

## 5. The Second Blind Spot: The Realisation of Value in (Digital) Capitalism

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So, how far have we come in our analysis of digital capitalism? *Firstly*, we have learnt from Karl Polanyi that what he defines as the *Great Transformation* is not determined by technological means, but by economic aspects (see Chapter 4.1): it is not the steam engine that is new, but the altered role of the merchant. He starts buying a commodity to which he previously had no access: labour. And, as a result, a crucial change has taken place on the buying side: nature and humans become commodities. Consequently, Polanyi locates the transformative character of capitalism on the buying side.

*Secondly*, we have seen that Karl Marx's analysis focuses on the very topic that disappears in Polanyi's vague term of 'waiting' (see Chapter 4.2), i.e. the actual process of production, which, to Marx, always also constitutes exploitation as well under capitalism. To him, it is not only outrageous that human beings (or, rather, their labour power) are turned into a commodity. He is just as enraged by the fact that this purchased commodity we call labour power is an actual human being, whose living labour produces more than he or she is compensated in wages as part of the terms agreed with the employer. Marx considers this surplus value and its appropriation by the capitalist (who consequently is more than simply the 'waiting' merchant) to be only one of two problems. The other is that this *generation of surplus value* is only made possible in the first place by a general social effort he refers to as the *development of the productive forces*. The entire ensemble of collective, social and technical elements, in a sophisticated, institutional division of labour, contributes to this process and, at the same time, becomes an expression thereof.

Even though the concept of the development of the productive forces, with its analytical breadth and depth, appears as a potential tool for fathoming the current—supposedly new and greater, but, at any rate—*digital* transformation, we have seen, *thirdly* (Chapter 4.3) that it hardly features as such a tool (if at all) in existing analyses of digital capitalism. Wherever it is used, we usually encounter either exaggeration, suggesting a leap in development, or a reductionist diagnosis of (unexpectedly meagre) productivity increases. Considering the productivity paradox by itself, we would probably be unable to ascertain any transformative quality of digital capitalism.

*Fourthly*, the two Karls have provided us with an insight into their comprehensive understanding of technology, enriched by the social sciences. Both do indeed take technology seriously as an enabler of transformation—not as its sole cause, but rather closely and multifariously linked to social dynamics. In this sense, technology represents both the precondition and the outcome of social and economic interaction. Aided by technology, the buying side and production—or the period of ‘waiting’—have effectively been revolutionised and, correspondingly, economic and social relations are undergoing a transformation.

What is left unanswered at this point is the question concerning the end. And I am not referring to the end of capitalism (although there is plenty we could learn about capitalist crises especially from Marx—but, again, the crisis dynamic is not our topic here). I am rather referring to the end of our line of inquiry that began with Polanyi on the buying side and led us to Marx’s illumination of the production process. There is no doubt that digital capitalism has caused both to become accelerated, intensified, globalised, automated and virtualised. And yet, the economic substance of existing analyses in this regard still seems to be accurate. So, what happens at the end, on the buying side? Is there anything here that might be undergoing transformation? Polanyi and Marx initially neglect this aspect. However, one thing is clear: starting with the *Great Transformation*, the beginning and intermediate stages have always required a functioning *end*. This end is constituted by the market and consumption. After all, one economic requirement of capitalism in all its variations is the realisation of the produced values on the market and the related imperative of a constant expansion of markets and consumption. Digital capitalism can in this sense only be comprehended after the fundamental economic problem of surplus value realisation and the two ‘places’ where this occurs—on the market (Chapter 5.1) and through consumption (Chapter 5.2)—are thoroughly understood. From early on, digitalisation was used as a kind of conveyor element or interface linking up production with the market and the market with consumption. Marx in fact already emphasises the significance of the means of communication. However, this does not solve the fundamental economic problems of (digital) capitalism, nor does it adequately explain its permanent susceptibility to crisis (Chapter 5.3). The corresponding theoretical foundation presented here should then serve to facilitate an understanding of what is really new about digital capitalism (Chapter 6).

## 5.1 Expansion and the market

The greatest product that is produced as a commodity for the market is not worth the effort if it is not met with corresponding demand. That is, of course, a platitude. Every child that has tried to sell their old toys at a yard sale or flea market

in order to save up for their first PlayStation knows that this will be impossible without other children willing to make the purchase (or grandparents who at least appear willing to do so). Yet Marx is not only concerned with supply and demand, nor with a simple transaction. The child at the flea market represents the old merchant, the one that existed prior to the *Great Transformation*. The child only sells. He or she can obtain a certain price, but there is no surplus value to be appropriated. The once beloved, now unwanted cuddly toy was produced elsewhere by others and, most likely, as a commodity. The surplus value generated at the time was realised on the market and appropriated by the toy's producer at some point in the past.

In his analysis, Karl Marx initially focuses on the tricky aspect of surplus value. And it is certainly not easily pinpointed, as it is—back then and, even more so, today—concealed by the seemingly exclusively relevant mechanism of supply and demand. The more complex the development of the phenomena of production and circulation, the more difficult to render it visible. And yet, Marx brought this surplus value to light. Not only did he make it comprehensible through intellectual precision, but he also illustrated it with numerous calculations. This section (like most others) is definitely worth engaging with, even (or, perhaps, particularly) today. At any rate, the surplus (or added) value remains both the starting point and the end point of an analysis through which digitalisation is to be defined as digital capitalism. Marx focused so heavily on the origin of surplus value because he saw it as the economic essence of capitalism.

Whether or not this means that he had no particular interest in the other side, i.e. value realisation, has been and continues to be debated, be it by Rosa Luxemburg (1951) or, more recently, by Christian Siefkes (2016). In the process, the glance at 'the other side' is captured, among other things, by the term 'schemes of reproduction'.<sup>1</sup> Marx locates one of the limits to unabated capitalist growth in the relation between production capital and consumption capital. Or, simply put: in the question of whether both the capitalists and their workers have enough money at their disposal to buy all the produced commodities. Regardless of the distribution between capital and labour—the amount of capital available for consumption will always be less than that of productive capital, which is why the values realised will

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1 The so-called 'schemes of reproduction' commonly refer to Marx's Chapter XX on 'Simple Reproduction' and Chapter XXI on 'Reproduction on an Extended Scale' in *Capital, Vol. II*. (see Marx 1997: 390–488 and 488–523). According to Hans-Peter Nissen, Marx thus provided a "very elaborate" description of the "circular relationships in a capitalist economic system" (1992: 251; translation amended). As he does so, Marx divides the production sphere into two departments: that of the means of production and that of articles of consumption. His concern are the input-output relations between these two departments, as well as the respective consumption capabilities of the two classes of capital and labour. The "dry matter" of the schemes of reproduction, Ulrich Krause notes, certainly effected a "colourful history of impact." (1982: 327; translation amended)

always be lower than those produced. Rosa Luxemburg<sup>2</sup> sought to challenge, or, rather, refine Marx's calculations, while others, in turn, have called her formulas into question—yet this is not the place for expanding on the “wonderful history of the Marxian schemes of reproduction.” (Krause 1982: 330; translation amended) Nonetheless, the schemes of reproduction are certainly regarded as an “essential contribution to the theoretical development of modern national account systems for capitalist market societies” (Nissen 1992: 251–252; translation amended) to this day, in spite of some (at times productive) criticism. And they demonstrate that to Marx, the link between production and consumption is not only important; he also detects a fundamental cause of capitalism's crises here, as well as a problem that each business enterprise must solve anew each and every day. Like a playwright, Marx breaks the process down into two acts, with the first act comprising pure production and thus the generation of surplus value:

