

CIRCULAR ECONOMY AND “CIRCULAR EXPERTISE”:  
THE SECOND-HAND MARKET AND PROFESSIONAL ESTIMATORS  
IN FIFTEENTH-CENTURY FLORENCE

*ECONOMÍA CIRCULAR Y “CONOCIMIENTO EXPERTO CIRCULAR”:  
MERCADO DE SEGUNDA MANO Y ESTIMADORES PROFESIONALES  
EN LA FLORENCIA DEL SIGLO XV*

ALESSIA MENEGHIN  
University of Bergamo  
<https://orcid.org/0000-0002-9022-0861>

*Abstract:* Making use of statutes as well as of a particular group of corporate sources, two registers entitled *Deliberazioni e Statutaria*, both promulgated in Florence by the *Arte dei rigattieri* (second-hand dealers) in the Late Middle Ages, this essay explores a crucial facet of circular economy, that of the regulation of the second-hand market in the 15<sup>th</sup> century. Control was operated through the activity of appraisers, sellers themselves, whom the *Arte* entrusted with the task of undertaking all necessary assessments of used garments that might have been required during daily transactions by different parties. By shedding light on key information like the fabrics and the fashion of second-hand clothing, this essay analyses all aspects of circular trade, from those prohibited by law, such as counterfeiting, to those adopted to facilitate business, such as the presence of officially appointed estimators.

*Keywords:* circular economy; second-hand market; Florence; fifteenth century; estimators; counterfeits; reuse & upcycling.

*Resumen:* Haciendo uso tanto de los estatutos como de un grupo particular de fuentes corporativas, dos registros llamados *Deliberazioni e Statutaria*, ambos promulgados en Florencia por el *Arte dei rigattieri* (comerciantes de segunda mano) a finales de la Edad Media, este ensayo explora un aspecto crucial de la economía circular, el de la regulación del mercado de segunda mano en el siglo XV. El control se operaba a través de la actividad de tasadores, los propios vendedores, a quienes el *Arte* encomendó la tarea de realizar todas las evaluaciones necesarias de las prendas usadas que pudieran haber sido requeridas durante las transacciones diarias, por diferentes partes. Al arrojar luz sobre información clave como los tejidos y la moda de la ropa de segunda mano, este ensayo analiza todos los aspectos del comercio circular, desde los prohibidos por la ley, como la falsificación, hasta los adoptados para facilitar los negocios, como la presencia de empresas oficiales estimadores designados.

*Palabras clave:* economía circular; mercado de segunda mano; Florencia; siglo XV; estimadores; falsificaciones; reutilización y reciclaje.

## SUMMARY

1. Introduction.– 2. Circular economy and second-hand in conversation: past & present.– 3. Professionalising the *stima*: “circular” expertise and estimators.– 4. Statutory regulations: counterfeits and prohibitions.– 5. Recycled and re-used objects and materials.– 6. Conclusions.– 7. Cited bibliography.

## 1. INTRODUCTION

By definition, circular economy aims to redefine growth, by gradually reconverting the traditional “linear” cycle of consumption –from extraction of resources to production, to consumption (and waste)– into a “circular” one, and by working waste out of the system. Circular economy is based on three essential principles: to reduce waste and pollution, to keep materials and products in use, and to revitalise natural systems. In particular attention to pollution has grown consistently over the past few years. If we go back to the past, and to the medieval one, the period object of our focus, we see that also at that time legislators were well aware of the risk that soiling the environment entailed; they emanated frequent dispositions to curb waste coming from particular industrial processes like leather tanning and dying for example –which could have detrimental effects– into the city waterways<sup>1</sup>.

However important are the issues related to contamination and pollution, this essay will not deal with them. It will focus instead on another aspect of circular economy, that is the recovery of discarded objects and their reuse, in compliance with one of its principles: *to keep materials and products in use*. It will do so by analysing the conditions that in fifteenth-century Florence allowed for these two aspects to unfold and naturally take place. Undoubtedly Florence is one of the most intensely researched cities in Europe, and the Quattrocento one of its most analysed centuries. The extraordinary wealth of data available in the many archives of the city grants scholars in social and economic history the chance to investigate on several aspects, among which, one is of crucial interest to this present essay: the means employed by the *Arte dei rigattieri* (merchants of second-hand clothing) to implement and sustain upcycling and reversion in the market of cast-offs<sup>2</sup>.

I have written extensively on the second-hand market in Florence and in the cities which formed part of its *Dominio* in the Quattrocento. We have detailed data on the way the second-hand market functioned and was regulated, but also important information on how it was supervised by especially appointed officers known as *stimatori*: we know their activity and identity within the guild due to the registers *Deliberazioni e Statutaria dei Consoli* 13 and *Deliberazioni e Statutaria dei Consoli* 14 preserved in the *fondo* of the *Arte* in the State Archive in Florence<sup>3</sup>. I argued that the market of discarded

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<sup>1</sup> See Zupko, Laures 1996; for an informed literature on the subject see also the recent Gelter 2019.

<sup>2</sup> They were one of the 14 minor guilds in Florence.

<sup>3</sup> Archivio di Stato di Firenze (henceforward ASF), *Arte dei Rigattieri Linaioli e Sarti, Deliberazioni e Statutaria dei Consoli*, 13, 14.

clothing presented the characters of a primitive prototype of circular economy: it was a model that broke up the traditional purchase-consumption-throwaway cycle, inasmuch as it involved the collection and re-use of clothing. Not only did it offer to the less well-off and others the possibility to clothe themselves at a reduced cost, but also gave new life to old items. In fact, one of the most immediate effects of the recycling of old clothing was to prolong the life cycle of valued pieces and precious materials. Although, as a matter of fact, the second-hand trade helped reduce pollution, otherwise caused by the dispersion of unwanted or worn out garments into the environment, what is important to us is to note that it fuelled the life cycle of objects, substantially contributing to reduce manufacture costs and expenditures for raw materials.

