

1 Economic Equality and Prosperity in the Post-Black Death Century

Preface

Demographic and economic historians have recently discovered an overriding trend: except for brief moments, inequality across Europe increased inexorably from the late Middle Ages to the present. However, the longest spell when the gap between rich and poor turned in the opposite direction and that can be demonstrated quantitatively with fiscal sources was the post-Black Death century (c.1375 to 1475).¹ The political and cultural consequences of this remarkable century remain to be unravelled. In short, this Element maintains that elites in late medieval and Renaissance Italy reacted to these new pressures from below not exclusively or primarily within the economic sphere.

In some parts of Europe – most prominently Eastern Europe and England – historians have long argued that elites did react economically to the new realities of labour scarcity by immediately imposing harsher forms of labour exploitation and restrictions on labour mobility to counter labour’s new-born advantages. However, as will be reviewed in Section 2, historians now challenge most of these exceptional twists from the general European pattern. In addition, for several decades historians have shown that England’s Ordinances and Statutes of Labourers of 1349 and 1351 failed to halt the rise in nominal wages. As John Munro has shown, post-Black Death real wages² into the fifteenth century rose by the same percentages in England as in the Low Countries, where no national wage restrictions and few municipal ones were promulgated (Cohn, 2007; Munro, 1994).

By contrast, elite reactions in Italy to the new economic realities created by Black Death demographics have not figured prominently in larger European discussions such as the Brenner debate or within Italian historiography. This Element argues that elites in central and northern Italy during the post-Black Death century colluded with the church and states to find other avenues to blunt the status of peasants, artisans, and shopkeepers, thereby preserving, and even enhancing, the social distinctions that widened the cultural gulf between them and commoners. Historians have yet, however, to investigate the price non-elites paid for their economic success following the Black Death. At the moment of their gains in the economic sphere, artisans’ powers and prestige in a second sphere – politics – dwindled, as marked by the declining power of

¹ Some begin that century with the Black Death itself. See numerous articles and working papers by Guido Alfani and his équipe at Bocconi University, Milan: Alfani, 2021; Alfani and Di Tullio, 2019; and further studies: Pamuk, 2007; and Van Zanden, 1995.

² Wages controlled for inflation.

their guilds and their participation in larger legislative assemblies. Moreover, a third sphere of losses points to the cultural domain, at least as can be currently seen from research in late medieval and early Renaissance Tuscany and Umbria. By the end of the fourteenth century, non-elites' prerogatives to commission works of art that previously had preserved their lasting remembrance before God and their neighbours within ecclesiastic buildings had dwindled and began to vanish altogether, despite steady increases in the wealth of peasants, artisans, and shopkeepers.

For the first time, post-Black Death equality and inequality will be explored within three intersecting spheres: the economic, the political, and the cultural. While the economic has been the best studied, historians have yet to touch the cultural in terms of the prestige of non-elites and a paradoxical rise in cultural inequality. I will argue that the social-psychological needs of elites spurred by the Black Death and successive waves of plague spawned not only labour scarcities but also a consequential widening of political and cultural inequalities. One mechanism to enhance elites' ensuing social and psychological distinction was a sharp rise in the entry levels to commission artistic works in church buildings. These new needs for elite distinction transformed the underlying economic conditions for a new Renaissance patronage of art by the end of the fourteenth century. More than settling debates, this Element poses new questions and hypotheses to stimulate new research that will interlink economics, politics, and culture within the historical investigation of inequality.

Long-Term Trends in Inequality and Their Analysis

Questions of economic inequality were central to the analysis of political economy during the nineteenth century, especially in the classical works of David Ricardo (1772–1823) and Karl Marx (1818–83). During the last decades of the nineteenth century until after World War II, those concerns largely vanished from economic analysis until Simon Kuznets, future Nobel Prize-winner in economics (1901–85), published his groundbreaking article (Kuznets, 1955). Written in a period when Western economies were beginning to rebound from the war's destruction and misery, Kuznets presented a view that contrasted sharply with Ricardo and Marx. Economic inequality was not pictured as the evils of labour exploitation or the greed of industrial entrepreneurs. Rather, it was cast as an inevitability of economic growth and a positive indicator of prosperity across social classes. Further, his famous inverted-U trajectory (later known as the 'Kuznets curve') predicted an optimistic outcome – one, in fact, that had become evident in the West from the eve of World War I. While rapid

economic growth with industrialization would drive inequality upwards – as in England in the eighteenth century, the Soviet Union in the 1930s, and the developing world after World War II – a second stage of diminishing inequality would soon follow.

