Code Based Marketing in India and Japan*, "European Journal of Applied Economics" 2014, vol. 11(2), p. 21; S. Okazaki, H. Li, M. Hirose, *Benchmarking the Use of QR Code in Mobile Promotion: Three Studies in Japan*, "Journal of Advertising Research" 2012, vol. 52(1), p. 104.

ARGUMENTS AND STRUCTURE

On a query to identify whether the symbols incorporating such codes shall be deemed sufficiently distinctive for the purposes of trademark law, this article upholds the following arguments:

- 1. The QR codes ought not to be *a priori* dismissed as trademarks for being devoid of distinctive capacity and character; distinctiveness for the purposes of trademark law ought not to be deemed prematurely excluded by mere reason of being graphically standardized machine-readable codes.
- 2. Instead, much like other figurative signs, they should be put to a distinctiveness test in terms of overall impression they create in the sight of the relevant public, notwithstanding the technical function they fulfill.
- 3. Yet, it needs to be concomitantly acknowledged that the threshold of distinctiveness sought in the graphic representation of QR codes is likely to be higher than that applies to other figurative signs. This follows from the format standards mandated by their technical function, consequently hampering the degree of liberty as regards the customization options.

Along these lines, the present analysis shall respectively focus on (i) the relevant technical aspects of QR codes, followed by an overview of their visual anatomy and identification of the room for visual configurability; (ii) the legislative and doctrinal abstraction of the subject matter which qualifies a registrable trademark within the meaning of the EU secondary law with the emphasis being placed, among other criteria sought therein, on the distinctiveness prerequisite; (iii) the projection of these trademark standards on the symbols consisting of (or incorporating) QR codes whilst discussing, in a problem-finding manner, the quarrels as to the registrability and the distinct consideration that may (and should) apply to different configurations thereof with other figurative elements; (iv) the analysis of limited case law from the national courts of the Member States and the EUIPO's practice. In putting forward the aftermath of the outlined analysis, the final section of this study postulates that a categorical answer to the posed question, at least from the perspective of distinctiveness.

THE TEST SUBJECT: TECHNICAL AND FIGURATIVE PROPERTIES OF QR CODES

The prelude to seeking answers to the question at hand rests at the comprehension of the default look of QR codes and that of the degree to which their look can tolerate tailoring before the functioning is compromised. Since the technical function, in general, and the encoded data, in particular, designate the visual representation of the symbol, it appears relevant to survey the function and figurative format standards respectively.

1. Technical function

In definitional terms, the QR codes are two-dimensional (2D) matrix codes that belong to the superset of machine-readable codes.⁶ Much like the other members of that superset, they consist of visual representation of information;⁷ in that, the information is conveyed by the arrangement of its dark and light elements, namely modules or cells.⁸ Differently from the one-dimensional (or linear) members of the same superset, such as the well-known UPC barcodes which convey the information in a single (horizontal) dimension, however, QR codes contain information in both the horizontal and vertical direction by means of modules organized in columns and rows.⁹ In addition, the type of data implantable in the module structure is plenteous. That includes numeric and alphanumeric data, Kanji characters as well as binary (hence Byte) data.¹⁰ Not only do these parameters respectively yield data density and variety, but they also collectively factor into an ample versatility such as to enrich the list of areas where QR codes are (and could be) implemented.

Though a comprehensive technical survey exceeds the purposes of this study, in functional terms, it suffices to iterate that QR codes serve as pictographic hyperlinks that can be embedded in the physical environment.¹¹ The function is performed within the systematic of sequential encoding and decoding.¹² The former process translates the target data into a machine-intelligible code represented in a QR symbol consisting of light and dark modules and function patterns, which might, then, be expressed imprint or digitally. The latter process, having decrypted that symbol, directs the user of the scanning device (most popularly smartphones) to the embedded data digitally. They, therefore, link and integrate the physical and digital realms.¹³

Finally, of the advantages and benefits of QR systems,¹⁴ we shall here content ourselves with dropping a pin on the error correction capability, to which we will

⁷ *Ibidem*, p. 2.

¹³ H. Bamoriya, *op. cit.*, p. 21.

⁶ Denso ADC, *QR Code* ® *Essentials*, "Denso ADC" 2011, p. 1.

⁸ G. Zhongpai, G. Zhai, C. Hu, *The Invisible QR Code*, "Proceedings of the 23rd ACM International Conference on Multimedia" 2015, p. 1048.

⁹ Denso ADC, *op. cit.*, pp. 3–4.

¹⁰ ISO/IEC 18004, Information Technology – Automatic Identification and Data Capture Techniques: QR Code Bar Code Symbology Specification, Geneva 2015, p. 5.

¹¹ V.B. Gopale, *QR Code and Useful Applications in Libraries*, "International Journal of Library and Information Studies" 2019, vol. 9(4), p. 83.

¹² S. Tiwari, *An Introduction to QR Code Technology*, "2016 International Conference on Information Technology (ICIT)" 2016, p. 39.

¹⁴ 1) Fast and omnidirectional scanning; 2) high-capacity data storage up to 7089 numerals; 3) small size; 4) Error correction up to 30% of data damaged; 4) handle many types of data; 5) distortion compensation; 6) linkability. See G. Zhongpai, G. Zhai, C. Hu, *op. cit.*, p. 1049.

have a recourse after examining the visual structure. With the benefit of Reed-Solomon error correction technology,¹⁵ the code symbols could be correctly picked up by the scanner even where they are smudged, damaged or otherwise obscured to a certain extent.¹⁶ Depending on the choice of error correction level, damage up to 30% of per symbol area can be tolerated.¹⁷ Whilst the prime function of the error correction feature is axiomatic, it comes with the side benefit of certain visual modifications being able to introduce to the code symbol without killing off the scannability.

2. STRUCTURE

For demonstrative purposes, the anatomy of QR codes shall be examined over the basic example (Figure 1) specifically produced to incorporate the text *Can QR codes be registered as trademarks?*



Figure 1. Elements of a QR code symbol

Source: own elaboration.

The illustrated elements of a QR code symbol on the one hand, the composition thereof on the other hand have to adhere to a string of universal standards.¹⁸ The symbols are typically constructed of square modules set out in a regular square array (matrix) consisting of encoding region and function patterns.¹⁹ Whilst the

¹⁵ See S. Reed, G. Solomon, *Polynomial Codes Over Certain Finite Fields*, "Journal of the Society for Industrial and Applied Mathematics" 1960, vol. 8(2), pp. 300–304.

¹⁶ T.J. Soon, *QR Code*, "Synthesis Journal" 2008, p. 63.

¹⁷ There are four selectable levels of error correction. Low (L), medium (M), quartile (Q), and high (H) levels of correction respectively offer 7%, 15%, 25%, and 30% recovery of code symbols. To that effect, see ISO/IEC 18004, *op. cit.*, p. 5.

¹⁸ Ibidem.

¹⁹ *Ibidem*, p. 7.

encoding region,²⁰ hence the placement of modules in the matrix, is shaped up by the data codewords, the function patterns²¹ must be placed in specific areas of the symbol so to ensure that QR code scanners can accurately identify and orient the code for decoding.²²

Classified by the number of modules per side, QR codes can be generated in 40 different symbol versions. On the lowest end of the spectrum stands version 1 that carries 21 modules on each dimension such as to form a 21x21 matrix. Each and every higher version has four additional modules per dimension and this sequence continues until version 40 which marks the highest end of spectrum with 177 modules per side (177x177).²³ The sample above, for instance, qualifies as version 3 insofar as it carries 29 modules per dimension.