“As soon as all the surplus labour it was possible to squeeze out has been objectified in commodities, the surplus-value has been produced. But this production of surplus-value completes but the first act of the capitalist process of production—the direct production process. Capital has absorbed so and so much unpaid labour.” (Marx 1998: 242)

Because the development of the productive forces is used to consistently refine the processes of production and surplus value generation, Marx argues that “the mass of surplus-value thus produced swells to immense dimensions, and only at this point does the “second act in the process” begin: what is produced “must be sold” (ibid.). From the perspective of the entrepreneur, then, this is not free of risk and anything but an automatic process:

“If this is not done, or done only in part, or only at prices below the prices of production, the labourer has been indeed exploited, but his exploitation is not realised as such for the capitalist, and this can be bound up with a total or partial to realise the surplus value pressed out of him, indeed even with the total or partial loss of the capital.” (Marx 1998: 242–243)

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2 With reference to Rosa Luxemburg, David Harvey notes one essential capitalist strategy of dealing with the limits to demand: “Whole populations had to be mobilised as consumers rather than as workers” (Harvey 2011b: 108). From this perspective, the collapse of the Eastern bloc appears in an entirely new light, i.e. not only in terms of an end to the battle between economic and political systems, but as a lifeline for capitalism, simply because it produced, overnight, millions (and, with China joining in, billions) of people who could henceforth be mobilised for consumption.

In other words, all the effort exerted in the first act would have been entirely in vain if the second act were to fail. That is what Marx refers to as the “the *salto mortale* of the commodity” (Marx 1996: 116). The stage is prepared, the show has begun—but the performance cannot be sustained up to the final applause. And the consequences for the theatre owner might prove fatal (to keep with the metaphor). Most entrepreneurs and managers would very likely agree with these statements—provided that we conceal Marx’s authorship and translate the passage into today’s consulting jargon, like so: even the best production and process optimisations are worthless if a prompt and profitable sale cannot be ensured. Only the combination of both factors guarantees successful business models and continuously rising profits in the long term. It is one aspect in particular that makes Marx so analytically appealing and ensures his analysis remains relevant beyond his time: he separates the actual process in reality from the concept, and the empiricism from the analysis, thereby rendering visible what empiricism alone may have hinted at but failed to comprehensively convey:

‘The conditions of direct exploitation, and those of realising it, are not identical. They diverge not only in place and time, but also logically. The first are only limited by the productive power of society, the latter by the proportional relation of the various branches of production and the consumer power of society.’ (Marx 1998: 243)

What Marx is most concerned with here is capitalism’s susceptibility to crisis. After all, the power of consumption is inevitably always lower than the mountain of produced commodities, no matter whether this refers to the consumption by another company or the average private consumer: even if businesses are currently investing significant amounts in the advancement of their means of production; even if the public hand substantially stimulates consumption or increases its own spending (along the lines of Keynes or, as is the case today, by printing money); and generally irrespective of whether the minimum wage, real wages or employers’ commitment to collective bargaining agreements are high or low for most workers. Even if the entire (‘absolute’) power of consumption were optimised to the utmost and a maximum of values were to be realised, this would still fail to match the values (and thus surplus values) previously generated in the production process. We could ask: what if the capitalist were to spend (i.e. consume) everything subsequently, including the appropriated surplus value? Could this not be transferred entirely back into consumption, thereby realising the value of all the produced goods? Would this, in fact, not be a possible way of conceiving of a frictionless cycle of creation and consumption, in which the market acts merely as a facilitator? As tempting as this may sound, it does not add up: capitalists, as private individuals, can consume consumer goods; as capitalists, however, they will

also ‘consume’ investment goods, i.e. invest in means of production and/or labour forces through which they can produce even more commodities and increase productivity. As a result, the mass of values generated and the share of generated surplus value per product further increase. The productive power has risen and, consequently, superseded the level of existing power of consumption once again. It would appear we are unable, even conceptually, to escape an economic cycle whose objective is the maximum production of surplus value. This means that even in the hypothetical case of ‘absolute’ power of consumption (which is improbable in reality and, at any rate, undesirable in ecological terms), it would nevertheless remain below the total value produced. And it is precisely this aspect which Marx identifies as the cause of one of the central and, in his view, most unescapable crisis dynamics of capitalism.<sup>3</sup>

As previously mentioned, crisis dynamics are not our main topic. One important aspect, however, is the fact that because they render the entire process a risky undertaking as such—for the individual company, for entire national economies and, ultimately, for capitalism as a whole—the market, reliable access to the market and the (if possible, to the utmost possible extent guaranteed) sale of produced goods become critical. And, because all capitalist actors pursue this objective, this eventually changes the market itself:

“The market must, therefore, be continually extended, so that its interrelations and the conditions regulating them assume more and more the form of a natural law working independently of the producer, and become ever more uncontrollable. This internal contradiction seeks to resolve itself through expansion of the outlying field of production. But the more the productive power develops, the more it finds itself at variance with the narrow basis on which the conditions of consumption rest.” (Marx 1998: 243)

The market, as the place for surplus value realisation, therefore, becomes increasingly important and turns into the paramount sphere of business activities. What may appear to us today as an unchanging state of affairs, almost resembling a natural order, is in fact the manifestation of a certain—in this case, capitalist—

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3 Incidentally, Marx does not mean this in a general and abstract sense, but, in fact, quite remarkably pinpoints the historical moment that marked the beginning of a production volume which, under existing conditions, cannot possibly be consumed: “Up till 1825—when the first general crisis occurred—it might be said that the requirements of consumption as a whole were growing more rapidly than production, and that the development of machinery was the necessary consequence of the needs of the market.” (Marx 1982: 99). This is one of the passages in Marx illustrating that he refused to adhere to a diagnosis of capitalism that is still common today, seeing as the dictum of scarcity—insinuating that the demand is always too great for supply to keep up—is among the fundamental principles of conventional economics.

mode of production. *The economic logic of production in capitalism inevitably enforces expansion: first, that of production itself, then that of markets and consumption.*

It is thus no coincidence that this is precisely what the venture capital logic regarding investments in start-ups and unicorns is geared towards: the scaling, i.e. the maximum conceivable expansion of the business model and user numbers (Chapter 8.2). However, this promise comes to fruition only for a small number of business start-ups (and their investors), “[a] narrow class of startups that can quickly grow to a large scale over a decade or less is the most desirable model.” (Kenney/Zysman 2018a: 22)

Capitalism, as described by Marx and Polanyi, is primarily (and remains to this day) concerned with producing an increasing number of values in ever-shorter cycles and at constantly decreasing costs. The development of the productive forces is supposed to lead to a gradually rising surplus value per product. Yet, given that all businesses do the same and (are forced to) outdo their rivals, the number of commodities rapidly increases—and always does so at a faster pace than the power of consumption and markets. After all, the masses’ power of consumption depends on their wages, which in turn the capitalist seeks to keep as low as possible in order to realise the greatest possible surplus value: in capitalism, the “consumption of the bulk of society” is reduced “to a minimum varying within more or less narrow limits.” (Marx 1998: 243)