The economic recession of 1973–5 spawned a period in which we still live, defying Kuznets' optimism. Yet economists and historians of equality failed to realize it until the recession of 2007–8. As late as 1995, in the first major historical study to investigate economic inequality before industrialization, Jan van Zanden, arguing on the basis of rental values of houses in the Low Countries, shored up Kuznets' model: since the late Middle Ages, inequality has been the consequence of economic growth. Furthermore, he went beyond Kuznets by positing a 'super-Kuznets curve' that spanned five centuries (van Zanden, 1995).

Shortly after the recession of 2007–9, a new generation of economic and social historians, trained in archival research and quantitative methods, began to question a principal plank of Kuznets' model of inequality as a function of economic growth. The most famous of these scholars has been Thomas Piketty. As with Kuznets' inequality, Piketty began with industrialization in the eighteenth century (Piketty, 2014). Between Kuznets and Piketty, other studies of inequality have linked the pre-industrial and industrial pasts, as in Jeffrey Williamson and Peter Lindert's study of the United States (Williamson & Lindert, 1980) and Şevket Pamuk's investigating inequality stretching through the Middle Ages and early modern period for Egypt and the Ottoman Empire (Pamuk, 2007). Most importantly, on the eve of Piketty's academic best-seller, Guido Alfani and his *équipe* at Bocconi University had already opened a new field of late medieval and early modern economic history by mapping long-term European inequality based on wealth and not income, reaching back to Europe's earliest tax registers (*estimi, castati, decime, cadastre*). For Tuscany and Piedmont, these survive from before the Black Death. Afterwards, especially during the sixteenth century, they became more abundant and fanned across the Italian peninsula and much of Europe (Alfani, 2015; Alfani & Ammannati, 2017).³

Two Types of Equality

Let us turn to the major conclusions drawn from the economic analysis of these pre-industrial fiscal records. First, scholars have calculated Gini coefficients, which estimate shifts in inequality of wealth, most often assessed from fiscal

³ The project began in 2012 as a European Research Council STG-6 Research Grant: 'EINITE-Economic Inequality across Italy and Europe, 1300–1800'; www.dondena.unibocconi.it/EINITE.

records,⁴ along with changes in the proportions of wealth calculated for various strata of populations. Despite problems of corruption, underestimation, and exemptions, trends in pre-industrial inequality show remarkably consistent patterns. From the mid-fifteenth or the beginning of the sixteenth century, depending on the place, inequality progressed steadily into the nineteenth century.⁵ When national records across Europe and the Americas begin to appear in that century, the Gini coefficients connect almost seamlessly.⁶ These pre-nineteenth-century results stretch across Europe and into the Middle East. Moreover, the rare reversals in mounting economic inequality were usually short-lived, as in northern Italy following the disastrous plagues of 1629–33, when Milan and Venice lost 30–50 per cent of their populations. The shift toward equality lasted less than a generation (Alfani & Murphy, 2017; Alfani & Percoco, 2019).

However, longer periods can be found. Another reversal from inexorable inequality ensued for Prato after its horrific siege and sack in 1512. Although given less attention in the literature, this reversal appears to have endured until a tax record (*decima*) in 1621 (Alfani & Ammannati, 2017: 1086–7). Other cities and their regions most likely experienced similar reversals after major sieges and sacks during the Italian wars (1494–1559), as with Brescia in 1512, Pavia in 1526–7, and Rome in 1527.⁷ Trends in equality in these cities and their territories (perhaps because of the destruction of sources) have yet to be considered. However, this elongation of economic equality rested on economic conditions that appear to have differed from those following the Black Death. For more than a century, historians have emphasized the economic silver lining of the Black Death that gave rise to higher wages, greater productivity, better diets and housing, and new opportunities to purchase luxuries and enjoy leisure time (Dyer, 2002; Dyer, 2004; Gasquet, 1893: xvi; Goldthwaite, 1993; Hatcher, 1998: 70–1, 79–80; Herlihy, 1997; la Roncière, 1982; Le Roy Ladurie, 1966; and especially Stuart, 2006) for artisans across northern and central Italy. By contrast, with places destroyed by war, as in Prato and other regions in the sixteenth or seventeenth centuries, the equality that arose was one grounded in destitution that spread across social classes.