Apart from these general format standards, many more apply to function patterns. Finder patterns, for instance, consist of three superimposed concentric squares that are represented, from inside out, by as 3x3 dark, 5x5 light and 7x7 dark modules with the module width ratio of 1:1:3:1:1.²⁴ The finder pattern is then surrounded by so-called the separator, formed as single-module light area.²⁵ The quiet zone surrounding the diameter of the symbol is, in turn, bound to be 4-module wide and devoid of any markings and needs essentially to be represented in the same tone as the light modules. With the exception of version 1 QR codes, alignment patterns have to be present in the symbol code. The latter likewise consists of three superimposed concentric squares, those being a single dark module at the center, surrounded by a 3x3-module light square on the background of a 5x5-module dark square.²⁶

Whereas the list of format restraints could effortlessly be enriched and the paradigm as to the formatting of encoding region appears further nuanced,²⁷ the above account sufficiently bears some pivotal inferences. As shall be seen, the modules, whereby the actual data is embedded, and the other patterns that comprise the QR symbol do not necessarily mimic visual appearance of the embedded content itself, be that text, visual content or other information. That is to mean, the underlying data is not perceptible to human glance; the symbols are, therefore, visual codes for

 $^{^{\}rm 20}$ That connotes the format and version information as well as the data and error correction codewords.

²¹ These being the quiet zone, finder patterns and separators surrounding them, timing patterns and alignment patterns.

²² S. Tiwari, op. cit., p. 40.

²³ The relation between version numbers and modules per side has been formulated as follows: Modules per side = $21 + [(Version - 1) \times 4]$. To that effect, see L. Karrach, E. Pivarčiová, P. Božek, Identification of QR Code Perspective Distortion Based on Edge Directions and Edge Projections Analysis, "Journal of Imaging" 2020, vol. 6(7), p. 68.

²⁴ ISO/IEC 18004, op. cit., p. 16.

²⁵ *Ibidem*, p. 17.

²⁶ Ibidem.

²⁷ For the complete account of the format standards, see *ibidem*, pp. 7–61.

the machine only. Albeit it is true that each QR symbol is unique in its niceties,²⁸ this uniqueness merely emanates from different placements of the modules in the encoding region and, to the plain eye, this is nothing but abstract configurations of dark and light squares within the definite matrix grid. Consequently, the standards summarized above add up to a fairly clear message as to the exactness of the restrains that apply to the visual representation of a QR code. Therefore, what the QR symbols look like is fairly predestined. However, by a slim chance, it might still be possible to tell two QR symbols apart on the face of their appearance, as far as the standard encoding is concerned, there exists almost no room for making them humanely discernible in a meaningful (and associable) manner.

3. Designer QR codes

So far it is already signified that the functional visual perception of QR symbols (i.e., the machine intelligible uniqueness) and their impression to the naked eye are two different matters. As regards the latter, it appears fairly axiomatic that the code symbols are visually insignificant as they usually look like a cluster of random quadratic patterns. Concordantly, it is heeded that, the lack of visual appeal, in commercial terms, considerably distracts from the overall production quality of the advertisements²⁹ and this is very likely to be detrimental to the brand image.

In counterbalance, recent years have witnessed continuous efforts to merge the functioning with aesthetic elements,³⁰ with a view to circumventing perceived ubiquity and to actively utilizing the QR symbols as a point of attraction as such. However, insofar as graphical customization is bound to transpire in a confined room for creativity,³¹ the main challenge of the process has been to embed visual content in the code symbol or aesthetically alter them without affecting the scanability.³²

With a recourse to the error correction amenity, it is noted that most of the methods employed in the making of custom QR codes essentially utilizes the tol-

²⁸ N. Kshetri, *Blockchain and Sustainable Supply Chain Management in Developing Countries*, "International Journal of Information Management" 2021, vol. 60, p. 8. Crucial to note that the same data input with the same error correction is liable to emit an identical QR symbol.

²⁹ G. Zhongpai, G. Zhai, C. Hu, op. cit., p. 1047.

³⁰ S. Lin, M. Hu, C. Lee, T. Lee, *Efficient QR Code Beautification with High Quality Visual Content*, "IEEE Transactions on Multimedia" 2015, vol. 17(9) p. 1515; K. Berisso, *op. cit.*, p. 1.

³¹ To the same effect, K. Fujita, M. Kuribayashi, M. Morii (*Expansion of Image Displayable Area in Design QR Code and Its Applications*, "Forum Informatic Technology Papers" 2011, vol. 10(4), p. 517) iterate that the possible area in which the designed image is embedded is restricted due to the standardized structure of QR code.

³² G.J. Garateguy, G.R. Arce, D.L. Lau, O.P. Villarreal, *QR Images: Optimized Image Embedding in QR Codes*, "IEEE Transactions on Image Processing" 2014, vol. 23(7), p. 2842; S. Lin, M. Hu, C. Lee, T. Lee, *op. cit.*, p. 1515.

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erable error ratio.³³ This enables the designers to alter the structure and change the appearance of the code symbol by deliberately introducing some errors.³⁴ The latter commonly entails (i) change of the color configuration of the symbol; (ii) insertion of graphics inside the symbol; (iii) geometrical distortion of the cell structure and/or manipulation of their placement.³⁵ Crucial to note, however, the room for custom-ization is directly proportional (and limited) to the error correction capacity³⁶ and inversely proportional to the likelihood of functionality.³⁷ Moreover, this room is further narrowed down by other considerations; for instance, superimposing images over finder or alignment patterns are found to severely decrease the probability of accurate decoding.³⁸ As for the color configuration, two reflective states in the symbol, that are lights and darks, must be palpably distinct within the symbol.³⁹ Conformingly, research found that the scanability failure largely boils down to two general causes: fixed pattern damage and insufficient symbol contrast.⁴⁰

The foregoing, however, does not necessarily mean that a good creative job cannot be done within this rather claustrophobic room. The following examples might, to some extent, approve this proposition.

THE UNIVERSAL CENTRALITY OF DISTINCTIVENESS

Without prejudice to the whole variety of functions ascribed to trademarks in modern society, the primary function is to indicate/identify the commercial origin of corporeal goods and services.⁴¹ Above the jurisdictions, the referred function stands to be a universal common thread.⁴² Moreover, this observation finds relevance

³⁷ It is noted, to this end, that the exploitation of the error correction capability for design degrades the readability. See K. Fujita, M. Kuribayashi, M. Morii, *op. cit.*, p. 517.

³⁸ G.J. Garateguy, G.R. Arce, D.L. Lau, O.P. Villarreal, op. cit., p. 2842.

⁴¹ I. Calboli, *Trademark Exhaustion in the European Union: Community-Wide or International* – *The Saga Continues*, "Marquette Intellectual Property Law Review" 2002, vol. 6(1), p. 48.

⁴² As early as 1916, jurisdictional depiction of this function was disclosed in the United States. Accordingly, "the primary and proper function of a trademark is to identify the origin or ownership of the article to which it is affixed" (see judgment of the United States Supreme Court of 6 March 1916, *Hanover Star Milling v. Metcalf*, 240 US 403, 415). Similarly, in the EU law this function has been conceptualized as a "guarantee of origin" since the CJEU's judgment of 23 May 1978 (C-102/77,

³³ G. Zhongpai, G. Zhai, C. Hu, op. cit., p. 1048.

³⁴ S. Lin, M. Hu, C. Lee, T. Lee, *op. cit.*, p. 1515; K. Berisso, *op. cit.*, p. 1.

³⁵ Ibidem.

³⁶ To this effect, G.J. Garateguy, G.R. Arce, D.L. Lau, O.P. Villarreal (*op. cit.*, p. 2842) highlight that, in order to retain high rate of decodability, the ratio between image and code area should be approximately proportional to the correction capacity of the code.