By analysing the epistemic reasons behind old upcycling practices, this essay will try to relate key aspects of circular economy, those of regulation and legislation –operated by officially appointed estimators– to our matter-of-fact knowledge of the second-hand market in fifteenth-century Florence. I shall set off by first engaging in a short, but necessary discussion as to why I believe it is essential to put in dialogue some data coming from the universe of current circular economy with yesterday’s practices. This will provide a comparative scenario which will help me to build up a frame for discussion. I shall then offer the reader detailed information on the role of estimators who apportioned used clothing and who acted under the umbrella of the *Arte dei Rigattieri*. I shall illustrate the way they were selected, and their specific duties and salaries, in the understanding that regulations but also regulators were an essential part of the recycling system. The essay will further unfold by debating on an essential theme, that is the link between statutory regulations, recycling and frauds. I shall conclude by presenting some evidence on the clients who resorted to practices of recycling, and on the goods and materials which formed part of the recycling and reconversion process.

## 2. CIRCULAR ECONOMY AND SECOND-HAND IN CONVERSATION: PAST & PRESENT

In order to understand what the circular economy was and how it worked in the Middle Ages, we start with its antithesis, the linear economy. In a linear economic model we have to imagine the process of production and use of a good as a line with a beginning and an end. In this process we can identify fundamental stages: the selection of raw materials and their first processing, the realisation of the finished products (in our case clothes and clothing accessories), their distribution, use and consumption. While all these steps meant that a sector such as fashion employed a large number of people in fifteenth-

century Florence, it also immediately revealed the criticalities of a system that produced costly items which were out of reach for many less affluent consumers if they wished to buy them new. First of all, therefore, we would say that the circular economy was certainly a response to a state of need. People in the medieval past had the habit of reusing everything, but not out of sensitivity to environmental issues and eco-sustainability. In short it was necessity that forced people to rethink alternative and different ways of consuming goods. In this sense there is an inherent risk of anachronism when talking of circular economy in preindustrial societies like fifteenth-century Florence, since despite the relationship between circularity and sharing economy existed even then, circular economy as we understand it today (when we are also using state-of-the-art technology) did and could not exist.

However, if we bear in mind that necessity was not the one and only factor shaping demand in the second-hand market (the less well-off were not the exclusive users of this type of commercial venues, which also had a distribution niche for luxury goods), and that other issues were at play, such as redistribution and sharing, we can surely think of the second-hand sector as a circular one: in fact, objects were not produced, bought and exchanged following the customary linear system only, they were also altered, profoundly modified, bequeathed, inherited, given and taken back as payments for other goods or services, used as gifts, passed down from hand to hand or throughout generations, as shown by the work of Laurent Fontaine<sup>4</sup>, or used even as pledges, as noted by Maria Giuseppina Muzzarelli<sup>5</sup>. In other words, clothes were items fuelling the market of cast-offs from a myriad of sources, susceptible to a variety of changes affecting their appearance and price (normal wear and tear, taste, driving demand for a particular type, etc.) but also people's personal circumstances (purchasing power, that could vary during one's life, depending on status and professional occupation for example).

Today cramped charity shops, little second-hand and vintage boutiques are only too familiar spots for us. However, they cannot be disjointed by the very concept of fashion, as a considerable share of the fashion system is made precisely by incomes deriving from second-hand and vintage. In fact, according to statistics carried out by Bva Doxa on behalf of Subito.it, an online platform used for selling/buying second-hand goods in Italy, in 2019 the market of cast-offs has generated a 24 billion euros turnover, amounting to 1.3 % of Italian GDP: an important figure, that has grown 33 % in the past five years, and that could grow more in the future<sup>6</sup>. Both physical shops and

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<sup>4</sup> Fontaine 2008. See also Damen 2007, pp. 81-99.

<sup>5</sup> Carboni, Muzzarelli 2012.

<sup>6</sup> <https://www.rinnovabili.it/economia-circolare/mercato-dell-usato/> [accessed: 22/03/2021].

online platforms such as eBay, Subito.it, DePop, Vestiaire Collective, and the recently born Vinted have attracted more and more people because of the Corona-Virus pandemic, but, as it seems, first-time buyers and sellers are not the only ones to make use of these resources. Regular consumers already shopped second-hand before the COVID era, and in consistent numbers. However, it seems certain that today the driving force behind this attitude to consumption is dual, both economic and ethical. In essence the chance to save up money goes hand in hand with a growing sensitivity towards environmental issues: a fairly large share of consumers believe that used items are a powerful and valid weapon to be used against waste and pollution<sup>7</sup>.

Before we go further ahead it is paramount to establish the difference between reuse and recycle, since the risk is to believe that one is synonymous with the other, and that in pre-industrial societies (characterised, it should be emphasised, by the lack of today-like cutting-edge technologies and the use of eco-friendly nanomaterials) the two practices were both feasible. To recycle means turning an object, in our case a garment, into raw material which can be used again, generally for a completely different purpose/product. To this end, one very good example in the early modern age, was the practice of wool recycling that had been carried out for centuries in the Prato district and also in the Marche, where it gave life to the rags industry to produce paper<sup>8</sup>. Conversely, to reuse refers to using the same item as it was originally intended, without any deep transformation or treatment of any kind taking place. If it is true that the second-hand market was mainly a place of reuse, but sometimes it could also be a place of recycling: this is the case, for example, of the recovery for sale of various components originating from production surpluses, such as fabrics or fabric scraps that in essence, were deadstock.

Men's recourse to cast-offs and re-using has always existed. In the medieval past of our cities to resort to used goods was the norm rather than the exception. The culture of consumption of many medieval cities simply represented one of the main *raisons d'être* of the second hand market: in fact, its ubiquitous existence show that a culture of re-using was very widespread, and transversally, in the whole medieval society<sup>9</sup>. Not only did the vast majority of population turn to this particular market on special occasions, such as when the time arose to provide for one's daughter's *donora* for example, or to buy garments for a funeral, but virtually, all-year round<sup>10</sup>. For large strata

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<sup>7</sup> On these issues, and the essential interaction between fashion industry, environment, production and consumption see Ricchetti 2017.

<sup>8</sup> Ciuffetti 2015.

<sup>9</sup> Meneghin 2020, pp. 13-15.

<sup>10</sup> *Ibidem*, pp. 122-124.

of the population practices like buying and selling cast-offs often offered the one and only solution alternative to the resort to charity or to go round dressed in tatters. We know that occasionally also well-off individuals, and even the elites resorted to second-hand.