In order to break free from this contradiction (at least temporarily), businesses, as will be well known to most readers, take advantage of distinct national economic settings—or, in other words, global wage differentials. This allows them to generate a higher surplus value in the respective national economy where production is sourced and simultaneously benefit from the higher power of consumption in the sales markets. We could also say that there is a spillover of parts of the technical and organisational forces of production: capitalist actors are able to draw, firstly, on the low exchange value for the commodity of labour in the producing national economy—in line with the distinct locally developed social forces of production—as well as, at least in part, the locally developed technical and organisational productive forces for local organisation and production. Concerning digital products and digital means of production today, the method of outsourcing is, of course, accompanied by other forms such as offshoring, crowdworking or the unpaid labour provided by users and customers.<sup>4</sup> Alongside permanent automa-

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4 While, on a global scale, the differences between so-called developing countries and advanced capitalist economies represented the crucial factor for a long time, today this can once again be achieved in one’s ‘own house’. This is the case, for example, when the spatial or geographic inequalities within a national economy have increased to such an extent that intra-national differentials offer lucrative conditions to capitalists. In the United States, such discrepancies have sharply increased once again ever since the 1980s. A study by Shambaugh und Nunn (2018), in which the authors examine the development of indicators such as income, poverty, life expect-

tion and rationalisation measures, all this contributes to a constant expansion of production.

Needless to say, these strategies only have a limited effect in the long term, for the fundamental underlying problem cannot be solved by the expansion of production but is rather aggravated: the amassed surplus value is of little use to a company if the produced commodities are not sold. Again, the generated surplus value must be realised on the market. Against the backdrop of continued capitalist development, then, solving this already difficult problem becomes even harder: precisely because production expands, there is an inevitable concomitant expansion of consumption and of markets on which the produced surplus value can be realised.

The constant “expansion of industry is conditioned by the expansion of markets.” Even in 19<sup>th</sup>-century capitalism, the productive forces increased “disproportionately faster” than markets could increase (Engels 1978: 295). Under capitalism, market expansion thus constitutes a necessary process which always lags behind the expansion of production. This implies that this development does not in the least occur in chronological order or in the sense of one-directional path dependence. Marx already elaborates on this aspect in the introduction to his *Critique of Political Economy*. Although he does repeatedly posit production as the point of origin, he emphasises the complexity and mutual interdependency:

“A definite [mode of] production thus determines a definite [mode of] consumption, distribution, exchange and *definite relations of these different moments to one another*. Production *in its one-sided form*, however, is in its turn also determined by the other moments. For example, if the market, e.g. the sphere of exchange, expands, production grows in volume, and becomes more differentiated. Changes in distribution, i.e. concentration of capital, different distribution of the population in town and country, and the like, entail changes in production. Lastly, production is deter-

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tancy or vacant properties in more than 3,000 US Counties from 1960 to 2016, illustrates that after years of gradual approximation between richer and poorer regions, this trend was reversed from 1980 onwards, producing a “yawning gap” (ibid.: 1). Such regional differences have implications, say, for Amazon’s selection of locations for its fulfilment centres. And this affects not only low-paid workers, but can just as well affect well-paid IT specialists: against the backdrop of the COVID-19 crisis, Mark Zuckerberg announced in May 2020 that he believed more than half of Facebook’s workforce would be working entirely ‘remotely’ (i.e. from home) within the coming five to ten years. He added that this would entail changes to the pay structure, as, for example, the place of residence would be factored in, while dishonesty in this regard would be responded to with drastic measures (see Murphy 2020). Even the constant cash flow of the venture capital investors is unequally distributed in the US: 84 per cent of all AUM (assets under management) are managed in the states of California, Massachusetts and New York (NVCA 2020: 12), while these same states also received 86 per cent of all new investments in 2019 (see ibid.: 21).

mined by the needs of consumption. There is an interaction between the different moments. This is the case with any organic entity.” (Marx 1986: 36–37)

That is to say, the expansion of production and the market is accompanied by a ‘surplus’ in the supply of consumer goods: there is a “multiplication of production branches, hence products” as well as a “progressively increasing mass of use values and enjoyments” (Marx 1998: 217). However: “Use values become a reality only by use or consumption.” (Marx 1996: 46). What is needed at the same time is a specific individual who can consume the use value or enjoy whatever is to be enjoyed. Yet while there is usually no lack of those willing to consume and enjoy, and the ‘drive’ of capitalist production develops the productive forces as if there were some kind of “absolute consuming power of society” (ibid.: 483) regardless, there is always a mismatch due to the relations of distribution inherent in the capitalist mode of production. So, we may conclude that manufacturing enterprises compete with one another not only in the context of the permanent refinement of production methods, but also for an always insufficient number of consumers.

Marx outlined all this—the significance of value realisation, the constantly progressing expansion of production and the market, and the inescapable limits to society’s power of consumption—not only in the sense of a prediction pertaining to some distant future, but as an empirically verifiable fact that could be observed even in his time. That is to say, they were already common phenomena in ‘good old’ industrial capitalism, and not some specificities of digital capitalism which Marx somehow predicted through his genius. If we imagine the further trajectory of these processes—which Marx described so vividly and which perpetually continue in mutual interdependence—all the way to our present day, then digitalisation, as we will see, becomes particularly significant. But first, we will address a consequence of the triad of value realisation, expansion and the market that prompts further complex developments and is key to understanding digital capitalism: the social (and societal) importance of consumption.

## 5.2 Consumption and society

As we can learn from a more recent, self-professed ‘political-economic’ study:

“The extreme proliferation of digitomation has resulted in the rapid growth of inter- and intra-country data flow [...]. This [...] has given birth to consumers across the globe who are demanding, and vocal in nature. As more and more integrated and informed consumers seek premium consumption experiences and lifestyles at lower price tags, firms are increasingly compelled to move toward a higher technology intensive production process, thereby substituting unskilled laborers in

the workforce by machines. We, the modern buyers, are influencing the providers of goods and services, or the sellers, to embrace technology to enable perfection in their products and services. The modern buyers value precision and perfection and do not seem to pay attention to the fact that the more precise a product is, the more reliant the sellers are on automation, which in turn results in replacement of low- and mid-skilled workers by machines and technology.” (Majumder/SenGupta 2020: 70)

According to the authors, technological change leads to changes in consumer behaviour, which in turn causes further automation of production. On the other hand, there are humans in their role as labour forces and as sellers (‘we sellers’), respectively, who have become increasingly distant from one another (because digitalisation allows for an ever more precise measurement and transparency of their performance; see *ibid.*: 50–51). This is quite an astonishing contortion of economic reality. Added to this, one involved actor—namely the capital side—is reduced to an entirely reactive element, almost compelled by existing conditions (and the rest of us). According to this logic, extra-economic mechanisms are at work, and digitalisation appears as an exogenous driver. And, of course, there are no antagonistic classes confronting one another, but rather the ‘sellers’, in the sense of a polarised workforce, on one side, and the ‘buyers’, with their increasingly homogeneous and rising demands, on the other (see *ibid.*: 84).