³⁹ ISO/IEC 18004-2000, op. cit., p. 92.

⁴⁰ K. Berisso op. cit., p. 4.

in respect both to the period of national systems⁴³ and to the multilateral regulatory era opened up by the 1883 Paris Convention.⁴⁴ With that, whilst the foremost quality sought in a prospective trademark is the capacity to distinguish the relevant commercial origin, much in line with the archaic definition thereof, the substance of this criterion under each jurisdiction has been (and still is) bound to vary.⁴⁵

This pattern was hardly any different within the European legal landscape. Whilst the gravity of the distinctiveness prerequisite did not necessarily fluctuate, both the contextual niceties of that criterion, its application and, correspondingly, the general delineation of the protectable subject matter tended to exhibit certain diversity from one jurisdiction to another.⁴⁶ Methodological nuances that readily existed between national laws were likewise liable to add up to further disharmony in terms of protectable subject matter.⁴⁷

Leap forward to where we are now, both the international trademark legislation and the EU law seem to fairly, but flexibly, wrap around the protectable subject matter. Unlike the Paris Convention which lacked a positive definition in this context,⁴⁸ the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) – the most comprehensive international IP arrangement to this day⁴⁹ – adopts a broad

Hoffmann-La Roche & Co. AG v Centrafarm Vertriebsgesellschaft Pharmazeutischer Erzeugnisse mbH, ECLI:EU:C:1978:108, para. 7).

⁴³ S. Ricketson, *The Paris Convention for the Protection of Industrial Property: A Commentary*, Oxford 2015, p. 44; S.P. Ladas, *Patents, Trademarks, and Related Rights: National and International Protection*, Cambridge 1976, p. 31.

⁴⁴ Whilst the signs that could be a trademark were not specifically addressed by the Paris Convention for the Protection of Industrial Property (March 1883), the distinctiveness criterion was placed in the core of trademark system by way of negative iteration. According to Article *6quinquies* (B) (ii) of the Convention, trademarks cannot be denied registration or be invalidated except "when they are devoid of any distinctive character, or consist exclusively of signs or indications which may serve, in trade, to designate the kind, quality, quantity, intended purpose, value, place of origin, of the goods, or the time of production, or have become customary in the current language or in the bona fide and established practices of the trade of the country where protection is claimed".

⁴⁵ S. Ricketson, *op. cit.*, p. 44.

⁴⁶ To the same effect, see *The Oxford Handbook of Intellectual Property Law*, eds. R.C. Dreyfuss, J. Pila, Oxford 2018, p. 195.

⁴⁷ It is noted that some legal systems adhere to exclusionary listing such as to pinpoint "what cannot be registered as trademarks" whereas others, either by way of exemplifying or by putting forward positive definitions, identify "what may constitute a trademark". See S. Ricketson, *op. cit.*, p. 44. To the same effect and for a survey of different national approaches both at European and international level, see S.P. Ladas, *op. cit.*, pp. 31–33.

⁴⁸ See, however, the negative (or exemptive) delineation of protectible subject matter set forth in the Paris Convention – footnote 44.

⁴⁹ To the same effect, see C.A.P. Braga, *Trade-Related Intellectual Property Issues: The Uruguay Round and the Developing Countries*, Chicago 1996, pp. 341; K.E. Maskus, *Intellectual Property Rights in the World Trade Organization: Progress and Prospects. Launching New Global Trade Talks: An Action Agenda*, Washington 1998, p. 133; S. Athreye, L. Piscitello, K.C. Shadlen, *Twenty-Five*

positive definition. Accordingly, "any sign, or any combination of signs, capable of distinguishing the goods or services of one undertaking from those of other undertakings, shall be capable of constituting a trademark". The quoted provision, having uttered *in particular*, continues with a non-exhaustive list of signs that are deemed eligible as trademarks.⁵⁰ Important to note, however, predating the TRIPS Agreement, EU law has long settled with the outlines of protectible subject matter for the purposes of trademark law.

Whereas the aforementioned facade of distinctiveness pinpoints the *de minimis* in a sign's abstract capacity of becoming a trademark, its actual distinctive character within the relevant commercial context is identified through a different (and more elaborative) test. The account of the latter shall be eliminatively taken within the scope of "absolute grounds for refusal". Albeit international legislative instruments do not verbatim refer to this institution, its contents, i.e. particular grounds refusal, largely emanate from Article 6*quinquies* of the Paris Convention.⁵¹ Systematically incorporating thereof, most national trademark legislations stipulate, i.a., the refusal of marks which are devoid of distinctive character in respect to goods and services for which the registration is sought. Consequently, it is concluded that what is roughly addressed as "distinctive capacity and distinctive character.

THE TEST: EUROPEAN LEGAL LANDSCAPE

Under the EU law, the depiction of eligible subject matter harks back to the earliest initiatives for harmonizing the national trademark laws. Having been adopted in late 1988, the First Trademark Directive (89/104/EEC),⁵² among other substantive provisions, introduced a positive definition of what constitutes a trademark. Later on, the Community Trademark Regulation (40/94/EC),⁵³ by which medium trademarks with unitary effect across the EU (back then the European Community) were created, verbatim incorporated the same definition.⁵⁴ According to what we

⁵² First Council Directive 89/104/EEC of 21 December 1988 to approximate the laws of the Member States relating to trade marks (OJ L 40/1, 11.2.1989).

Years since TRIPS: Patent Policy and International Business, "Journal of International Business Policy" 2020, vol. 3, p. 318.

⁵⁰ Article 15 (1) of the Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C (1994).

⁵¹ See footnote 44.

 $^{^{53}}$ Council Regulation (EC) No. 40/94 of 20 December 1993 on the Community trade mark (OJ L 11/1, 14.1.1994).

⁵⁴ It is worthwhile to note that the envisaged action plan of the European Commission in trademark law was of two layers. While Directive 89/104/EC undertook to approximate the national trademark laws of the Member States, Regulation 40/94/EC created trademark rights that are with

may call "the twin provisions" trademarks consist in "any sign capable of being represented graphically, particularly words, including personal names, designs, letters, numerals, the shape of goods or of their packaging, provided that such signs are capable of distinguishing the goods or services of one undertaking from those of other undertakings".⁵⁵

Of the amendments both the Directive and the Regulation went under throughout the time, the most important to the present context is the abandonment of "graphical representation" requirement.⁵⁶ Preserving the historical parallelism, Directive 2015/2436 (EUTMD)⁵⁷ and Regulation 2015/2424 (now Regulation 2017/1001, EUTMR)⁵⁸ have replaced the latter requirement with that of "being represented on the register in a manner which enables the competent authorities and the public to determine the clear and precise subject matter of the protection",⁵⁹ thus normatively paving the path to non-traditional marks.⁶⁰ As the Union's trademark law now stands, both national and EU trademarks may consist of any signs that are capable of: "(a) distinguishing the goods or services of one undertaking from those of other undertakings, and (b) being represented on the register in a manner which enables the competent authorities and the public to determine the clear and precise subject matter of the protection ".⁶¹

At the outset, therefore, three qualities are positively sought: being a sign; the capacity of being represented on the register as prescribed; and, of course, the distinctive capacity. Clear by all means is that these criteria are sought cumulatively.

On the second layer, Article 4 EUTMD and Article 7 EUTMR enunciates the situations where marks, irrespective of their conformity with the description of Article 3 (a) EUTMD and Article 4 (a) EUTMR, ought to be refused due to several public considerations centering around the interests of customers and other

unitary and equal effect all across the Union (back then the Community) and that simultaneously exists with the national trademark systems. For the 1976 memorandum whereby this two-tier approach was conceptualized, see Memorandum on the creation of an EEC trade mark adopted by the Commission on 6 July 1976, "Bulletin of the European Communities", Supplement 8/76.