However, if we reason on the market of second-hand, and on the overarching factors contributing to making it an essential feature of circular economy today, we must ask ourselves a crucial question: whether it is legitimate to apply, with the methods of the scientific research, a reading of practices that were unquestionably widespread and rooted in *ancien-régime* societies, although they were not necessarily introduced by the same sensitivity displayed by a twenty first-century individual to current environmental problems. Another question to be posed is whether there was a legislative apparatus regulating those aspects, and by whom it was enforced. Finally, is it possible to draw comparisons with the statutory prescriptions, in our case that of the Florentine *Arte dei Rigattieri*, and today's legislation, which we know has recently begun to produce a series of measures aimed at containing waste and pollution, by encouraging various forms of recovery of raw materials and used items<sup>11</sup>? I believe that it is reasonable to ask these questions, provided of course, that the writer, as well as the reader, are both aware of the dangers inherent in the re-reading of historical events, as critically highlighted by Tommaso di Carpegna Falconieri, in relation to concepts such as "actualization" and "presentism"<sup>12</sup>. In fact, one of the risks involved is that of giving too much weight to the psychology of the reader, according to what Giuseppe Sergi has defined "perceptual historiography": this would ensure that a non-specialist public, made up of students and lovers of history, is attracted to themes that he/she considers close, similar, assimilable to his/her own experiences, and to his/her own points of reference, thus playing up a deformed and distorting reading of historical reality<sup>13</sup>.

Naturally the relationship between sumptuary laws and circular economy also comes to mind. The limitations and prohibitions of the former, although subject to deceptions and tricks, all converged on the same intent: to reduce, if not avoid, unnecessary expenses and therefore, frivolous consumption on for example precious textiles and materials, and length of drags<sup>14</sup>. If sumptuary legislation was in some way aimed at curbing un-

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<sup>11</sup> I am thinking of EU consumer legislation regulating the right of consumers to have their purchases repaired within the period legally guaranteed by law. On this see Monier 2016; and Montalvo 2016.

<sup>12</sup> Carpegna Falconieri 2020, pp. 109-126.

<sup>13</sup> Sergi 2005, pp. 9-17.

<sup>14</sup> Muzzarelli, Campanini 2003.

controlled spending by the elite for the benefit of the commune’s coffers, in reality the link between clothing, consumption and law remains an historical, solid and persistent one also in relation to circular economy. In the second-hand market, however, the role of supervision of consumption and circulation of clothing was played not so much by sumptuary legislation –regardless of the impact it had undoubtedly on consumers’ commercial habits– rather by the regulations issued by the statutes of the guild. The statutes set out a wide range of protections: firstly towards the role of the *rigattieri*, the only ones authorised to resell second-hand clothes, and secondly towards the final consumer. Last but not least, they protected the reputation of the guild and that of all actors, and this is where especially appointed estimators came in: they enforced statutory laws adapting them to specific situations in the market of cast-offs.

### 3. PROFESSIONALISING THE *STIMA*: “CIRCULAR” EXPERTISE AND ESTIMATORS

In fifteenth-century Florence *rigattieri* made for a solid presence, especially in that commercial hub that was the Old Market. Over the fourteenth and the fifteenth centuries the reinforcement of the sector had experienced an increase in the number of workshops, *fondaci*, *fondachetti* and *botteghe di regatteria* scattered in the city centre and beyond<sup>15</sup>. This commercial expansion had pushed the *Arte*’s leaders to legislate to protect its members and their reputation, in the understanding that within a market more and more driven by stringent rules, to be reliable and to be perceived as honest businessmen, was essentially the same thing: an indispensable tool to favour the corporatism of the trade and, ultimately, to facilitate business. In particular, it was vital to provide clear guidelines for the trade and its regulation, since used clothes did not have a price list or *tariffario*: it is likely that in the past this had been responsible of various attempts of commercial fraud. Therefore sometimes in the fourteenth century (the precise date is unknown) the *Arte* adopted a critical initiative, and officially appointed *stimatori* with the task of estimating items, in a way regulated by law:

s’è fatto ordine e statuito nella nostra università [di istituire degli stimatori] per [porre] freno alla fraude (...) perche l’astutia (sic) delli uomini spesse volte avanza la forza delle leggi<sup>16</sup>.

<sup>15</sup> Meneghin 2020, pp. 76-83.

<sup>16</sup> “Orders have been made and established in our corporation [to set up appraisers] to [curb] fraud ... because the cunning of men frequently exceeds the force of the law”, ASF, Arte dei Rigattieri e Linaioli, f. 63v.

The *stimatore* in Florence has long been *sottostimato* (underestimated) by historians, despite his importance and his professional proximity to brokers<sup>17</sup>. More in general scarce attention has been dedicated to this figure, although a few scattered studies concentrated on different realities<sup>18</sup>. Even less consideration has been paid to the legislation bounding and regulating the activity of Florentine estimators. We are lucky to possess the *Deliberazioni e Statutaria* registers which are of extreme relevance to the subject of expertise and assessment. Not only they include the complete list of all *rigattieri* who were chosen to perform as estimators in the years 1446-1452 and 1471-1475<sup>19</sup>, providing for the full and comprehensive definition of the profession and its regulation even in the smallest details, but also offer minute details on the actors, revealing the estimated price for almost all items inspected. Moreover, they are incredibly rich with descriptions pertaining to the shape, colour and materials that composed the re-used clothing that estimators were called upon to evaluate. The two registers slightly differ for one element: while the data coming from *Deliberazioni e Statutaria* 13 (which covers the years 1446-1452) contain records of items just purchased or about to be purchased, submitted by potential buyers in agreement with the seller to be estimated, in register 14 (which covers the years 1471-1475), those who turned to the estimators were almost certainly heirs, those who had been bequeathed goods.

In valuing used chattels, garments and items of various kind estimators functioned as mediators between the commercialization of re-used goods and their purchase in view of a partial or full re-employment, in a system that resembled very closely the current model of circular economy. This meant that in Florence the office of those chosen to act as estimators transcended the realm of private economic relationship, that is the simple commercial mediation between vendor (the *rigattiere*) and client, to enter that of public law, by

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<sup>17</sup> Laurent Feller is arguably the leading expert on the theme of expertise and assessment: Gazeau 2011; Feller 2013; Denjean, Feller 2013; Feller, Rodriguez 2016. The character of the estimator is different from that of the broker, although they can be both seen as intermediaries between buyers and sellers. However, the latter would not determine the price of a particular item of clothing or accessory, although he was able to influence, with his expertise, the circuits of the sale and even the tastes of the potential buyer. To this regard see the work on late medieval Aragon by García Marsilla, Navarro Espinach, Vela Aulesa 2015. This subject has generated much interest and produced a vast bibliography also among art historians such as Welch 2002, and Antenhofer 2016, who have both studied the various ways of purchasing goods via *familiari* at the court of the Gonzaga; and Krohn 2003, who has shown that the statutes of the *Arte dei Medici e Speciali* regulated the practice of *stima* of works of art since the mid-Trecento, although it would only be in 1471 that the painters' guild in Florence created a sort of *vademecum* for evaluators.