Second, against the Kuznets paradigm, the long pre-industrial period in inequality did not depend on economic growth. Instead, from the sixteenth

⁴ Where 0 means perfect equality with each household or individual possessing the same income or wealth, and 1, complete inequality with one household or individual earning or owning everything.

⁵ On the shortcomings of these records, see Alfani, 2010: 518, 524, and 537.

⁶ Portugal is an exception but only after 1565; see Alfani, 2021: 14, based on Reis, 2017.

⁷ For these sacks of cities, see Bowd, 2018; for ones in the countryside, Cohn, 2021.

century, inequality also grew steadily in periods and places with stagnating or declining economies, as in seventeenth- and eighteenth-century Italy. Third, as David Herlihy and Christiane Klapisch-Zuber demonstrated for Florentine Tuscany more than forty years ago, inequalities were greater in urban centres than in small towns or rural villages, and the larger the city, the higher the inequalities (Herlihy, 1967; Herlihy, 1968; Herlihy & Klapisch-Zuber, 1978). However, recent longer-term and European-wide studies of Alfani and his *équipe* have questioned whether those correlations can be generalized (Alfani, 2021).⁸

Finally, as claimed in our Preface, the most significant period when the gap between rich and poor narrowed was the post-Black Death century (either *c.*1350 to *c.*1450 or *c.*1375 to *c.*1475 or later, depending on place), as can be demonstrated quantitatively with fiscal sources. However, the character of that post-Black Death equality has yet to be explored, especially in its initial phases: was it one launched by growing prosperity of non-elites, or grounded in a levelling poverty across a wide spectrum of the population? Gini coefficients by themselves tell us little about these radically opposing economies.⁹ For that, other quantitative evidence, such as real wages, has been beneficial.

From much more sketchy and problematic data,¹⁰ Walter Scheidel, Steven Friesen, and Branko Milanovic have investigated an earlier and longer period of equality than that of the post-Black Death century. This was one which dominated the economic history of the Roman Empire and late Antiquity, from *c.*150 CE to 700. They have estimated that Roman economic inequality reached its peak around 150 CE. Then, for the next five and a half centuries, economic inequality declined through periods of economic and political expansion as well as contraction (Scheidel, 2017: 78–9; Scheidel and Friesen, 2009: 75–90). The character of this equality, however, contrasts sharply with the economic experiences now argued for most of Western Europe during the late fourteenth and fifteenth centuries. For ancient Rome, rising living standards of non-elites did not underpin these years of equality. As Milanovic concluded, the transition was from a ‘complex and prosperous but highly unequal society [to one that] became

⁸ However, his first study of inequality from records of Ivrea (Alfani, 2010: 515, 527, and 545–6) emphasized the correlation between population size and inequality.

⁹ Although Gini coefficients have been the standard statistic for evaluating levels of inequality since the early twentieth century, they have come under criticism mostly because of the inadequacy of a single figure for expressing varying differences in inequality across different social groups. Such has been the case with growing global inequality since the 1980s, where the startling rises in economic inequality have more sharply divided the middle classes from the rich and especially the super rich. As a result, economic historians such as Thomas Piketty (2020: 26–7) use stratified percentiles of wealth or income to chart inequality.

¹⁰ Scheidel and Friesen (2009) admit: ‘Our reconstruction is in its entirety a matter of controlled conjecture: undeniably conjecture, given the paucity of “hard” data’ (63).

much poorer, primitive, and more equal' (Milanovic, 2019: 13; see also Alfani, 2021: 7).

Thus, declines in inequality following demographic disasters across time can manifest two opposing economic realities. For one, a sudden drastic shortage in the supply of labour increased labourers' bargaining powers and led to rising productivity, with peasants migrating to better lands, higher levels of capital investment, diversification of crops, and rising real wages in cities and the countryside. For the other, wars, sacks of cities, and long-term climatic deterioration 'levelled' populations (to use Scheidel's term), squeezing not only the poor but also middling groups and even some elites. In the post-Black Death century, both realities may have been at work at different phases of collapse, recovery, and transformation.