We can find a similarly distorting analysis in a historical treatment of the development of trade by historian Claire Holleran (2011), who reconstructs the distinct forms that trade assumed over time. From the days of the Roman Empire to the Middle Ages, and then later to the onset of modernity, these forms remained largely unchanged, she contends (see *ibid.*: 11–22), until “[...] over the course of the eighteenth and nineteenth centuries the distributive trades were transformed” (*ibid.*: 15–16). Quite surprisingly, the historian views this transformation not as a result of an emergent capitalism, but as an expression of the rise in demand for consumer goods to which production and trade merely reacted (see *ibid.*: 15).

It is obvious that this putative analysis does not take us any further either, as it individualises highly complex economic contexts and reduces them to micro-economic acts, posits digitalisation as a given fact and completely neglects the actors (business enterprises, nation states, politicians, etc.). That is why we will once again return to Marx at this point. Although he is mostly associated with the production side, he does develop thoughts on consumption, too. The first sign of this is that he always seeks, in critical engagement with the economists of his time, to present the clearest possible definitions. For example, in a critique of Adam Smith, he emphasises: “The same instruments of labour may in many cases serve either as means of production or as means of consumption.” (Marx 1997: 205) In a critique of David Ricardo, he adds: “The same things, the same kinds of things, appear

in one place as articles of consumption and in another as instruments of labour.” (ibid.: 225) That is to say, it is not somehow inherent in the nature of a thing as to whether it is a means of production, consumption or labour; what is decisive is the context of its use. However, not each and every thing can be randomly used in any of the contexts. In this sense, there are “[m]eans of production, commodities having a form in which they must, or at least may, pass into productive consumption” (ibid.: 394) and “[a]rticles of consumption, commodities having a form in which they pass into the individual consumption” (ibid.: 394)

Another important level of distinction are *necessary means of consumption*,<sup>5</sup> which are consumed by members of both classes—“even if frequently different in quality and value from those of the labourers” and “[a]rticles of luxury”, which are reserved exclusively for consumption by the capitalist class. Here, again, Marx is less concerned with the materiality of the respective luxury good than with the origin of the funds for its purchase: luxury consumer goods “can therefore be exchanged only for spent surplus value, which never falls to the share of the labourer.” (ibid.: 402)

These passages alone illustrate that Marx regards consumption not simply as a virtually ahistorical, ontological process of use or depletion of something by a human being (such as the wearing of a cotton shirt or the eating of a piece of bread). On the contrary: the process of consumption, its conditions and even the quality of the product all reflect the relations in which all this was created and is occurring: “The use of products is determined by the social conditions in which the consumers find themselves placed, and these conditions themselves are based on class antagonism.” (Marx 1976a: 133) Following these remarks, Marx goes on to call for the quality and sustainability of products. Neither potatoes and cotton nor brandy and opium were the result of a development towards a better product. Cotton, for example, replaced sheep’s wool and linen even though the latter were “of greater utility, if only from the point of view of hygiene.” (ibid.: 133) It was always “economics [that] prevailed, and dictated its orders to consumption.” (ibid.: 133) The factor determining what the masses are allowed to consume, according to Marx, is exclusively the production cost. Cotton products triumphed over sheep’s wool and linen “[b]ecause the least amount of labour is needed to produce them, and, consequently, they have the lowest price.” (ibid.: 133) So, in capitalism, it is neither a matter of “absolute utility of these objects” nor of “their intrinsic utility,”

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5 As Marx adds, it is entirely “regardless of whether such a product as tobacco is really a consumer necessity from the physiological point of view. It suffices that it is habitually such.” (Marx 1997: 402) Such distinctions can actually have a real impact even today, and Karl Marx is certainly more progressive than, for instance, the guidelines used to assess Germany’s basic security benefits (ALG II): since 2011, tobacco and alcohol are no longer deemed admissible items in the calculation of the standard rate of social security (see Pfeiffer et al. 2016a), i.e. the habitual use is not considered to constitute an appreciable necessity.

(*ibid.*: 133) and certainly not a question of human needs. Instead, capitalism, as the “society founded on *poverty*” that it is, is about “the *poorest* products [having] the fatal prerogative of being used by the greatest number.” (*ibid.*: 133–134)

Sadly, the reference to textiles may appear rather topical to us today. Indeed, the need to monitor global value chains to prevent forms of modern slavery is higher than ever (see Voss et al. 2019). Besides this, the quality of today’s second-hand clothes is often so poor that they cannot be reused, as is increasingly lamented by German charity organisations (see Rau 2018). Still, textile production and per capita consumption worldwide have almost doubled over the past two decades (see Shirvanimoghaddam et al. 2020). The logic of lowering costs and quality standards satisfies neither the demand for high-quality employment nor for high-quality products (not to mention the devastating ecological consequences). As a result of (increasingly viral) advertising, the degree to which fashion and textiles have become disposable articles is unimaginable. Even cotton increasingly loses out to synthetic materials, which in turn are often very successfully greenwashed as vegan and/or recycled materials.

Given the increased relevance of consumption since the end of World War II, the complex, deeply socially embedded concept of consumption as conceived by Marx has also inspired more recent analyses. In the following, we will pay a brief ‘visit’ to three authors who stand out in this regard. First, there is Wolfgang Fritz Haug who, in the early 1970s, critically addressed the role of Commodity Aesthetics, the origin of which he regards to be constituted by the contradiction inherent in the exchange relation and which he illustrates based on strongly differing phenomena: from tie fashion trends (see Haug 1986: 39–44) to the sales pitch and the “moulding of the sales assistant” (*ibid.*: 63–67); from the “technocracy of sensuality” to sexual illusion (*ibid.*: 47–52). Haug considers his critique to be a “contribution to the social analysis of the fate of sensuality and the development of needs within capitalism” (*ibid.*: 5). He explicitly states that he seeks to go beyond the level of phenomena, and instead unfold “the phenomena under investigation from their fundamental economic relations” (*ibid.*: 6). Correspondingly, he defines commodity aesthetics as follows: “It designates a complex which springs from the commodity form of the products and which is functionally determined by exchange-value—a complex of material phenomena and of the sensual subject-object relations conditioned by these phenomena.” (*ibid.*: 7)

The form and function of the commodities that surround us are therefore determined by the fact that they are commodities. That something is not only produced but also designed and marketed as a commodity, one could say, does something with this ‘thing’—and with us, the people who use these things. Haug emphasises that although his main concern is to reveal “the subjective element in the political economy of capitalism”, it is so only “in so far as subjectivity is at once a result and a prerequisite of its functioning” (*ibid.*: 7). It would thus be an utter misapprehension of Haug to read him as a culture-pessimistic critic of consumer

behaviour. Rather, he insists that he derives “these phenomena [...] from the basic functional system of commodity production” (ibid.).