<sup>18</sup> Cohen, Cohen 2010, pp. 480-481. On the role of estimators for evaluating luxury objects see Feller 2014; and again García Marsilla 2016; see also Stabel 2007, pp. 53-70.

<sup>19</sup> For a complete list of estimators see Meneghin 2020, pp. 116-119, tabs. 4.1, 4.2, 4.3, 4.4.



assuming the character of official controller representative of the guild. Over time, the guild seemed committed to put under stricter surveillance this last prerogative, the control and regulation of estimates at the time of a sale, perhaps looking for a compensation to the progressive decrease of its political role during the fifteenth century (especially from the last decades of the century). Since the estimators were the guild’s “instruments” of control and emissaries of trust in the mercantile trade, the guild became increasingly involved in keeping this category subjected, and in further clarifying its obligations, prohibitions, and boundaries, enacting a series of norms and legislation aimed at accentuating the formal function of the *stimatori*<sup>20</sup>.

The *rigattieri*’s broad and accurate knowledge of the merchandise and the market, its ebbs and flows, its people and products, its stock chains and payment methods made them the natural guarantors for the establishment of the *giusto prezzo* (fair price). This is not the place to embark into a discussion about the fair price, on which an extensive literature has been published<sup>21</sup>. It will suffice to say that the *stimatori*’s authority in these matters was considered beyond dispute, and also that there were many variable factors which concurred to radically alter the price of used clothing, such as the state of conservation, one’s effective ability to reuse the purchase item, the material of manufacture, the demand for that product at a given moment. In general, estimations facilitated transactions especially in those cases where two parties were involved in the deal: heirs and the executor of an estate, two parties to a marriage, seller and purchaser.

Originally, the appointment of the estimator lasted one year, although it was later reduced to four months; at the beginning of the period he was obliged to commit himself, with an oath pronounced on the Bible in the presence of the consuls of the *Arte*, to the obedience to the statutes, and to the honest and diligent exercise of the profession. The obligation of the oath was accompanied by that of the payment of £10 (a sort of licence to exercise the profession) from which the *Arte* could withdraw money in the case of future fines imposed on the estimator, thus preventing the possibility that such sanctions could remain unpaid. In addition to the oath and the payment of the money, another element of the procedure for admission to the post of *stimatore* was the approval of the candidates, conducted by secret ballot by the consuls and the council of the *Arte*<sup>22</sup>.

We know that each *stimatore* was paid a sum of d 2 for each £1 (0.83 %) of value of the goods estimated in each transaction. If this figure seems

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<sup>20</sup> *Ibidem*, pp. 116-124.

<sup>21</sup> For a detailed survey on the bibliography and the discussion on the fair price, or *giusto prezzo* see Martinat 2008; García Marsilla 2017; Pepke 2017; Meneghin 2020, pp. 111-115.

<sup>22</sup> ASF, Arte dei Rigattieri Linaioli e Sarti, *Deliberazioni e Statutaria dei Consoli*, 13, f. 42r-v.

low, however, we must consider that some items, especially luxurious ones, could be valued several *lire* if not dozens of florins. Estimation was a very specialized market which implies that it was also very hierarchical, even from an economic point of view, that is they could also receive higher payments in virtue of the high consideration enjoyed. This could add substantially to the payment due to them<sup>23</sup>. Thus trust, based on reputation and excellent conduct in business, was a key element in the relationship between the *Arte* and the estimators, and between the latter and their clients.

The *stimatore's* function of control was manifested first of all in the fulfillment of one of his principal tasks: the recording of estimates in a notebook that was to be made available to the bursar and to the notary of the *Arte*. To the registration of the estimator's *stime* was attributed a probative value. In fact, in the event that after the assessments disputes arose between the contracting parties, the writing of the appraiser was called into question as a determining testimony for the resolution of the controversy. For this reason, this writing must always be kept at the disposal of the consuls and the notary of the *Arte*. This is a very relevant aspect in the profession of a *stimatore*, which assumes a marked official character: above all in the act of registration of the *stima*, which is the drafting of a document of publicly recognized value, the estimator appears to carry out a specific task as official representative of the *Arte*<sup>24</sup>. There is also another value that over time, the registration of the *stimatore* takes on, even more important than being a proof for commercial disputes: it represents an effective instrument of control, especially of financial nature. In fact, at any time the *Arte* can inquire about the extent of the earnings of its estimators and the dealings concluded by them; and still can monitor the honesty of the estimated price of the goods (all this of course provided that the estimator's notebook corresponded to reality). The writing of the estimator could also be used for other purposes such as helping to hinder the free commercial initiative in the event that the *Arte* intended to apply corporatist measures such as the imposition of certain prices.

A last critical element of estimators' reliability became their tendency to frequently perform *stime* at the many *botteghe's* of *rigattieri*. Business that generally took place in a shop was characterized by so many commercial, statutory and legislative constraints that it was a *locus* of trust. If a fraud, for example, was committed in a shop against a customer, the *rigattiere* could be immediately tracked down and convicted, and answer for his crime; conversely, transactions that occurred on the street or in the squares offered no guarantee on the quality of the products sold, nor safety of any kind to the client.

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<sup>23</sup> Meneghin 2020, pp. 116-119.

<sup>24</sup> ASF, Arte dei Rigattieri Linaioli e Sarti, *Deliberazioni e Statutaria dei Consoli*, 13, f. 64r.

## 4. STATUTORY REGULATIONS: COUNTERFEITS AND PROHIBITIONS

The medieval model of circular economy in Florence was not supported by any specific legislation enacted by specialized policy makers<sup>25</sup>; it was therefore the *Arte dei rigattieri* that deliberated in this sense, delegated directly by civic authorities. In turn, the *Arte*'s consuls, entrusting the estimators with the supervision of market practices, assigned them a professional function, officially recognized by the authorities and by all Florentine society.