⁵⁵ Article 2 of Directive 89/104/EC and Article 4 of Regulation 40/94/EC.

⁵⁶ For a detailed account of the trademark reform launched with 2009 review of the Commission and resulted in Directive 2015/2436 and Regulation 2015/2424 (followed by Regulation 2017/1001 renaming "the Community trademark" as "the EU Trademark"), see A. Kur, *The EU Trademark Reform Package – (Too) Bold a Step Ahead or Back to Status Quo*, "Marquette Intellectual Property Law Review" 2015, vol. 19.

⁵⁷ Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks (OJ L 336/1, 23.12.2015).

⁵⁸ Regulation (EU) 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union trade mark (OJ L 154/1, 16.6.2017).

⁵⁹ Article 3 (b) EUTMD and Article 4 (b) EUTMR.

⁶⁰ It needs to be noted that the jurisprudential pathway to less traditional marks was, however, not completely shut before the amendment.

⁶¹ Article 3 (a) EUTMD and Article 4 (a) EUTMR.

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competitors in the market. While these cluster of situations are subsumed under the title of absolute grounds for refusal, existence of one of these grounds shall suffice to exclude the sign from registration. In that context, Article 4 (1) (b) EUTMD and Article 7 (1) (b) EUTMR, bar the registration of marks that are devoid of any distinctive character. Though the latter concept appears fairly elusive at the first glance, its context is jurisprudentially elaborated.

These two layers are abstracted below such as to lay down the distinctiveness-based registrability test the EU law puts forward.

1. Distinctive capacity

Whereas the centrality of distinctiveness both in European law and any other jurisdiction is irrebuttable, as a starting point, the context of Article 3 (a) EUTMD (and that of Article 4 (a) EUTMR) quoted above has to be well understood. Having been organized under the title of "signs of which a trade mark may consist", the provision inherently relates to an acontextual identification of the subject matter of protection. That is to say, it is expected from the sign in question, in itself and on an abstract level, to exhibit those three qualities enunciated in the referred provision, before any account being taken of the type of goods or services to which the sign is planned to be affixed.⁶²

Along the same lines, the assessment of the capacity of distinguishing the commercial origin within the meaning of that provisions concerns whether or not the sign at the stake is capable of transmitting a message as to the commercial origin of any goods or services one may envisage. Correspondingly, this assessment is perceived to be the first hurdle a prospective trademark has to pass through.⁶³ The doctrinal dichotomy on the types of distinctiveness aptly accentuates the nuance. Abstract distinctiveness is judged by the ability of a particular sign to distinguish (any) goods and services, on an abstract and general level, without regard being paid to the type of individual goods or services the mark is intended to cover.⁶⁴ Concrete distinctiveness, in turn, connotes the ability of a sign to distinguish the commercial origin of particular goods or services in respect to which the trademark registration is sought.⁶⁵

Article 3 (a) EUTMD and Article 4 (a) EUTMR clearly seek out abstract distinctiveness. Concrete distinctiveness, on the other hand, sought immediately after this

⁶² To that effect, see judgment of the CJEU of 12 February 2004, C-363/99, *Koninklijke KPN Nederland NV v Benelux-Merkenbureau*, ECLI:EU:C:2004:86, para. 80.

⁶³ C. Seville, *EU Intellectual Property Law and Policy*, Cheltenham 2016, p. 279; D.I. Bainbridge, *Intellectual Property*, Essex 2012, p. 703.

⁶⁴ N.S. Sreenivasulu, *Law Relating to Intellectual Property*, Kolkata 2013, p. 56; C. Suluk, R. Karasu, T. Nal, *Fikri Mülkiyet Hukuku*, Ankara 2021, p. 152.

⁶⁵ C. Suluk, R. Karasu, T. Nal, op. cit., p. 153; N.S. Sreenivasulu, op. cit., p. 56.

"first hurdle" and that is within the context of absolute grounds for refusal set out by Article 4 (1) (b) EUTMD and Article 7 (1) (b) EUTMR whereunder trademarks which are "devoid of any distinctive character" shall be excluded. Admittedly, there is an intricate relationship between the assessment of "capability of distinguishing" and "devoid of distinctive character" (on which note some commentators pointed at this as a source of confusion⁶⁶) this relationship, nevertheless, is sequential and progressive. In that, the former is abstract and independent of the type of goods or services and refers to a general "capability", whereas the latter, conditional on the presence of the former, puts in perspective the corporeal goods and services, hence relative to the context.⁶⁷ Logically therefore, should a sign be devoid of abstract distinctiveness, its capacity of concrete distinctiveness is *a fortiori* eliminated.⁶⁸ By the same token, when a sign is not abstractly distinctive, acquisition of distinctive character is likewise *a priori* eliminated.⁶⁹

Lastly, the importance of the wording "capable of" needs to be highlighted. It does not necessarily refer to *de facto* fulfilment of the distinguishing function; it rather refers to objective feasibility of the sign to fulfill that at the outset. Moreover, the message as to the commercial origin is not directed to disclosing the full pedigree of the relevant undertaking, nor do the members of the public, through the interpretation of that sign, have to be able to draw a profile of that undertaking. The function is sufficiently performed when the sign is capable of telling apart the goods or services in such a way to indicate that those originate from a particular undertaking and not from the others.⁷⁰ What is sought under the Article 3 (a) EUTMD (and Article 4 (a) EUTMR), and conceptualized as capability of distinguishing, is therefore an abstract associability; substantive (or actual) assessment of distinctiveness, on the face of the relevant goods or services, however falls in the proximity of absolute grounds for refusal.⁷¹

⁶⁶ See C. Seville, op. cit., p. 279.

⁶⁷ Albeit it is true that the, "signs that cannot constitute a mark" is listed among the absolute grounds for refusal (Article 4 (1) (a) EUTMD), thus with a reference to the preceding provision it targets the signs devoid of abstract distinctiveness, it has to be acknowledged that this particular ground for refusal is a general catch clause and it equally targets the (lack of) quality of being a sign and capability of proper representation. Therefore, Article 4 (1) (a) EUTMD is neither a mere repetition of the abstract distinctiveness requisite (as per Article 3 (a) EUTMD), nor is it the same thing as the concrete distinctiveness (as per Article 4 (1) (b) EUTMD).

⁶⁸ To that effect, see judgment of the CJEU of 18 June 2002, C-299/99, *Koninklijke Philips Electronics NV v Remington Consumer Products Ltd.*, ECLI:EU:C:2002:377, para. 39.

⁶⁹ For the same view, see C. Suluk, R. Karasu, T. Nal, *op. cit.*, p. 165; Z. Popov, *Appraising the Distinctiveness of Different Categories of Trade Marks in EC Law*, Lund 2009, p. 10.

⁷⁰ D.I. Bainbridge, *op. cit.*, p. 703.

⁷¹ Z. Popov, *op. cit.*, p. 11.

2. Distinctive character

The first hurdle captured above serves for the determination of whether there exists a sign for the purposes of trademark in the first place. The test set out in Article 3 EUTMD (and Article 4 EUTMR), therefore, does not enfold an *ex-ante* feasibility as a trademark. Having passed that test, a sign then shall be subject to absolute grounds for refusal set out in Article 4 EUTMD and Article 7 EUTMR whereunder the concrete distinctiveness of the prospective mark as well as various public policy considerations are examined.⁷² With the exception of acquired distinctiveness, presence of one of these grounds shall exclude the mark as registrable.⁷³ Of these, in consideration of their marked relevance to the QR symbols, we shall look into the assessment criteria of signs devoid of distinctive character.