Decades later, Haug complements his deliberations with a second book and refines the critique of commodity aesthetics by taking *High-tech Capitalism* (2009) into consideration. He finds the need for doing so in the fact that the development of the productive forces also revolutionises the “technologies of the imaginary” (ibid.: 216; translation amended). Alongside e-commerce and advertising, he sees additional effects at work as well, which otherwise tend to play, quite surprisingly, only a minor role in the academic engagement with digital capitalism. While other authors often and gladly simply stare, analytically motionless—like a rabbit caught in the headlights—at the alleged immateriality of a product, Haug, by contrast, also emphasises the specific rationalisation effects: “The saving in labour costs, the compression of time as a result of the neutralisation of geographic distance, advertising, customer contacts, procurement and ordering, and similar activities can thus be rationalised” [i.e. automated] (ibid.: 254–255; translation amended). Besides this, intermediary trade could also be eliminated. Finally, Haug also addresses the emergence of a “special market for a novel valorisation strategy”, referring not to the marketing of products, but of companies themselves: “The use-value promise that incentivised the purchase here was the expected profit.” (ibid.: 256; translation amended) In just a few pages, Haug thus manages to outline more substance—and certainly more analytical dimensions—pertaining to digital capitalism than the analyses presented in Chapter 2. Yet the most intriguing thought for our endeavour might be the following:

“Not only commodity capital but also commodity aesthetics, which is supposed to facilitate the former’s realisation, faces a problem of realisation. The reality of the actual purchase becomes an option only if the advertisement was noticed. That which is potentially perceivable needs to be actually noticed.” (Haug 2009: 265; translation amended)

Haug’s analysis neither stops at the digital phenomena nor does he update his observations from the 1970s with regard to the new objects. Here, he demonstrates the potential of an alert dialectical view: he is not content with reflecting on whether the Internet-based *Commodity Aesthetics* dissolves or aggravates the contradictions of production capitalism. He searches for new contradictions within *Commodity Aesthetics*. As a result, his thesis is particularly compatible with my own—not only because he salvages his ‘old’ theory of *Commodity Aesthetics* for digital capitalism through the publication of his second volume, but because he takes this sphere seriously as an historically concrete form in his analysis.

Jean Baudrillard likewise proceeds from Marx to consider the sphere of consumption. However, Wolfgang Fritz Haug raises the question, somewhat unfairly,

as to how Baudrillard (among others), as a supposedly “radical, critical theoretician”, could become the marketing and advertising crowd’s favourite philosopher. He suspects that this might be related to the fact that “such cultural critics”, “who lack both a critique of political economy and a historical perspective”, run the risk of “succumbing to the fascination of the surface themselves.” (Haug 2009: 340; translation amended)

Here, however, he is mistaken about Jean Baudrillard, whose topics include more than just cultural criticism. In his introduction to Baudrillard’s book, *The Consumer Society*, Georges Ritzer emphasises that he is concerned precisely not with the consumption practices of individuals, but with consumption as a structure. In analogy to Marx’s concept of the means of production, Ritzer states, the entire concept of the *Consumer Society* reflects an inherent tension arising from the means of consumption (Ritzer 1998: 15–16). What we find here, from a Marxist perspective, are completely different assessments. So let us give the cornered Baudrillard the opportunity to get a word in.

Jean Baudrillard proclaims the “age of consumption”, which, “being the historical culmination of the whole process of accelerated productivity under the sign of capital, is also the age of radical alienation.” (1998: 191) As a result, he contends, consumption has become far more than merely the appropriation of use values. After all, the task at hand is also to know what should be consumed: which consumer goods and practices are socially accepted and are suitable for expressing social status. Baudrillard therefore distinguishes between two levels of the consumption process:

“1. As a process of *signification and communication*, based on a code into which consumption practices fit and from which they derive their meaning. [...] 2. As a *process of classification and social differentiation* in which sign/objects are ordered not now merely as significant differences in a code but as status values in a hierarchy [...]” (Baudrillard 1998: 60–61; emphasis in the original)

Of course, consumption requires economic buying power. Given decades of declining or stagnating real wages, however, buying power is (seemingly or temporarily) sustained by loans and credit card debt. A step that previous generations would have considered so extreme, namely taking out a considerable mortgage on one’s own house, that they reserved it exclusively for long-term use values has long become a standard way to fund just about any form of consumption. In the 28 member states of the European Union, outstanding repayments solely for consumer loans (i.e. excluding property loans) rose from €330 billion to €1,019 billion between 1995 and 2008. Following a nosedive in the wake of the financial crisis, they quickly grew back to €991 billion by 2016 (see Ferretti/Vandone 2019: 11–28); in 2016, some 28 per cent of all private households in the EU alone were indebted

with consumer loans at an average of €5,000 per household, while the figure for property loans stood at €28,200 per household (median values, see *ibid.*).

Capitalism is very creative and innovative when it comes to creating the impression of economic buying power: from leasing a car that one cannot actually afford to buy on one's salary/wages to instalment repayments of credit card debt, with people not actually repaying debt, but paying interest—right up to the point at which the individual consumer's house of cards collapses and consumer insolvency proceedings are initiated.<sup>6</sup> Frederico Ferretti and Daniela Vandone (2019) therefore speak of an “Industry of Personal Debt”, the business models and financial products of which have become increasingly diversified over time (see *ibid.*: 29–50). The many different variations aside, private consumer debt can be roughly divided into 40 per cent that are directly product linked (such as the financing of a car) and 60 per cent that are uncommitted consumer loans (see *ibid.*: 30). Based on numerous examples, Ferretti and Vandone illustrate (see *ibid.*: 44–50) that this industry also struggles with the dynamics of capitalist logic: on the one hand, increasingly specific loans are tailored to increasingly specific customer groups, while, on the other hand, the expansion of the European market for private credit is leading to more complexity and competition. The combination of these developments and the involvement of increasingly high-risk customer groups diminish the profit margin.

Consumption in a consumer society, then, is not only a matter of economic buying power, but also of participation and skills. For the additional task at hand is to know and understand the significant ‘codes’ and to translate them into individual buying and consumer behaviour—if you will: a historically new facet of human labour capacity. Consumption thus also becomes a matter of participation in society and, particularly with regard to so-called “poverty consumption” (*Armutskonsum*), and even concerning such essential consumption as food, must be skilfully enabled in the narrow margin that exists between debt and digital possibilities (see Pfeiffer et al. 2015). When he speaks of codes in his book, which was originally published in 1970 and in which he distinguishes quite astutely between today's ‘growth society’ and the ‘affluent society’, Baudrillard, of course, is also referring to social codes. Obviously, he was unable to predict at the time the extent to which these codes would be mediated through program codes and algo-

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6 On the one hand, this is, of course, a helpful step to provide the person concerned with a way out of their predicament. On the other hand, this legally ensures a “minimum repayment quota” within the “good conduct period”, so that the creditors (even those who skilfully and almost imperceptibly set up the debt trap in the first place through corresponding offers) are entitled to at least partial repayment of the debt (see Section 287, Clause 2 of the German Insolvency Code (InsO)); a ‘minimum repayment quota’ was set at 35 per cent simultaneously to the Law on the shortening of the residual debt discharge procedure and the strengthening of creditors’ rights 2014 (GlRStG) coming into effect.

rhythms today (Chapter 8.2). But that does not render his assertions obsolete. We could almost say: today, the program code ensures that the appropriate consumer codes are conveyed to us all in a timely, personalised and occasion-related manner.