The earliest known statutes of the *rigattieri* date to 1296. Reformed statutes appeared in 1318 and in 1324, while the statutes of 1340 bear the mark of the merge with the *linaioli*<sup>26</sup>. The latest version is the most complete one, and like the others relate to administrative, representative, commercial, and managerial aspects of the *Arte*<sup>27</sup>. All throughout, the statutes contain specific headings destined to deal with the regulation of re-using practices and the selling of re-used products. In general, the norms held within conveyed rules for the conduct and business of the *artieri* (members of the *Arte*). However, it should be specified that the directives aimed at managing and monitoring interventions and/or manipulations of items put up for sale, were intended instead for the protection of the quality of the garments traded. Expressed and reiterated over the years, these regulations established severe penalties for non-compliance. As a general rule penalties were generally pecuniary and reflected the need to limit the damage that infringement of laws could cause to the reputation of the *Arte* as a whole. One of the reasons these norms were repeatedly reinforced in the statutes is plain: in the absence of clear rules by competent authorities (we have seen that no price list for used garments existed), this inevitably led to unfair competition due to the alteration of the rules of access to the market of second-hand, in this case translated into counterfeit and significant alteration of the products for sale. The stricter disciplinary sanctions were in fact provided for those who contravened those rules definable as professional ethics. Not only second-hand dealers, to be reliable, had to acquire a monopoly on the sale of second-hand goods, but, since they had been

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<sup>25</sup> Although the general principles of circular economy began to find a systematization since the 1990s, only recently they have been taken as a starting point for the definition of international and national policies, adopted worldwide for smoothing the transition towards a virtuous model of economy. In 2016 the European Environment Agency published a document (n.º2/2016), “Circular Economy in Europe - Developing the knowledge base”, rationally defining the application methods for achieving the objectives of circular economy. The Ellen MacArthur Foundation – a non-profit charitable organisation born in 2009 with the goal of reaching a sustainable model of economy – contributed significantly to its drafting, demonstrating its authoritative weight in providing universally recognized elements of policy making.

<sup>26</sup> On the merge with the *linaioli* see Meneghin 2020, pp. 50-52.

<sup>27</sup> *Ibidem*, pp. 51-52.

entrusted by the authorities with the task of carrying out quality control of the products they were selling, they had to comply with strict regulations. This was to protect that same quality of the product, and that corporate ethics which, given the nature of the profession and the absence, as we have seen, of previous legislation on the subject, made it all too susceptible to fraud and counterfeits of all kinds.

If sanctions were generally applied to *rigattieri*, also estimators could commit frauds, but it is peculiar that in the *Deliberationi e Statutaria*, so customarily careful to regulate even the most minute aspects of the profession, there is no reference to this, apart from a rather laconic recommendation that the *stima* must be done “honestly and judiciously” (*onestamente e giudiziosamente*<sup>28</sup>), else, the *stimatore* would be fined and removed from his appointment. One wonders who did police them in such cases, the *Arte*, the institutional bodies of the city, the market, or the social commentary? In fact, there was an inherent weakness in the estimates of large batches of goods, which was determined by the lack of possibility of having a large number of estimators, each specialized in a particular sector. In turn, this would have entailed a separation of control tasks and probably required a very high number of *stimatori* instead of the two performing together at each *stima*.

The prohibitions contained in the statutes that interest us more –since they would most closely concern aspects of circular economy, and entail penalties if disattended– can be divided into three categories: rejuvenations and dyeing, alterations and re-fashioning, barter and exchanges. The first set of prohibitions concerns using “chemical” reagents and mechanical processes to make clothes look newer than they were originally. The veto on *follatura* (fulling) or mechanical compression to make the item look compact, light, and soft, appeared in the statutes of 1296, *de non faciendo pannos follatos*, and was renewed in the statutes of 1318, *de non rinfollando vel rimbórrando pannos*, and in 1340, *de non rinfollando vel rimbórrando pannos*<sup>29</sup>. The ban related to the sale of *marezzati* clothing, *de non vendendo aliquem pannum maregiatum*, sets back to 1296, and was reinforced in 1340: the cloth *marezzato* –that is immersed in sea water– tended to present stripes due to the remnants of salt on the surface, which recalled the colour and resembled the sinuosity of certain silks<sup>30</sup>. Moreover, the interdiction to starch and re-stuff old padded jackets and doublets, and even to use soap, hot water and washing soda to clean the garments, *de non reactandis pannis veteribus cum sapone et aqua calida vel sodandis ad ceppum* –something which does indeed sound strange to the

<sup>28</sup> ASF, *Arte dei Rigattieri Linaioli*, 7, f. 62v.

<sup>29</sup> Sartini 1940-1948, pp. 19-20, 65-66, 211-212.

<sup>30</sup> *Ibidem*, pp. 34, 214.

modern reader— finds place in the statutes of 1296, 1318, 1324, and 1340<sup>31</sup>. This first category also includes the prohibition of dyeing old clothes in a different colour, indigo blue for example (1318, *quod nullus tingat pannos cum indaco*, reinforced in 1324 and 1340)<sup>32</sup>.

The washing and dyeing of old garments was part of a large pattern of textile-rejuvenation. The underlying sense of these rules is clearly to be interpreted as an attempt to limit resort to counterfeiting. The continuous reiteration in the statutes, of punishments for the crimes of “counterfeiting” of used goods is very strong: in the presence of a counterfeited item, or of an old item sold as new, the pecuniary penalty (imposed on those who tried to sell such items to others) was very high, 21 florins, in virtue of the principle that counterfeited goods were, precisely like counterfeited coins, a crime punished severely. If one bears in mind that the matriculation fee for *rigattieri* joining *ex novo* the corporation was three gold florins (ten *lire* for *rigattieri* from the *contado*), it is obvious that the lofty sum of 21 florins reflected the extreme gravity of the corresponding offence<sup>33</sup>.

The second set of prohibitions pertains to upcycle, and concerns limitations on the making of *gonnelle*, mantels or *sottane* and doublets from veils, curtains, blankets, and even sacred vestments (1296, *de non faciendo farsitia vel copertoria vel alia laboreria da velis cremonensibus vel tentoriis tendis vel trabacchis*; 1318, *quod nullus faciat vel vendat farsitia guarnella vel sottana de velis*; 1340, *de non faciendo vel vendendo farsitia vel sottana aut copertoria de velis*). In this group also falls the ban of crafting mixed clothing and jackets, probably made with parts of different fabrics, or even with parts more or less new and others more or less used: 1296, *de non faciendo farsitia mista de stuppa et bonbice*; 1318, *quod non fiant farsitia mista*; 1324, *quod non fiant farsitia mista*; 1340, *de non faciendo farsitia mista*, and *de non faciendo iubbam mixtam*<sup>34</sup>.