Abstract distinctiveness prerequisite under Article 4 (a) EUTMR is somewhat conjectural. Whether a sign, in actual terms, is capable identifying the commercial origin of corporeal goods or services, thus fulfilling the foremost function of a trademark, is assessed under Article 7 (1) (b) which expressly excludes the signs devoid of distinctive character.⁷⁴

The settled practice builds such an assessment upon two prominent factors. Firstly, though not reflected in the wording of the article, it appears unequivocal on the face of the Court's jurisprudence that distinctiveness must always be examined in relation to the goods or services in respect of which registration is sought.⁷⁵ The second factor revolves around the type of audience who is expected to perceive the distinctive impression conveyed by the sign in question. In that, the (second) reference when assessing the distinctiveness must be made to the perception of "the relevant public" and that, according to the CJEU's definition, consists of average consumers of the goods or services in question, who are reasonably well informed and reasonably observant and circumspect.⁷⁶ The two criteria appear substantively

⁷² Judgment of the CJEU of 29 April 2004, joined cases C-456/01 P and C-457/01 P, *Henkel KGaA v European Union Intellectual Property Office*, ECLI:EU:C:2004:258, para. 46.

⁷³ Under Article 4 (4) EUTMD, signs devoid of distinctive character, descriptive signs and those which became customary in the practices of trade might acquire distinctive character by use. Should distinctiveness be acquired, the sign shall not be refused registration, nor be declared invalid for these grounds of refusal.

⁷⁴ Similarly, in relation to the counterpart of distinctiveness provisions in the EUTMR, the CJEU held: the fact that a sign is, in general, capable of constituting a trade mark within the meaning of Article 4 of Regulation 40/94 does not mean that the sign necessarily has distinctive character for the purposes of Article 7 (1) (b) of Regulation in relation to a specific product or service. See judgment of the CJEU of 29 April 2004, joined cases C-456/01 P and C-457/01 P, para. 32.

⁷⁵ Judgment of the CJEU of 12 February 2004, C-218/01, *Henkel KGaA*, ECLI:EU:C:2004:88, para. 31.

⁷⁶ Judgment of the CJEU of 8 April 2003, joined cases C-53/01 to 55/01, *Linde AG, Winward Industries Inc. and Rado Uhren AG*, ECLI:EU:C:2003:206, para. 41.

interrelated insofar as the average customer profile is determined with a reference to the whole customer portfolio that might be in the market for those particular goods or services; customer group for each type of goods or services as well as the average profile within that group will conceivably vary. Furthermore, on several occasions the Court indicated that the relevant public is not strictly limited to the end users; particularly when the products or services in question cater to specialists, the relevant public encompasses those who are experts in the sector or the parties in the trade thereof.⁷⁷ The sign must, then, be perceived by that relevant public as an indication to the commercial origin of the corporeal goods or services.

Instructions are also fairly clear on where to look at when assessing the distinctiveness: it is sought in the "overall impression" the sign creates. This is, for the most part, premised upon the Court's settled (and credible) presumption that the average consumer normally perceives a mark as a whole without much analytical comprehension.⁷⁸ This is particularly liberating when it comes to multi-element signs (or compound marks) since it is distinctiveness-by-result that is taken into consideration rather than a distributive one. As a result, and as was articulated by the Court, merely because each one of those elements, considered separately, is devoid of distinctive character does not mean that their combination cannot add up to a distinctive character.⁷⁹ Nonetheless, the Court highlights that the competent authorities, as a starting point, are not barred from examining the distinctiveness of individual components comprising the whole sign and that such an examination might even be useful.⁸⁰

Finally, it is worth noting that, distinctiveness does not call for a distinctly creative input being made into the sign. Consistently held by the European General Court and cited by the CJEU is that a "minimum degree of distinctive character" is sufficient to rule out the refusal on the grounds of being devoid of distinctive character,⁸¹ provided that it enables the targeted public to distinguish the commercial origin. With that, however, the examination of whether such a degree of distinctive tiveness (likewise those pertaining to other absolute grounds for refusal) is present must be "thorough and full" in order to avoid improper registration.⁸²

⁷⁷ Judgment of the CJEU of 15 September 2005, C-37/03 P, *BioID AG, en liquidation v European Union Intellectual Property Office*, ECLI:EU:C:2005:547, para. 68; judgment of the CJEU of 9 March 2006, C-421/04, *Matratzen Concord AG v Hukla Germany SA*, ECLI:EU:C:2006:164, para. 24.

⁷⁸ Judgment of the CJEU of 11 November 1997, C-251/95, *SABEL v Puma, Rudolf Dassler Sport,* ECLI:EU:C:1997:528, para. 23.

⁷⁹ Judgment of the CJEU of 16 September 2004, C-329/02 P, *SAT.1 SatellitenFernsehen GmbH* v European Union Intellectual Property Office, ECLI:EU:C:2004:532, para. 28.

⁸⁰ Judgment of the CJEU of 30 June 2005, C-286/04 P, *Eurocermex v OHIM*, ECLI:EU:C:2005:422, para. 23.

⁸¹ Judgment of the General Court (Second Chamber) of 19 September 2001, T-337/99, *Henkel KGaA v European Union Intellectual Property Office*, ECLI:EU:T:2001:221, para. 44.

⁸² Judgment of the CJEU of 12 February 2004, C-363/99, para. 123.

THE TEST APPLIED TO QR SYMBOLS

Having mapped out the distinctiveness-based steps of trademark-ability test in the preceding section is likely to provide certain ease in administering that test in respect of QR symbols. This, however, scarcely means that a categorical answer could be obtained. In this section, we shall set about applying this test to QR symbols by following the same order employed above and by taking on a dual account, roughly conceptualized as standard and customized ones, albeit with the express acknowledgement of the ample diversity within the latter category.

1. The first hurdle – distinctive capacity

Conceivably, the initial matter here to recall is the addressee of the distinctive impression. Within the paradigm of trademark law, the message pertaining to the commercial origin is addressed to the human beings who, within that paradigm, often assume the role of "customer". Quite naturally, therefore, the level of distinctiveness has to align with what can be perceived by an average human, who may be at the market at some point.

On the other hand, each QR code is unique to the data it carries and there is a sharp visual precision conveyed through and, more importantly, limited to the arrangement of dark and light modules within the matrix symbol. The addressee that is expected to take notice of the visual nuances between different code symbols within the QR system is, however, the scanning equipment and that is clearly not the same addressee as the trademark laws (and the distinctive capacity therein) center around. It follows that, it is the capacity of the addressee that serves as reference point in pinpointing the type and level of distinctiveness; secondly, "any distinctiveness at all" does not come to be equivalent of humanly appreciable distinctiveness.

Comprehension of a standard QR code (Figure 1) by human perception appears to be plainly visual and, in all likelihood, this would be nothing more than a cluster of dark and light rectangular shapes arranged within a square. Moreover, in their basic form, this perception is bound to so stay since different arrangements of the modules could neither be grasped nor be abstractly memorized. What is thus perceived could, then, hardly be associated with or be taken to convey any message even indirectly, including those as to the manufacturer or provider of any given product or service. Whilst it is true that the increasing daily encounters of customers with QR codes have already established the awareness of what a QR code is and what it serves for, this cognition is far from entailing an objective capacity to indicate to a commercial source.