For instance, Prato may have experienced the longest period of post-Black Death equality that can be measured from successive tax records. From at least the *catasto* of 1428 (and probably before but yet to be calculated), Gini coefficients computed from fiscal records show equality on the rise until a tax record in 1621. However, the longevity of Prato's equality may rest in part on the rarity of fiscal surveys during the Medicean Grand Duchy, which provides only two snapshots, 1546 and 1621, after the last *catasto* of the Republican period in 1487.¹¹ Alfani and Ammannati consider that Prato's delay in conforming with the general sixteenth- and seventeenth-century trends of racing inequality 'could be partly the consequence of the terrible sack', but they hasten to add that Prato's shift to greater equality was already well underway before that disaster. They then list the city's Gini coefficients (0.683 in 1428, 0.624 in 1487, and 0.575 in 1546), as though behind these numbers lay much the same socio-economic factors suggestive of an equality grounded in prosperity, but without supplying supporting evidence (Alfani & Ammannati, 2017: 1086–7).

By its sack in 1512, and probably earlier in the Italian wars, Prato's equality had become one of hardship, economic decline, and poverty across social classes. Most likely, Prato's 'levelling' equality was already manifest by 1487, given what we know about Florentine domination over this subjugated town, reaching back to Medicean policies after 1434 and more so during the Laurentian period from the 1470s to 1492 (Petralia, 2000). Moreover, already by a tax record of 1393/4, the average wealth of Prato's propertied citizens was approaching that of mountain peasants north of the city: the mean family wealth in the city of Prato¹² was 283 *lire* versus 241 for the community of Morello, and

¹¹ It is assumed that the 1546 *decima* still reflected the consequences of the 1512 massacre. Sherer, 2017: 172, claims that 25–30 per cent of Prato's population was murdered.

¹² This analysis regards Prato's quarter of La Porta di Santa Trinita.

576 versus 446 if only property holders are tallied (Cohn, 1999: 61).¹³ This similarity in wealth becomes striking when compared with city–countryside differences in 1427. Florentines were 8.5 times wealthier than those in market towns such as Empoli or San Gimignano, and 19.5 times wealthier than those in villages and ‘sparsely populated areas’ (calculated by Alfani & Di Tullio, 2019: 101, from data in Herlihy & Klapisch-Zuber, 1978). Of course, as Herlihy and Klapisch-Zuber demonstrated, Florentine wealth also exceeded that of residents from its six most populous subject cities (which included Prato) but by less (only three times).¹⁴ Dividing by this factor, the average wealth of citizens in Prato would be expected to have been almost three times more than those residing in its *contado*. By contrast, Prato’s average wealth was only 1.17 times more than its nearby mountaineers of Monte Morello, reflecting its relative poverty as an urban centre.

In addition, Prato’s rising equality during the sixteenth century was probably not an outlier in Italy. If small towns and villages are included, hundreds of sacks destroyed Italian regions during the Italian wars, especially to 1530 (Bowd, 2018: 6, table I.1). In 1512 alone, two further massacres – Brescia and Ravenna – ranked among the most brutal in Italian history. Presently, no Gini coefficients or other markers of inequality have been calculated for either. Nor do fiscal data appear to have survived for major cities such as Milan that barely escaped terrible sacks.¹⁵ Given chronicle descriptions of Milan’s suffering from war, billeting of troops, and soaring taxation from 1499 to the 1530s, an equality of the levelling kind probably engulfed this capital city. Gianmarco Burigozzo, a Milanese shopkeeper whose chronicle stretched from 1500 to 1544, meticulously reported the billeting of and occupation by Spanish and German troops during these years. They destroyed Milanese homes and palaces, burnt their furnishings and squandered the resources of rich and poor alike. According to a wide variety of sources, this oppression, accompanied by excessive taxation, spurred mass migration of merchants, even noblemen, along with the poor.¹⁶ Without doubt, these troops would have preferred their billets in palaces over hovels. Yet other than brief mentions of Prato, I know of no studies which explore the creation and persistence of this sixteenth-century

¹³ From the fifteenth century, cities within the Florentine territory outside its *contado*, such as Poppi (Benadusi, 1996) or Pescia (Brown, 1982), did not begin to decline markedly until the late sixteenth or seventeenth century. Earlier, these towns benefited economically from their interdependence with Florence.