The third set of prohibitions is concerned with systems of payment and exchange of goods, or bartering. Barter was another vetoed activity. While in practice *rigattieri* often exchanged their unsold merchandise for other goods, barter had no fixed written rules, as the *Arte* claimed in its statutes, and as such must be avoided at all costs<sup>35</sup>. Furthermore, the estimator must not join in sales as a seller or buyer, in order to participate later in the resale of clothes and objects previously acquired. To this end, it was established that it could

<sup>31</sup> *Ibidem*, pp. 23-24, 67-68, 119-120, 213-214.

<sup>32</sup> *Ibidem*, pp. 76, 128, 218.

<sup>33</sup> Meneghin 2020, pp. 43-44.

<sup>34</sup> Sartini 1940-1948, pp. 15, 64, 210.

<sup>35</sup> Meneghin 2020, p. 41.

not be sold any used clothing or object *per modum baroccholi vel conii*<sup>36</sup>. The term *baroccholo* or *baroccolo* is a derivative of *baro*, that is cheater, and the term *coniare* meant “to deceive”: they likely both indicated unfair tricks taking place, disguised by selling something, by giving it or paying for it an exaggerated price<sup>37</sup>. This prescription was repeated in the statutes of 1318, 1324 and 1340.

Finally, one important obligation spelled throughout all four statutory versions was to entrust those garments to be put up for sale to *curandarii* and menders of proven reliability only (*de non dandum ad curandum pannos aliquibus aliquibus curandariis nisi satisdent*)<sup>38</sup>.

## 5. RECYCLED AND RE-USED OBJECTS AND MATERIALS

Shopping habits and consumer culture have always played a major role in determining the possibility of recovering products made from recycled material. However, the reuse of clothing, according to a process that today would make us think about the much praised “sustainable economy”, in the Middle Ages was rather linked to the inability to produce consumer goods in large quantities at affordable prices. The very existence of minute regulations pertaining to the sphere of activity of *rigattieri*, and regulating the intervention of the estimators to the smallest details, demonstrates that reuse and recycling were in fact not only practiced, but even preferred by large sections of the urban population.

We must not forget one essential principle: this type of market allowed the potential customer to choose among a wide variety of garments in different colours, shapes and fashion. However, the “circular” nature of the second-hand market meant essentially that one laid his/her hands on what was available at a given moment. Tastes, needs, even desires, had to go along with what was on offer. We may even say that demand was shaped by supply.

Generally, used goods went through a selection process which we must imagine be a rather sloppy one for the garments intended for a clientele of basic to low needs; conversely it was most likely quite strict for those garments considered appealing or even luxurious, destined for a clientele of greater financial means. Clothes which were reused in the same shape, could be recontextualised for different functions, or even enhanced, thanks to the work of the tailors who worked for the *Arte*, whose interventions creatively

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<sup>36</sup> Sartini 1940-1948, pp. 79-80, 130, 219.

<sup>37</sup> D’Errico 1994.

<sup>38</sup> Sartini 1940-1948, pp. 159, 207.

modified the garments' appearance, fashion, and general measures. Re-contextualisation and creative intervention generally gave rise to upcycling, in which the value of the reused dress or object could be greater than that of the product in its original use. In this sense, by making use of the work of tailors and menders, second-hand dealers were at the forefront of the trend towards the diffusion of upcycling of already-used clothing and accessories.

The fate of clothing therefore varied depending on what could be recovered. The most extreme solution was recycling; hence the focus was on the recovery of materials or constituent elements of a garment. Trimmings and other distinctive decorations for instance could be easily stripped from clothing, and could be rapidly altered into other sorts of items. When Piero di Francesco da Vicchio, a servant of the *Parte Guelfa* in Florence in the fifteenth century turned to a tailor, Giovanni d'Antonio nicknamed *Tesoro* for adjustment in 1451 of one of his pieces of cloth (“he made me a *lucco* by converting a cloak”, *per acconciatura di un mantello mi ci fece un lucco*), and to turn a garment inside-out (*per rivoltare da capo a piè un lucchetto verde*) as it was probably worn on one side, his request was made specifically in this spirit<sup>39</sup>. This process was indeed a kind of remanufacturing, whereby an already finished item could be conspicuously modified. In this case, the individual materials retained their original function, but the individual components were used to alter an object or to distort it to the point of creating something totally new. This was a field that required a great deal of ingenuity and often manual dexterity and could be an excellent breeding ground for new entrepreneurial ideas. And it was here that *rigattieri*, often commissioning remanufacturing to tailors or others artisans subjected to the guild, showed a high spirit of guile and adaptability, since they realised that the multiform possibilities offered in this field could in fact contribute to enhancing business opportunities. After all, the very *raison d'être* of the *Arte dei Rigattieri* was based on this principle: using other people's necessity as an incentive for the creation of their own business opportunities.

We have chosen to include in the following tables only clothes and clothing accessories, although everyday objects, like mattresses, blankets, cutlery, jewellery, books, knives, weapons and even, occasionally, musical instruments also appear among the goods appraised. We shall begin with the tables for the years 1446-1452, which contain, listed in decreasing number of occurrences, all types of garments/accessories submitted by potential clients for estimates. Let us remember that these data most likely reflected purchases about to be made, which potential clients wanted to have assessed by the expert eye of an official

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<sup>39</sup> Meneghin 2015, p. 61.

estimator before making any decision. What immediately comes to one's eye, is the great number of tunics, 39. These garments were considered a necessary, essential layer to a man's ensemble. They were worn over the *farsetto* (doublet) and the *camicia* (blouse). In Florence they could take many names and be of variable lengths: sometimes there could be shorter versions, like the *giubbe*, or slightly longer ones (*cioppe*), or be in the shape of sleeveless *giornee*, or even appear in the traditional version worn by Florentine magnates, the *lucchi*. All the tunics could be of various style, narrow, open down the front, pleated, and be fully or partially lined for winter protection. The 14 overcloaks (mantels and *clamidi*) were worn over the tunics, for further warmth, or simply for cutting a nice figure while parading the streets of Florence. Incidentally, these two types of garments were also among those which required more *braccia* of fabric to be fashioned, and were therefore the most expensive to have made bespoke by a tailor<sup>40</sup>. Then, there followed shoes, *gamurre* (women's dresses, or basic gowns), *gonnelle* (simple shift garments for both men and women, or housegown), *cappucci* and berets, *guarnelli* (simple garments made of undyed fabric) and so on.