A similar finding was proposed by the German Federal Patent Court in a 2015 decision. Accordingly, an average consumer recognizes QR codes as an access key to information about corporeal goods, therefore, they are habitually not concerned

with the exact appearance of the figurative elements borne by the codes themselves which are, anyway, largely similar in structure and only differ from one another in the number and arrangement of the modules. The public, therefore, would only recognize these symbols as technical devices in the image of such QR codes, but will attribute no relevance to them as indication of origin.⁸³ Interesting to note that, whereas the above-referred line of reasoning hinted at the lack of abstract distinctiveness, the German court carried out its analysis within the proximity of Section 8 (2) (1) of the German Trademark Act on the absolute ground for refusal due to the lack of distinctive character. This could possibly be explained by the appellant's claim that the QR symbol for which the registration was sought incorporated the sequential letters of "Kö" formed up of dark modules within the matrix grid, which eventually brought under dispute whether the symbol at issue was purely standard and led the Court to consider a possible existence of abstract distinctiveness. In fact, the Court readily alluded to the fact that the sequence of those letters was not a separate element added to the code symbol and were sufficiently trivial to be considered by the public as a "coding-related coincidence".⁸⁴ Moreover, the German Court's refrainment, within the framework of its analysis, from paying regard to relevant goods may be taken to imply that the actual reason for concluding the sign's inadmissibility as a trademark was due to the lack of abstract distinctiveness.

Albeit the bar of distinctive capacity for the purposes of Article 3 (a) EUTMD (and Article 4 (a) EUTMR) is fairly low, the present author takes the view that basic QR codes *per se*, i.e. without being combined with other verbal, figurative elements and the like, shall still be deemed to fail this standard due to the lack of abstract distinctiveness. Should that be the case, their inadmissibility as trademark ought to be concluded on the grounds of lack of distinctive capacity within the meaning of Article 3 (a) EUTMD and/or Article 4 (a) EUTMR instead of being devoid of distinctive character *as per* Article 4 (1) (b) EUTMD and/or Article 7 (1) (b) EUTMR. Crucial to emphasize that, this conclusion is relevant only where a standard QR symbol is plainly sought to be registered. The low threshold of abstract distinctiveness shall, in our view, provides for any additional element resulting in customization to sufficiently qualify the sign in question for the second hurdle wherein, i.a., distinctive character is tested contextually.

2. Second hurdle – distinctive character

Abstract distinctiveness pinpoints if the sign in question is capable of distinguishing the commercial origin of any goods or services at all. The latter being conceptualized as distinctive capacity, the modest threshold for that could possibly

⁸³ Judgment of the Bundespatentgericht of 14 October 2015, 28 W (pat) 535/13, p. 8.

⁸⁴ Ibidem, p. 9.

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be attained by introducing an (even any) extra element to the code symbol such as to divert its appearance from a rudimentary one. Once the abstract distinctive capacity is found, a contextual analysis of distinctive character is carried out under the absolute grounds for refusal set out in Article 4 (1) (b) EUTMD and Article 7 (1) (b) EUTMR.

Well-settled judicial practice stipulates the distinctive character to be assessed by reference, first, to the goods or services in respect of which registration is sought and, second, to the perception of the relevant public.⁸⁵ These two standards are universal among all fashions of signs insofar as Article 4 (1) (b) EUTMD and Article 7 (1) (b) EUTMR assert no distinction between different categories of trademark for the purposes of assessing their distinctiveness.⁸⁶ The same is naturally true of figurative signs, thereupon, QR symbols should normally be weighed against these two standards just like other figurative signs. Nevertheless, this initial (and standard) paradigm has to be considered in conjunction with a unique-to-kind setback with which the QR symbols are likely to undergo the distinctive character test. That setback emanates from their ubiquity to the general public, resulting in a near-uniform impression in the perception thereof.

In that regard, a recourse to the observation of the German Federal Court visà-vis QR codes being perceived by general public as an access key to information falls relevant. Accordingly, the registration of QR symbol marks appear nuanced from that of the marks which are illegible for general public which could have distinctive character. That is because, in the case of the latter category, the general public cannot usually establish any connection to the goods or services, thus, cannot attribute any other content to that sign that undermines its possibility of being perceived as a trademark. Conversely, the public immediately recognizes the QR codes' access key function and therefore attaches a specific technical meaning to it, which, then, prejudices their (potential) perception as an indication of origin.⁸⁷ This acknowledgement, albeit to a narrower extent, has also been endorsed by the EUIPO's practice.

To extract distinctiveness out of QR symbols would, then, presumably require, to some extent, counter-balancing this default perception as an access key. This, in turn, calls for some alterations being introduced to the code symbol visually, since the perception of the sign is an innately bound variable to the impression being conveyed by that sign, hence, to the sign itself. Consequently, attainment of distinctive character will conceivably require a departure from the standard code symbol. The rudimentary formula thus being reasoned, the elements of distinctive character should concomitantly be taken into consideration.

⁸⁵ Judgment of the CJEU of 8 April 2003, joined cases C-53/01 to 55/01, para. 41.

⁸⁶ *Ibidem*, para. 42.

⁸⁷ Judgment of the Bundespatentgericht of 14 October 2015, 28 W (pat) 535/13, p. 8.

On face of the sign itself, proximity in which the distinctive character to be sought is not perplexing: it is to be judged by the overall impression. Thereupon, it may be effortlessly concluded that, in order for a sign incorporating a QR symbol to be registrable, the alterations to be introduced to a basic code symbol has to be such as to alter the overall impression. The remainder of the test is, however, scarcely objective. The sufficient degree of alteration and/or customization shall depend, first, on the type of goods or services in respect to which the registration is sought and, second, on the perception of relevant public, a cluster which inevitably differs significantly from one type of good or service to another. Moreover, this diversity is fairly rich in view of the fact that goods and services in respect to which QR codes may be implemented are not categorically confined.

Identifying the average customer, the prescription of "reasonably well informed and reasonably observant and circumspect" is liable to mark vastly different territories depending on the type of goods and services whilst, admittedly, it is hard to envisage any particular type in respect to which QR codes are not (and cannot be) made use of. Frankly, in certain classes of goods and services, the target audience as well as the specialists operating in the relevant sectors could reasonably be deemed to have a greater capacity of identifying the customized features, then, associate the sign with a particular undertaking. Correspondingly, it could be speculated that, in such cases, the required degree of customization transpires at a relatively low level. This, nevertheless, should not be taken to mean that any customization, that is any divergence from the visual randomness resulting from coding process, qualifies for the distinctive character. The impression of, so to say, otherness is serviceable only to the extent that it adds up to associability and a perception as a trademark. Despite the relatively sophisticated knowledge the customers and professionals in technologic sectors are presumably equipped with, therefore, this requisite may not be fulfilled, for instance, through minor re-arrangement of modules in matrix structure.

The landscape is likely be more demanding when it comes to the goods and services that address wider and more general audience. Presumably, the more the goods and services in question embrace the general public, the more likely it is for the average consumer within that group to perceive a QR symbol as a mere access key to information. Thereupon, it may be reasoned that the necessary degree of customization, in such cases, appears to be higher in order for the overall impression of the code symbol to deviate from that of a standard one in the perception of that public.

An *a priori* survey of the opposite ends of the good and services (and correspondingly that of the relevant public) spectrum hardly makes it possible to draw an objective and systematic threshold of customization. With that, the EUIPO practice sheds some light on the question.



Figure 2. QR codes: a) emergency; b) Powa Technologies Limited; c) Talking Label; d) CHECK get organized for better food; e) AOP appellation d'origine protégée; f) my coffee.store

Source: EUTM 012609616, registration sought in classes 9, 16, 41; EUTM 014396766, registration sought in classes 9, 35, 36, 38, 42; EUTM 011298155, registration sought in classes 29, 30, 32, 33, 35, 41; EUTM 016530461, registration sought in classes 9, 35, 38, 42; EUTM 010266203, registration sought in classes 9, 32, 33, 34; EUTM 018061024, registration sought in classes 35 and 43.