¹⁴ Again, these calculations derive from Alfani and Di Tullio, 2019, taken from Herlihy and Klapisch-Zuber, 1978.

¹⁵ For instance, in 1526, the supreme commander of the occupying German, Spanish, and Swiss troops in Lombardy, Antonio De Leyva, planned to sack the city; see Cohn, 2021.

¹⁶ Burigozzo, *Cronica Milanese*, 67; and numerous references from Sanudo, *I diarii*; and other chronicles; see Cohn, 2021.

Italian equality grounded in poverty that stemmed from the carnage of the Italian wars.¹⁷ Prato's post-1512 experience illustrates the problems of Gini coefficients for understanding trends in economic and social history. Beyond the obvious problems of fiscal data, this quantitative evidence can easily disguise diametrically opposed economic realities. More case studies, even ones from fragmented records as with Ivrea, need analysis and to be combined with narrative and other qualitative sources, especially for the post-Black Death century.

Equality and Inequality: The Importance of Qualitative Evidence

Reaching back more than fifty years, David Herlihy saw the necessity of combining quantitative with qualitative evidence to grasp economic and social change after the Black Death. In his study of the commune of Santa Maria Impruneta from the late thirteenth century into the third decade of the fifteenth century, he calculated Gini coefficients and plotted Lorenz curves¹⁸ for the distribution of taxable wealth based on three tax surveys (*estimi*) in 1307, 1319, and 1330, plus the *catasto* of 1427. These showed the progressive march of wealth inequality in this large, predominantly rural community, fifteen kilometres south of Florence (Herlihy, 1968: 256–60). Recently, Alfani and Ammannati have questioned his analysis, maintaining that the Black Death marked a reversal towards more equal wealth distribution at Impruneta, along with Italy and across most of Europe, and this trend continued through most of the fifteenth century. They rightly charged that Herlihy had not standardized the wealth distribution for the earlier *estimi* when comparing it with the *catasto* of 1427, which listed those without taxable wealth. Moreover, with additional *estimi* for 1365 and 1402, a later *catasto* in 1458, and Florence's first *decima* in 1504, they added more observations for Impruneta (Alfani & Ammannati, 2017: 1082).

However, their critique failed to acknowledge fully Herlihy's qualitative analysis or his general conclusions. These presented a radical view on the *mezzadria* system (a variant of share-cropping). Herlihy's essay marked a departure from his mentor, Robert S. Lopez, who famously argued that the Black Death led to 'the economic depression of the Renaissance' (Lopez, 1953; Lopez & Miskimin, 1962). Herlihy showed that the *mezzadria* system spread

¹⁷ One city to be studied with partial *estimi* (tax surveys) during the Italian wars (1487, 1518, and 1544) was Ivrea, where no growth in inequality occurred; instead, for a wealthier part of the city equality rose slightly; Alfani, 2010: 526.

¹⁸ A graphic means to show levels of inequality, in which a 45-degree diagonal line represents perfect equality.

dramatically from the late fourteenth century through the early fifteenth century in Impruneta and (in a later collaboration with Christiane Klapisch-Zuber) across more than a third of the Florentine state (Herlihy & Klapisch-Zuber, 1978: 268–86). During the late Middle Ages and Renaissance, this tenancy had not become the ‘cruel’ system of exploitation it would adopt a century later and that remained into the second half of the twentieth century. Instead, a new wave of urban investment in the land spawned agricultural improvements with increases in animal husbandry and diversification of crops. Vineyards and olive groves became interspersed with wheat and other grains. The *paesaggio* or agricultural organization and setting began to assume traits that continued into the twentieth century with mixtures of grains, olive groves, and vineyards in place of the previous near monoculture of wheat, ill-suited for Impruneta’s hilly and rocky terrain. These improvements were not only more salubrious for the land, they also provided healthier diets and higher profits. In addition, the *mezzadria* system shielded rural labourers from Florence’s burdensome taxation by categorizing them as ‘*nullatenenti*’ – that is, possessing no property. As Herlihy made clear, on the books *mezzadri* appeared without any taxable wealth, but in terms of their calorific intake, increases in cattle, and healthier diets, the material conditions of Florence’s peasantry improved vastly over those of the previously independent but impoverished *fictaioli*, who had owned their own plots. Herlihy concluded: ‘The agricultural labourer, able to lease good farms on good terms with the aid of cheap capital, was better off than many of his forebearers. “Depression” with its connotations of unemployment, low wages or scarcity of capital does not describe his situation’ (Herlihy, 1968: 276).¹⁹ Moreover, for rural communes close to Florence’s city walls, this post-Black Death investment in the land did not derive solely from Florentine elites. From nearly 1,000 surviving notarial land contracts redacted by the Mazzetti family of notaries between 1348 and 1426 in communities such as Santo Stefano in Pane and Sesto and up the hillsides of Monte Morello, Florentine shopkeepers and skilled artisans began investing in the land, purchasing small plots or even creating new farms (*podere*) with *mezzadria* tenancies by the 1360s (Cohn, 1999: 18–19, 102–4, 108).