Moreover, Baudrillard notices people's experience of radical alienation, referring not merely to an economic but to a political element of consumption. Consumption becomes the initial impetus for human liberation—instead of and despite the failure of political and social liberation. According to Baudrillard, this holds the potential for profound crises and novel contradictions (see *ibid.*: 85). What is more, when reading Baudrillard, you realise what and how much has happened along the very paths he describes. Correspondingly, even he perceives the reinvention of spaces and targets of consumption as endless; to him, even the body is turned into the 'finest consumer object' and thus beauty and eroticism become functional, fitness becomes a cult and beauty a new obsession (see *ibid.*: 129–150). Given today's boom in cosmetic surgery, Instagram filters<sup>7</sup> and the *quantified self* movement, his examples appear virtually harmless. And one feels immediately reminded of personalised advertisements, target marketing and the associated digital monopolies when Baudrillard speaks of the logic of "Personalization or the Smallest Marginal Difference" (see *ibid.*: 87–98). He defines the latter as follows:

"The logic of personalization [...] can be defined historically: it is industrial monopoly concentration which, abolishing the real differences between human beings, homogenizing persons and products, simultaneously ushers in the reign of differentiation." (Baudrillard 1998: 89)

While Baudrillard proclaims *The Consumer Society*, Zygmunt Bauman (2007) speaks of *Consuming Life*. The starting point of his examination are three cases, seemingly taken at random from newspapers. These cases deal with the self-marketing of a very diverse set of people: school students on social media; customers trying to avoid being incorrectly categorised by support software prematurely; and people seeking to qualify for immigration. They all appear in a dual function: "They are, simultaneously, *promoters of commodities* and the *commodities they promote*." (*ibid.*: 6) No matter how strongly the respective circumstances may differ, "the activity in which all of them are engaged [...] is *marketing*." (*ibid.*) What is

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7 In fact, the cosmetic surgery industry and Instagram are even forming alliances: for example, there are filters (which have since been officially banned, but are still shared illegally) which simulate the outcome of cosmetic procedures; at the same time, scientific studies published in academic journals in the field of aesthetic surgery regard Instagram filters as a valuable tool to improve communication between patients and their attending plastic surgeons (see Youn 2019). No wonder the industry is optimistic, as the viewing of social media photos taken after plastic surgery has been found to increase the readiness of viewers to undergo such procedures themselves (see Walker et al. 2019).

demanded from them (and us all) is “[...] *to recast themselves as commodities*: that is, as products capable of catching the attention and attracting *demand and customers*” (ibid., emphasis in the original). To Bauman, these are all phenomena of a fundamental change: from “a society of producers to a society of consumers” (ibid.: 8). Bauman refers to the general and comprehensive commodification of human life as (one) collateral damage (among others, see ibid.: 117–150). This is all the more startling given that Bauman describes this process as a new phenomenon, even though he makes reference to Karl Marx and Karl Polanyi in his introduction (see ibid.: 13–14)—albeit to their commodity fetishism (which Polanyi criticises in Marx). And yet, both (see Chapters 4.1 and 4.2) view the fact that people (or, rather, their labour), things (nature) and the social (society) are turned into commodities as a fundamental feature of capitalism. Commodification itself is nothing new, then, nor is its tendency to pervade all that which was never meant to be for or part of the market. What is new, however, is the perfected and expanded requirement of self-marketing in the different markets of life, which has become increasingly differentiated and a social phenomenon in its own right. Another new aspect is that all this has in turn become the basis of various business models—from job application trainings and style advice to coaching classes for influencers. What emerges are new facets of human labour capacity surrounding advertising, marketing, search engine optimisation, influencing, etc. We will return to this at a later point (see Chapter 6.1), but let us first recap: the fundamental economic problems of capitalism continue to be those of digital capitalism. The need for surplus value realisation, permanent market expansion and the constant stimulation of new consumer needs all requires very specific responses at the level of the individual company.

### 5.3 Communication and crisis

What is fundamental for the individual company is to enable value realisation in the market at the lowest possible risk and to stimulate and satisfy consumption in increasingly targeted and agile ways. Ever since its onset, digitalisation has been used to accelerate this circulation process and to expand its scale to an increasingly global and all-encompassing level. Yet because all companies are playing and indeed have to play this game, the risk of the failure to achieve surplus value realisation generally does not decrease, but increase (which, in turn, is hoped to be mitigated by new forms of digitalisation).

It is surprising to realise at times just how topical and up-to-date Marx’s analyses appear to be from today’s perspective. Needless to say, he could not have predicted digitalisation, and yet, the means of communication as part of the produc-

tive forces and as an ‘enabler’ of growth and the acceleration of the capitalist mode of production do feature strongly in his considerations:

“Speaking generally, the growth of the productive forces, with their more rapid means of communication, accelerated circulation and feverish turnover of capital consists in the fact that in the same time more can be produced, and hence, under the law of competition, more must be produced.” (Marx 1976b: 430)

Let us illustrate these mechanisms based on an example: over the past 20 years, global textile production has doubled, amounting to an average annual increase of 5 per cent. (Today, more than 100 million tons of textiles and garments are produced globally.) During the same period, the annual per capita consumption of clothing items almost doubled from 7 to 13 kilogrammes (see Shirvanimoghaddam et al. 2020). According to the *Fachverband für Textilrecycling* (Textile Recycling Association), per capita consumption in Germany is twice as high and currently stands at 26 kilogrammes per year (BVSE 2020).

At the same time, however, spending on clothing as a share of overall private consumption has been continually declining in Germany: while it accounted for 7.8 per cent in 1991, it will have declined to 3.9 per cent by 2030 (Bieritz et al. 2017: 10).<sup>8</sup> So, while Germany’s consumers buy a greater total volume of textiles today, this figure is falling relative to other areas of consumer spending.

However, this does not mean that turnover in the textile and garment industry has declined in Germany. In 2019, textile and fashion retailers (not including professional, workwear or skiwear) achieved a turnover of €64.6 billion (of which 17 per cent were online sales); five years earlier, this figure was €58.6 billion, which indicates an annual increase of 2 per cent. Despite a minor slump in 2020 (brought about by the coronavirus crisis), the volume is expected to rise to €74.3 billion by 2025. The per-customer earnings in the textile and garment market, amounting to €719.22 in 2014, rose, modestly but steadily, to €773.68 by 2019 (figures based on statistics taken from the retail data portal EHI 2020).

If, in 2014, the number of garment items purchased per capita was 53.9, five years later this figure had risen to 56.2 (see *ibid.*). So, here, too, we can see an increase, albeit—at 0.8 per cent—quite a moderate one considering the growth in turnover over the same five-year period. Furthermore, the share of luxury fashion remains at a quite constant level of 6 to 7 per cent, with no discernible trend whatsoever, both in the studied five-year period and in the estimates for 2020 and beyond. If we compare the per capita turnover to the per capita number of clothing items, we find that