The signs in Figure 2 were filed with the EUIPO as figurative marks. Despite the ornamentation with other verbal or figurative elements, the applications were commonly refused on the grounds of lack of distinctive character under Article 7 (1) (b) EUTMR. Observations of the Board of Appeals in CHECK get organized for better food (Figure 2d) offers worthwhile remarks on the general appraisal of OR symbols as trademarks as well as their combination with other elements. Initially, however, these observations were preceded by a societal one whereby the Board having indicated at the increased daily encounters with QR codes concluded that consumers have no reason to concern themselves with the precise appearance of the images themselves, which, irrespective of their content, are largely similar in terms of their make-up and differ only as a result of the number and arrangement of the modules.⁸⁸ While this observation alone signifies the exclusion of standard QR symbols as trademarks, the Board went on to establish, in a negatory manner, a dual appraisal similar to that we have proposed above. Accordingly, the QR symbol in the trademark applied for was merely a standard representation without any additional individualizing feature. Hence it was considered as devoid of distinctive character in respect of all the goods and services claimed.⁸⁹ Moreover, the verbal elements appendant to the code symbol in question were not to alter this conclusion for they were, in themselves, devoid of distinctive character and not clearly legible.⁹⁰ It is therefore, a contrario deduced that the code symbols with individualizing features would be eligible as trademarks. The assessment in AOP (Figure 2e) was of similar nature: the test was first applied to each element comprising the mark, then to the (claimed) combination thereof. The examiner alluded to the impression of mere access tool conveyed by the QR symbol

⁸⁸ Decision of the EUIPO Second Board of Appeal of 16 March 2018, R 2358/2017-2, *Max Maier*, para. 14.

⁸⁹ Ibidem, para. 16.

⁹⁰ *Ibidem*, paras 17–19. The imperative that "for the verbal elements appendant to a compound mark to be taken into consideration, it has to be clearly legible" flows from the GC's ruling in Case T-137/12 (*FunFactory GmbH*), para. 37.

and the indistinctiveness of the expression "AOP APPELLATION D'ORIGINE PROTEGEE" which was the French equivalent of "protected designation of origin" and had no palpable message as to the commercial origin.⁹¹ In the final instance, it was concluded that neither each one of these components nor their combination as in the applied mark had a distinctive character. Likewise, in my.coffee.store (Figure 2f) the conclusion was drawn that the verbal element was descriptive, hence, *a fortiori* devoid of distinctive character in respect to coffee-based drinks in class 35 and entirely devoid of distinctive character (even if not descriptive) in respect of services in class 45 due to the significant sectoral relevance.⁹² However admitting the presence of certain degree of stylization conferred to the mark by the figurative elements (including the QR symbol), the examiner maintained that the nature of these elements was so negligible and far from ascribing any distinctive character in overall impression.⁹³ Therefore, the QR symbol incorporated in the mark was not sufficiently unique of an identifier to extinguish the absolute grounds for refusal set out in Article 7 (1) (b) EUTMR.

In the light of the foregoing, it may be concluded that, albeit there exist examples where two (or more) indistinctive elements to combine into a sign with distinctive character,⁹⁴ in the context of QR symbols, two or more indistinctive elements scarcely yield an overall distinctive impression sufficient to overcome Article 7 (1) (b) EUTMR. Seemingly, a standard QR symbol has not much to contribute into the combined and overall distinctive impression, therefore the gravity in distinctiveness test shall be borne by the other individualizing elements.

On the other hand, the following examples, having been found sufficiently distinctive by the EUIPO, might be instructive in projecting the distinctiveness threshold. Figure 3. QR codes: a) Wiki Presi; b) Tagit; c) GSE QR BTP; d) Top Modular; e) Post by Me; f) Proconsult



Source: EUTM 009944539, registration sought in classes 35, 38, 42; EUTM 011941317, registration sought in class 9; EUTM 018494336, registration sought in class 42; EUTM 010688505, registration sought in classes 6, 19, 37; EUTM 017926130, registration sought in class 39; EUTM 013953344, registration sought in classes 35, 42, 45.

⁹¹ OHIM, Refusal of application for a Community trade mark on Application No. 010266203, para. 5.

⁹² OHIM, Refusal of application for a Community trade mark on Application No. 018061024, para. 23

⁹³ Ibidem.

⁹⁴ See, i.a., judgment of the CJEU of 20 September 2001, C-383/99 P, *Procter & Gamble Company v European Union Intellectual Property Office*, ECLI:EU:C:2001:461.

The mark exhibited in Figure 3a consists of a standard QR symbol compounded with verbal element. Distinctive character in that example is likely be attributable first to the distinctive character exhibited by the verbal element *per se* and, secondly, to the relative subservience of the standard QR symbol. On an interesting note, it is observed that, having been filed by the same applicant, the mark in Figure 3b stands to be a further customized version of that exhibited in Figure 2b. The different findings as regards the distinctive character thereof might likewise be ascribed to the additional (and distinctive) verbal element contained in the former. Moreover, chromatic elements (i.e., the blue shopping bag icon surrounding the code symbol and alignment patterns colorized alike) seem to provide further dissimilation from a standard code symbol. The remainder of specimens given in Figure 3 similarly incorporate verbal, chromatic as well as certain figurative elements, resulting in an overall distinctive character.⁹⁵



Figure 4. OR codes: a) ACBC S.r.l.; b) Noah s.r.l.; c) Trail Systems Oy

Substantiated by the above sets of examples, it might be maintained that the inclusion verbal elements that are of distinctive nature *per se*, appears to be a relatively dependable strand to secure overall distinctive impression. Nevertheless, as is the case for the examples in Figure 4, adding a verbal component is not the exclusive path leading to overall distinctive character; figurative compositions may likewise be perceived sufficiently distinctive. Color elements, in turn, could be regarded as fairly seeming diversions from black and white standard module structure. At the same time, when assessing the distinctive input of such added color elements, there appears no palpable reason to reject the CJEU's general propensity that the colors *per se* have limited distinctive power. It follows that mere coloration of the standard module structure may not yield an adequately distinctive character.⁹⁶ Admittedly, on the other hand, the end result of such ratiocination hardly amounts to an objective and exclusive standard of distinctiveness that is applicable

Source: EUTM 018609434, registration sought in classes 18 and 25; EUTM 018063436, registration sought in classes 41 and 43; EUTM 018153242, registration sought in classes 9, 35, 42.

⁹⁵ It is worth noting that the mark similar to that exhibited in Figure 3(f), albeit without the verbal element of "proconsult" was also successfully registered with the EUIPO.

⁹⁶ See in general judgment of the CJEU of 6 May 2003, C-104/01, *Libertel Groep BV v Bene-lux-Merkenbureau*, ECLI:EU:C:2003:244.

to QR symbols beyond the general appraisal of distinctive character of figurative and compound marks. Whereas it is the settled ground that the attainment of such distinctive character calls for visual deviation from the standard code symbol, the latter finding also implies that the extent of this deviation is neither likely to be objectively set, nor could it be static across different type of goods and services. What is crucial to recall in identifying the required level of distinctive character is that the presence of a QR symbol tilts the scale of inherent disincentives towards negative due to the well-emphasized "mere access key" perception they tend to arise. This initial set-back is therefore likely to set the required customization level relatively high in comparison to other abstract signs that would not necessarily be perceived, at the outset, to serve for another function. With that, however, it is plausible to suggest on the face of the practical evidence that this level is not as far as to require the sign to be unidentifiable as a QR code. In other words, it is not necessary to conceal or camouflage the QR symbol in such a way that it would be imperceptible to the eye.