Table 1. Types and number of garments and accessories assessed<sup>41</sup>

DESCRIPTION	MS. ORIGINAL	N.° OF ITEMS
Gowns (long, full length)	<i>Tuniche</i>	39
Overcloaks	<i>Mantelli &amp; clamidi</i>	14
Shoes	<i>Caligae</i>	8
Gowns (woman)	<i>Gamurre</i>	7
Garments (woman/child)	<i>Gonnelle / gonnellini</i>	6
Hats & headgears	<i>Cappucci / mazzocchi / cappelli</i>	6
Overgowns (with sleeves)	<i>Sacchi / cioppe</i>	6
Belts	<i>Cintole</i>	5
Overdresses (long, sleeveless)	<i>Giornee</i>	5
Linings	<i>Foderi</i>	4
Clothes	<i>Guarnelli</i>	3
Bags	<i>Borse</i>	1
Detachable sleeves	<i>Maniche</i>	1 pair
Headscarves	<i>Asciugatoi</i>	1
Jackets	<i>Giacche</i>	1

If we look instead at the table for the years 1471-1475, it does not come at a surprise that the most conspicuous type of garments and accessories

<sup>40</sup> Collier Frick 2002, pp. 159-161; Appendix 3, pp. 231-232. The Florentine *braccio* –an arm's length– measured 0,583 mt.

<sup>41</sup> ASF, Arte dei Rigattieri Linaiole e Sarti, *Deliberazioni e Statutaria dei Consoli*, 13, 1446-1452.



estimated were handkerchiefs and headscarves (followed, again, by tunics, *gamurre* and *clamidi*). As seen, these data contain information on pieces of clothing bequeathed by masters, relatives, parents to people who had then decided to bring them about for estimation before selling them. *Fazzoletti* and *sciugatoi*, or *asciugatoi* were basic elements of a woman’s ensemble featuring in many medieval *trousseaux*, such as the Minerbetti’s analyzed in detail by Carole Collier Frick, or many others<sup>42</sup>. Not even the poorest *donora* lacked a *fazzoletto* and/or a *sciugatoio* and some linen; it was among the objects most frequently bequeathed from woman to woman.

Table 2. Types and number of garments and accessories assessed<sup>43</sup>

DESCRIPTION	MS. ORIGINAL	N.º OF ITEMS
Handkerchiefs	<i>Fazzoletti</i>	60
Headscarves	<i>Asciugatoi</i>	28
Gowns (long, full length)	<i>Tuniche</i>	26
Gowns (woman)	<i>Gamurre</i>	15
Overcloaks	<i>Clamidi / cappe / mantelli / catalani / gabbanelle</i>	14
Hats & headgears	<i>Cappucci / berretti / berrette</i>	8
Detachable sleeves	<i>Maniche</i>	5 pair + 1
Overdresses (long, sleeveless, women)	<i>Giornee</i>	6
Belts	<i>Cintole</i>	5
Overgowns (with sleeves)	<i>Cioppe</i>	5
Nightgowns	<i>Guardacuori</i>	3
Shirts	<i>Camicie</i>	3
Doublets	<i>Farsetti</i>	2
Garments (woman / child)	<i>Gonnelle</i>	2
Jackets	<i>Giacche</i>	2
Aprons (for housework)	<i>Grembiuli</i>	1
Bags (square leather bags)	<i>Scarselle</i>	1
Clothes	<i>Guarnelli</i>	1
Gowns (long, sleeveless, men)	<i>Lucchi</i>	1
Overgowns (amply cut, full-length)	<i>Guardanappa</i>	1

If we now turn our attention to the fabrics brought up for inspection and assessment, the sources show that silk and wool<sup>44</sup> predominated, although

<sup>42</sup> *Ibidem*, pp. 233-239.

<sup>43</sup> ASF, Arte dei Rigattieri Linaiole e Sarti, *Deliberazioni e Statutaria dei Consoli*, 14, 1471-1475.

<sup>44</sup> Since the literature on wool is huge I shall not attempt to give an exhaustive list of published works. I shall only mention the classic work by Hoshino 1980, and the bibliography in the most recent book by Ammannati 2020.

the occasional garment made of linen or cotton could also show up. The production of silk fabrics, a monopoly of Byzantium during the High Middle Ages, spread to the Mediterranean West through Sicily and Muslim Spain, and in the thirteenth and fourteenth centuries had a great development in Italy, particularly in Lucca and later in Genoa, Venice, and Florence. The growing international demand for luxury fabrics, and therefore primarily for silks, had some repercussions also on the nature of the demand for used clothing<sup>45</sup>. This required on the part of those who estimated a continuous update on the type and costs, something that only an expert seller possessed. They knew for example that the most precious fabrics, velvets or satin gold brocades, had a very limited diffusion but demanded high costs, even when presented in bad state (thus described as *tristi* or *frusti*), while the less rich ones, such as *taffeta* and smooth or worked satin, such as damask, were used more frequently, to make accessories (bags, belts) or entire dresses. Along with silks (*broccati*, *damaschini*, *lucchesini*, satins, *taffetà*<sup>46</sup>, velvets<sup>47</sup>), there were linens, cotton (*boccaccino*, *guarnello*, *sargie*, *valescio*), and wool fabrics (*bigello*, *panni di San Martino*, *perpignano*, *rasce*), whose variation in market prices were important<sup>48</sup>.

The ability of estimators to recognise and distinguish different types of silks, wool and other fabrics as well as items of different nature and function, and colours (*alessandrino*, black, *bruschino*, *celestino*, *grana*, green, *marmorino*, *monachino*, *morello*, *moscavolieri*, *oricello*, *pagonazzo* or *pavonazzo*, red, *rosato*, *scarlattino* and *turchino* are only a few among those documented in the *Deliberazioni e Statutaria* registers) is indeed startling. For example, garments made of *velluti* were picked out immediately and differentiated, and the *stima* carried out accordingly without hesitation. *Stimatori* knew well that velvets composed a very heterogeneous group, where the costs were given by the processing (the cheapest *velluti* were plain, then there were those a *due peli* or a *tre peli di altezze addobbate*, that is, velvet with either two or three pile warps per dent of the reed), by the presence of gold or silver threads woven into the weft, and by the colouring, the most expensive of which was *chermisi*. A plain new *pezza* of crimson velvet could fetch several

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<sup>45</sup> As for wool, the number of scholars who have worked on silk is massive. Mandatory references are to some of the contributions in Cavaciocchi 1993, and to the work by Edler de Roover 1999. An enormous amount of publications has followed thereafter. For convenience I refer to Molà 2000 and Tognetti 2002.