Herlihy attributed these changes in city and countryside to the transformative forces of the Black Death and subsequent plagues. His arguments did not

¹⁹ Also, see Herlihy, 1967, for similar views on increases in animal husbandry, diminished demand for wheat, and ‘much stronger demand for meat, wine, oil, and wood’ (129); that the pre-Black Death agriculture had been ‘destructive of the land and . . . of people too’ (145); and that the *mezzadria* system was ‘fairer to the land and to the people, [providing] Pistoia’s Renaissance society with a firm and stable basis for its political life and cultural growth’ (147). Moreover, Pistoia’s urban economy recovered and expanded in the early fifteenth century by becoming ‘more tightly integrated within a Tuscan regional economy’ (178 and ch. 7).

depend solely on Gini coefficients. As he was well aware, the tax records had masked early fifteenth-century growth in rural wealth and prosperity. This view of the Black Death's silver lining for labour also held for Florence's urban population, as seen in his final, posthumous work (Herlihy, 1997: 47–51).²⁰ Yet, at the same time, he maintained that Tuscan societies during the fifteenth century were becoming more patrician and more unequal, both socially and politically. However, he never presented these trends as paradoxical or tried to reconcile them (Herlihy, 1967, chs. 8 and 9). Sections 2 and 3 of this Element will confront these paradoxes.

Finally, Herlihy and Klapisch-Zuber emphasized the growth of another sort of economic inequality in the Florentine state that stretched from the pre-Black Death period to at least the *Catasto* of 1427 (Herlihy, 1978; Herlihy & Klapisch-Zuber, 1978). This was an inequality between the city of Florence and its principal six cities and towns (Pisa, Pistoia, Arezzo, Prato, Volterra, and Cortona, all with populations above 3,000), its fifteen largest so-called 'villages' (places such as Empoli, San Gimignano, and Castiglion Fiorentino),²¹ and then the myriad of real villages and hamlets. Alfani and his *équipe* investigated this economic inequality between cities and their *contadi* (Alfani & Di Tulio, 2019, 102–12), but not between capital cities and their subject towns and cities. The only historians to analyse this dimension of inequality are Herlihy and Klapisch-Zuber. Yet they examined it from one date alone – 1427. From that reference point, they speculated that Florence's great concentration of wealth ('a blazing sun of affluence surrounded by dim planets of wealth in small Tuscan cities and villages'; Herlihy & Klapisch-Zuber, 1978, 249) was of recent origins and stood in sharp contrast to Tuscany before the Black Death. Certainly from the perspective of the six major cities, this speculation appears correct. During the thirteenth through the early fourteenth century, all these cities had been vigorous centres of international commerce and banking, had possessed major cloth industries, or, as in the case of Pistoia, had been the major centre of Tuscany's iron works.

This subject of geographic inequality is ripe for new investigation across the early modern period and beyond Florence's hinterland. The local histories of Tuscan towns, such as Pescia in the Valdinievole and Poppi in the

²⁰ A decade later Herlihy changed his mind slightly on the *mezzadria* system and the Black Death's long-term silver lining. While he continued seeing it sustaining large families through good and bad times, he now emphasized the skewed distribution of wealth and constraints of indebtedness to their lords that limited economic incentives for peasants and artisans alike (Herlihy, 1978: 150–4).

²¹ This was the *Catasto*'s designation. They were, instead, market towns or what are now called 'quasi-città' (Pinto & Pirillo, 2013). Collectively, these comprised 25,000 inhabitants, nearly 10 per cent of the Tuscan population (Herlihy, 1978: 136).