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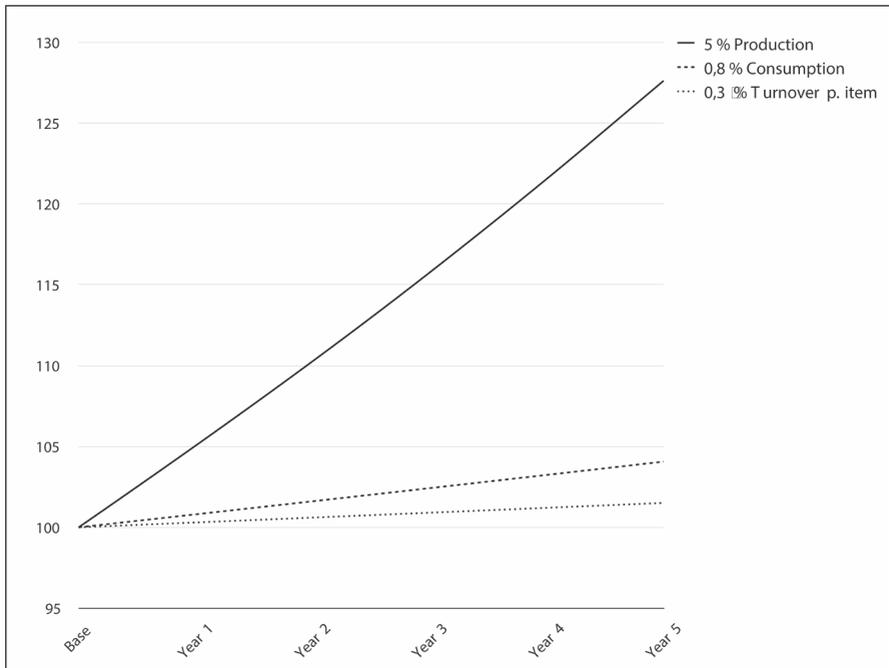
8 Nominal figures adjusted for price changes, as according to 2010 prices; database: Einkommens- und Verbrauchsstichprobe (EVS—Income and Consumption Survey) 2008, forward projection developed in the context of the socio-economic model (Bieritz et al. 2017: 1).

in 2014, the turnover per clothing item was, on average, €13.30; five years later it was €13.80, which corresponds to an annual increase of only 0.3 per cent (ibid.).

So, to summarise: global textile production grows by an average of 5 per cent annually. In Germany, one of the advanced capitalist economies, the sales measured both per capita and in euros are growing by just 0.8 per cent annually. At the same time, the share of private consumer spending for clothes has been declining by an average of 1 per cent annually, while spending for luxury textiles is stagnating in the single digits. And yet, each year the industry manages to increase turnover per capita and per clothing item by 0.9 per cent and 0.3 per cent respectively.

These figures once again perfectly illustrate the links between overproduction and insufficient consumption previously diagnosed by Marx: every year, production increases by 5 per cent, while consumption lags markedly behind—at 0.8 per cent annually—and turnover per sold product is even lower (not to mention that it says nothing about the actually realised profit), rising at an average of 0.3 per cent per annum. Just how quickly the gap between production and consumption may then widen can be fictionally, and impressively, illustrated based on a starting value of €100 for a five-year period (see Fig. 2).

Fig. 2: Increase in production, consumption and turnover (generic)



Data basis: Statistics on the retail trade in clothing and textiles in Germany (EHI 2020).

In order for this to turn a profit, a whole system of correspondingly developed productive forces is needed. This includes the cheapening of the raw materials (using innovation- and investment-intensive, but cheaply manufacturable, synthetic fibres and dyeing machines, and condoning the possibility of hazardous or hormonal substances in the garment); the increase in the productivity of agricultural cultivation areas (such as through genetically modified cotton and the use of matching herbicides, causing a dramatic impact for farmers, the potential build-up of resistances, transgenic contamination etc.); the exploitation of global wage differentials, permitting the most appalling, unsafe and unhealthy working conditions along the supply chain; as well as the intentional and targeted prevention of any trade union-related activities or the foundation of any kind of interest-representing bodies, pertaining to the entire supply chain, for instance from textile manufacturing and dyeing via fabric cutting and finishing to packaging, shipping, transport and sales. All these grievances have long been made public by Naomi Klein (2010) and featured in countless media reports (which, unfortunately, continue to reveal new abuses and scandals). And indeed, resistance is forming, some of it very well organised, that is presenting new approaches to ethically responsible and sustainable value chains: Matthew Williams (2020), for example, explores the strategies developed by social movements formed by students and workers to combat sweatshops between 1997 and 2007 as well as the responses by companies. Another study (see Balsiger 2016) addresses the momentum the European network *Clean Clothes Campaign* (CCC) was able to generate in highly contested textile markets.

However, despite all the scandals, the “sweatshop regime”, which is the result of a “complex regime of exploitation and oppression [...] [that links] processes of surplus extraction to different realms of social reproduction of the labour force” (Mezzadri 2017: 185), has remained remarkably stable over time. As a result, the most diverse processes of surplus value generation, all woven into the same system, are globally interconnected. Since the onset of automation—the beginnings of which can be traced back to the English textile industry—the productive forces have been driven to utmost perfection within this regime, though this is not so much owing to digitalisation. The latter is needed particularly in order to tie the global network of distinct forms and places of surplus value generation closely together and simultaneously configure this overarching structure in such a dynamic, responsive, open and flexible way that new trends can immediately be seized upon, implemented and new suppliers can be included or excluded in accordance with demand, the overall economic situation or geopolitical risks, without destabilising the system as a whole. Hence, digitalisation also enables and ensures the interplay between global and thus highly unevenly developed productive forces.

Another central precondition for the formation of such global regimes is political deregulation. In the textile and garment industry, this is evidenced by the expiration of the *Multifibre Arrangement* (MFA) in 2005. Up to then, the MFA sill guaranteed a degree of geographic inflexibility (i.e. restriction) of the markets (see Kumar 2020: 1). Ashok Kumar, who has conducted a political-economic study of the fashion and footwear industries, refers to *Monopsony Capitalism* and thus goes far beyond the consideration of the poor working conditions in sweatshops. While the term *monopsony*<sup>9</sup> is mainly used to describe labour markets—one (employer, as an individual) consumer, or demander, is confronted with many providers (of labour power)—Kumar (see *ibid.*: 17–51) focuses on the relationship between multinational fashion brands and retailers with smaller, globally dispersed yet locally bound suppliers. According to Kumar, the former ensure access to critical technologies and can thus dominate the latter and control production sites, production, investments, prices and employment along the value chain. Through their key position as central demanders in a monopsony, large retailers and brands restrict the smaller actors within the value chain and, more importantly, prevent their further development, i.e. that of the local productive forces. The smaller actors are unable to apply common business strategies—they are neither able to modernise their means of production nor can they buy up competitors. They are left exclusively with profit margins that are always subjected to market fluctuations (see *ibid.*: 31).

In the textile industry, the power relations have once again grown more rigid and differ considerably from those familiar in, say, contract manufacturing in the electronics industry or between the powerful corporate buyers in the automotive industry and their suppliers (from system suppliers to those suppliers who are lower ranked within the supply pyramid, referred to as *tier-n* suppliers). In these latter industries, supplier companies are by all means capable of building up technological expertise over time. They are thus able to develop their productive forces ‘technology’ and ‘labour’ and that way strengthen their position *vis-à-vis* *Original Equipment Manufacturers* (OEM) or their own higher-ranking suppliers. This often entails the opportunity for workers to improve their working conditions, too. In the textile industry, however, neither local employers nor their workers have achieved such an upgrade (see Kumar 2020: 31).

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9 The term was first used 1933 by economist Joan Robinson (1969) in her book on *The Economics of Imperfect Competition and Employment*, in which she makes considerable reference to Karl Marx and also discusses many of John Maynard Keynes’ ideas. Regardless of its literal meaning, the term is mostly also applied to models of buyers’ market power that assume not only one, but a small number of demanders, or simply to situations in which businesses are faced with a rising number of labour forces (Boal/Ransom 1997: 86).