CONCLUSIONS

Regrettable on a quest for jurisprudential guidance is that no dispute revolving around registrability of QR symbols made a debut before the courts of the Union. Nevertheless, both the theoretical appraisal of the Union's trademark law and the practice of the EUIPO suggest that there exists no "one-fits-all" formula.

In an attempt to pose a systematic answer to the present question, there appear very few concrete imperatives. In that, the bottom line could perhaps be drawn that the standard QR symbols alone are bound to fail the first hurdle of trademark-ability test, meaning that they are not possibly subsumed under the "signs in which a trademark may consist" at the outset. Albeit their quality of being a sign and the capacity for being properly represented accommodate very little (if any) quarrelling, their plain form does not retain an objective capacity of indicating the commercial source of any goods or services since it is axiomatic that the machine intelligible uniqueness of code symbols cannot possibly create the same impression in the anthropic perception. Secondly, this aftermath could be reverted in cases where code symbols are compounded with other figurative, verbal, numeric, chromatic elements and the like or where the visual niceties of matrix symbol itself is manipulated by certain technical means.

Of little doubt, preserving the functionality while customizing the code symbols is a technical challenge. On the trademark law front, however, this challenge is not immaterial to the extent that format requirements dictated by the functionality tend to translate into a confined playroom for visual modifications and distinctive input. Presumably, it takes quite a modest tailoring for a QR symbol to conform with

abstract distinctiveness (or distinctive capacity) for the purposes of Article 3 (a) EUTMD and Article 4 (a) EUTMR. In the view of elementariness and acontextuality of latter proviso, any detectable customization is likely to suffice to overcome this first hurdle. The same is not necessarily true of the second step whereby distinctiveness relative to corporeal goods and services (concrete distinctiveness) is negatively tested against the absolute ground of refusal for the lack of distinctive character.

Having expressly admitted the difficulty of establishing a normative and/or objective standard as regards the required degree of customization in overcoming the absolute ground for refusal set out in Article 7 (1) (b) EUTMR, the bare minimum could be set at the assurance of the code symbol being perceived beyond a mere access tool in the sight of the relevant public. This in turn entails dissimilation of the sign in question from a standard OR symbol to such an extent that it could be associated with the commercial origin of corporeal goods or services. In substantive terms, however, this assessment has to put in perspective, first, the type of goods and services in respect to which the registration is sought and, second, the perception of average customer for such goods and services. Correspondingly, the gravity of distinctive character and the level of customization required for the attainment of latter shall fluctuate across different types of goods and services. It could be *a priori* surmised that the marks (to be) appendant to goods or services addressing a greater audience will be confronted by the necessity of a higher distinctive character insofar as the hypothetical average consumer in that group is more likely to view a OR symbol exclusively as an access key and less likely to concern themselves with the precise appearance of the symbols. Inferred from a reverse reading would be that, should the average customer in the relevant market be more informed than the general public and be more likely to concern themselves with the precise appearance of the code symbols, the required degree of customization and the gravity of distinctive character sought might be relatively low. Although the ubiquity of QR symbols adversely affects the distinctiveness of the signs consisting of (or incorporate) them, surpassing the distinctiveness threshold hardly necessitates any artistic or technical creativity.

In the light of foregoing, the question initially posed shall be answered in affirmative: distinctiveness for the purposes of trademark law could fit in the confined room among the format standards of QR codes and the technical limits to their customization. It follows that, signs consisting of or incorporating QR code symbols shall not be *a priori* dismissed as trademarks for being devoid of distinctive character, provided that they are customized or compounded with other elements such as to render distinctive character for the respective goods and services. On the one hand, when taken as the subject matter of trademark protection, QR symbols exhibit the characteristics of a figurative mark and cater to visual perception of the public. To that end, the standards of distinctiveness test need not to be distinct from that applies to other figurative marks. On the other hand, it is crucial to read

this postulate in conjunction with the inherent set back as regards their distinctiveness: they are, by default, perceived as an access key to information rather than an indication of commercial origin. Therefore, the attainment of distinctive character in the context of QR symbols appears relatively onerous in comparison to other abstract shapes that are not *prima facie* attributable to another function in the perception of public.

The final note should be reserved to certain other considerations that are liable to perplex the registrability of QR symbols. As is known, despite their significant overlaps, each one of the absolute grounds for refusal set out in EUTMD and EUTMD calls for a separate examination.⁹⁷ That is to say, irrespective of the presence of distinctive character, a QR symbol could still and all be caught by the other absolute grounds for refusal.⁹⁸ In addition, it is all the more relevant to project that the increasing claims on QR symbol marks could potentially nudge the distinctiveness bar higher in due course. By the same token, even if they were found inherently distinctive, the said proliferation could bring into question the likelihood of confusion with an earlier mark.

Whilst the findings of the present study argumentatively draw the landscape based on the relatable legal and practical evidence that is readily available, it goes rather undoubted that jurisprudential interpretation of the CJEU on the present matter would be greatly welcomed.

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⁹⁷ Judgment of the CJEU of 15 September 2005, C-37/03 P, para. 59.

⁹⁸ Thus, the possibility is not excluded that a QR symbol mark for which the registration sought might be regarded as a sign "which have become customary in the current language or in the bona fide and established practices of the trade" as per Article 7 (d) EUTMR.

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ABSTRAKT

Nowa, bezkontaktowa rzeczywistość, podyktowana globalna pandemia, ponownie wprowadziła kody QR, o niemal trzydziestoletniej historii, jako nowy standard przekazywania informacji. Są one teraz nie tylko wszechobecne w codziennym życiu ludzi, lecz także nierozerwalnie związane z obrotem społecznym, handlowym i urzędowym. Ostatnio podejmuje się wiele technicznych i artystycznych starań, aby owe zazwyczaj abstrakcyjne i nieatrakcyjne zbiory biało-czarnych kwadratów bardziej przyciagały wzrok. Uczynienie z symboli kodu czegoś, co przyciąga uwagę, zapewniając tym samym głębszą interakcję z klientem, jest pożądane z handlowego punktu widzenia. Co ciekawe, indywidualnie zaprojektowane kody QR, często związane z wizerunkami marek i systemami handlowej identyfikacji, zbliżają się w swej istocie do sfery prawa znaków towarowych. Jednakże wszechobecność i technicznie niezbedne standardy formatu znaków QR dążą w kierunku przeciwnym do podstawowej przesłanki znaków towarowych, czyli zdolności odróżniającej. Celem artykułu jest udzielenie odpowiedzi na pytanie, czy oznaczenia składające się z symboli QR lub je zawierające moga spełniać wymóg dotyczący zdolności odróżniającej przewidziany w prawie Unii Europejskiej. Ze względu na brak orzecznictwa dotyczącego tej kwestii w opracowaniu najpierw omówiono kryteria sprawdzania zdolności odróżniającej w świetle unijnego prawa znaków towarowych oraz związane z nimi interpretacje orzecznicze. Następnie zwrócono uwagę na zastosowanie tych kryteriów do znaków składających się z symboli QR lub je zawierających. W tym ostatnim zakresie ograniczone wskazówki orzecznicze z państw członkowskich i praktyki EUIPO ujete zostały w perspektywie prawa materialnego i uzupełnione jego wymogami. W artykule potwierdzono, że nie istnieje uniwersalna formuła rozstrzygniecia rozpatrywanej kwestii oraz że symbole QR nie powinny być wykluczane jako znaki towarowe tylko dlatego, że są zasadniczo znormalizowane.

Slowa kluczowe: standard przekazywania informacji; kody QR; znak towarowy; zdolność odróżniająca