This may in part be owing to the products' differing degrees of technological complexity. For example, a system supplier in the automotive industry has greater scope to develop their own expertise and patents. A process of upgrading in the supplier company can actually take place, possibly even causing dependencies on the part of the OEM in return. This also entails, *firstly*, higher skill requirements for workers, which takes effect in local labour markets. As a result, workers have more opportunities to assert their demands and, moreover, a chance to improve the situation of the labour forces. An aspect related to this is, *secondly*, the fact that the system supplier is in a far better position to tackle global competition (at least until the next industry-wide technological transformation) than the textile supplier. *Thirdly*, what distinguishes both most decisively is their position within the value chain. Unlike the automotive system supplier, the small local textile companies Kumar considers manufacture no complex product that might be integrated into complex products and production processes of OEM and therefore be essential for the generation of surplus value. Instead, textile companies produce finished products for wholesale and the market. As a result, businesses and their workforces are exposed to global competition in an entirely different way. In this context, Anna Tsing (2009) interprets present-day capitalism in terms of a *Supply-Chain Capitalism*, adopting a corresponding perspective from which to explain the diversity and constitutive difference in today's global capitalism. She thus argues firmly against theories of growing capitalist homogeneity and seeks, building on her concept of 'figuration', to show the multiple forms in which capital, labour and resources are mobilised along the supply chain, but also the diverse ways in which management, consumption and entrepreneurship are understood and applied. Above all, however, she shows how exactly this ties self-exploitation, on one side, and over-exploitation on the other together (see *ibid.*).

One aspect of Kumar's *Monopsony* thesis that is decisive for our line of inquiry here is his emphasis of separate spheres: "This tension is located in the global separation between the space of value creation at the point of production (via the labour process)—and its realization—at the point of consumption (via its sale)." (Kumar 2020: 31) At the same time, however, this global separation is only possible because of digitalisation and physical transport routes. It is their optimisation and further refinement, i.e. their acceleration, improved predictability and cost reduction, that constitute the prime objective of the major global actors. In my diagnosis of the phenomena Kumar describes, I would thus go one step further: the productive forces and their local development have not only become irrelevant to those global actors, but also something that is both worth avoiding and avoidable. One *wants* to avoid it because otherwise the existing power asymmetry may change. And one *can* avoid it because the developed forces of distribution and, along with them, digitalisation as the central means of distribution, allow potential developments of the productive forces to be eluded (this will be discussed in detail in Chapters

6 and 8.2). It is therefore not only a matter of finding the next suitable place with even lower wages, but also the next place with even slimmer chances of a potential, locally consequential development of the productive forces. In fact, Marx already emphasises the role of the means of communication in this context:

“Every development of new productive forces is at the same time a weapon against the workers. All improvements in the means of communication, for example, facilitate the competition of workers in different localities and turn local competition into national, etc.” (Marx 1976b: 423)

Unlike the digital-based ‘old’ links between OEM and their suppliers, however, what is crucial today is the comprehensive digital coupling and integration of the whole system with the market and consumers. This not only has to occur in one direction, i.e. from production to the market and on to the equally digitally stimulated (that is, nudged and influenced) individual consumer needs, but also vice versa: from the digitally tracked new trends, clustered and extracted by algorithms, and potential novel consumption opportunities, back to the acquisition of raw materials, cut and dye modifications, and, finally, to the launch of the actual process of clothing production.<sup>10</sup>

The economic significance of the Marxian means of communication—which today would include digitalisation—is evident not only from the objective of individual companies to assert themselves in the global competition and, say, take advantage of wage differentials. The tight-knit, direct and quick connection between globally dispersed production sites (or, rather: places of surplus value generation) and sales opportunities (i.e. opportunities for surplus value realisation) expands in parallel with the growth of the scale of overproduction. We have seen above (Chapter 5.1) that this is inevitable and already led to frequent commercial crises in Karl Marx’s times:

“It is enough to mention the commercial crises that by their periodical return put on its trial, each time more threateningly, the existence of the entire bourgeois society. In these crises a great part not only of the existing products, but also of the previously created productive forces, are periodically destroyed. In these crises there

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10 As described above, this also changes the (technology-based) stronger position of system suppliers in the automotive industry. Although the technological complexity of products and production processes does still constitute a ‘locational advantage’ within global value chains, the digitally enabled, enhanced integration and more direct linkage of development and production with the market and consumption are noticeable here, too, changing long-standing power relations along the entire value chains down to the very last car workshop and car dealer (see Maier 2019).

breaks out an epidemic that, in all earlier epochs, would have seemed an absurdity — the epidemic of over-production.” (Marx/Engels 1976a: 489–490)

Particularly against the backdrop of the coronavirus pandemic (I actually began writing the original German version of this book more extensively during the first lockdown in the spring of 2020), one realises that given a capitalism which has been able to continue to develop in such a rapid and unimpeded manner ever since the days of Marx, the epidemic metaphor is no longer adequate, as it refers to the temporarily and geographically limited occurrence of a disease. Likewise, the term pandemic would be inaccurate, as it also denotes temporary spreads of diseases, albeit requiring transnational and intercontinental monitoring. Unlike in Marxian times, then, overproduction today is not some sporadically recurring and inevitable capitalist crisis phenomenon. For a long time, we have rather been dealing with a permanent global crisis of overproduction. To be clear, this means on a global scale, and not everywhere on the planet and at the same time. Overproduction continues to be faced with scarcity affecting the majority of the world’s population. Furthermore, overproduction has long ceased to be merely a relative term, in the sense of ‘more than can be bought and consumed under existing conditions’. It has become an absolute term, in the sense of ‘more than one planet and its finite resources can take’ (on the destructive consequences, see also Chapter 9).

From the perspective of capital, absolute overproduction further aggravates the conditions of relative overproduction: say, when commodity prices rise because supply is being reduced; or when states appear to heed their responsibility to restrict the market in the sense of Polanyi (Chapter 4.1) and resort to regulatory measures to mitigate the ecological disaster and its harbingers of the looming crisis; or when the concerns of consumers suddenly need to be accommodated through soothing greenwashing or effective sustainability measures, which, as a whole, certainly increase circulation costs, and often production costs as well. These higher costs, however, cannot always be directly passed on to customers under the conditions of global competition. As a result, such competition can intensify (say, if regulations differ between regions/countries), engendering varying shares of the generated surplus value per product. Even companies that are serious about pursuing ecological targets and operate in certain niches are affected because, given their higher production costs, they always remain dependent on the relations determined by the majority of less ecologically-oriented companies.

*Crises of overproduction, which inevitably occur under capitalism, but which occurred only epidemically in Marx’s time, have for a long time grown into a permanent pandemic—one for which there is no effective vaccine or cure within this mode of production, only a sporadic alleviation of symptoms.* At the level of the individual company, however, the competition over both the temporal and geographic pole position in the markets is intensifying. Being the first to realise the surplus value on the mar-

ket has become more important than ever. In order to achieve as much, digitalisation has become the means of choice, making it a crucial dimension—for individual businesses and for entire national economies. In the next step, this will be not only described at the empirical level of digital phenomena, but conceptualised in terms of the distributive forces, and thus as an increasingly important facet of the productive forces in (digital) capitalism.