<sup>46</sup> Mostly dyed in *grana*, on which see Hoshino 2001, pp. 23-39.

<sup>47</sup> On velvets see Tognetti 2002, pp. 114-118. Velvets mentioned were coloured in *alessandrino*, *chermisi*, *scarlattino*, *verde* and were often *appicciolati*, that is "A type of striped damask or damask with a flower motif that contrasted with the background", Collier Frick 2002, p. 301.

<sup>48</sup> *Ibidem*, *passim*.

florins per *braccio*. For a pair of detachable sleeves in crimson velvet that the *famiglio* Antonio di Nanni had received as a legacy from Antonio di Papi, the appraisers Cristofano di Angelo di Cristofano and Bene di Giovanni Delbene issued an estimate of £8<sup>49</sup>. A *pezza* of only two *braccia* of the same material and colour (*velluto chermisi*<sup>50</sup>), belonging to a woman, Nunzia di Raggi and her son, also a second-hand dealer, was valued at £12 by Tommaso di Ser Piero and Antonio di Paolo<sup>51</sup>. In those same years a specialized worker, a bricklayer working in one of the numerous construction sites opened in Florence, was paid 19.6 *soldi* a day, while an unskilled worker received 11 *soldi*. The three basic elements of the diet of an adult individual, namely wheat, meat and wine respectively cost 16 *soldi* per bushel (about 18 kg, enough to feed a family of three for a month), 24 *soldi* a pound (gr. 339.5) of gelding or calf, and 63 *soldi* a barrel (lt. 40.7)<sup>52</sup>. It is adamant that the estimate of £260 (nearly 50 *fiorini larghi di grossi*<sup>53</sup>) made on a woman’s open-sleeved *chermisi* velvet dress (assessed, to be true, along with a white bed blanket) was a very high figure. A comparison with some of the above prices for basic food helps us to gauge a sense of its value<sup>54</sup>. Naturally, the “circular consumption” practices, by this time transversally widespread and popular, helped to reduce costs and save up on necessary purchases.

## 6. CONCLUSIONS

Today, when we speak of circular economy, we speak of waste recovery, reconversion, respect for the environment, and greater social and economic opportunities for everyone. From an historical point of view, the responsibly ethical management of resources is only a recent “discovery”. If we look at the past, at the Middle Ages, long before the industrial revolution set in, no moral obligation was overwhelmingly felt as a priority, and even when institutions and governments regulated aspects of public use of resources they did so very rarely with an eye to preserve their world for future generations<sup>55</sup>,

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<sup>49</sup> ASF, Arte dei Rigattieri Linaioli e Sarti, *Deliberazioni e Statutaria dei Consoli*, 14, f. 147v.

<sup>50</sup> In 1448, to make a pair of detachable sleeves, it was necessary roughly between one and a half and two and a half *braccia* of fabric, Collier Frick 2002, p. 232.

<sup>51</sup> ASF, Arte dei Rigattieri Linaioli e Sarti, *Deliberazioni e Statutaria dei Consoli*, 13, f. 62r.

<sup>52</sup> Tognetti 1995, pp. 318, 320, 326, 332.

<sup>53</sup> The *fiorino largo di grossi* was most likely the one used for this transaction, see Goldthwaite, Mandich 1994, p. 96.

<sup>54</sup> ASF, Arte dei Rigattieri Linaioli e Sarti, *Deliberazioni e Statutaria dei Consoli*, 13, f. 22v.

<sup>55</sup> These are the major driving forces nowadays: responsibility towards the environment and the adoption of an environmental-friendly mindset. In particular, after the acceleration

rather, they did it because resources were far and scarce, and access to them was, in fact, *the* true compelling issue.

The flow of textiles, clothing and accessories that fuelled the consumption of fashion in fifteenth-century Florence was considerable. The consumption options that consumers faced were determined first and foremost by their financial ability. The principle according to which the second-hand market, where it was possible to obtain clothing at reduced prices, responded to multiple needs and solved different problems, should not be separated from considerations about its function as a collector of experiences of “circular consumption”: if reconversion, the base principle of waste reduction, implies the retrieval of an item, or part of it, in view of its reuse, then one of the most obvious and natural venue for this was undoubtedly the second-hand market. We have seen that not even the elite disdainfully eschewed this practice, therefore we can say that the recovery of clothing and “secondary” raw materials was not hampered by the idea that the consumer would purchase a product “inferior” to new ones.

The definition of circular economy, as provided in the opening page of the site of the Ellen Macarthur Foundation reads that *a circular economy is based on the principles of designing our waste and pollution, keeping products and materials in use, and regenerating natural systems*<sup>56</sup>. To keep *products and materials in use* was precisely what the market of cast-offs was about. In this sense, the continuous recycling and reuse of parts of, or whole clothes –handed over from person to person– to make others, is a clear example that continuity of certain practices can indeed be observed between past and present, and that the *Arte dei rigattieri* in Florence performed a function of which nowadays shops and platforms for second-hand are essentially a replica. Of course it is the duty of an historian to reason on the motivations behind re-using in the fifteenth century: cost of raw materials and/or unavailability of items in great number and varieties. Whatever were the motivations behind each second-hand purchase, it is nonetheless important to underline two key outcomes here: waste minimization, and avoidance of “resource-loops”.

We have seen that the role today performed by regulatory bodies and institutions is comparable to that of *stimatori*: as potential buyers and sellers resorted to *rigattieri* not only to purchase affordable clothing but

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that the awareness to the issue of climate change has had with the birth of the international climate movement called *Fridays for Future*, everyone is alerted to the problems concerning the burnout of current resources; institutions, governments, organisations, single actors are all concerned about the impelling need to find a way out from the linear cycle of production-consumption-waste that –as scientists pointed out– may soon exhaust the planet.

<sup>56</sup> <https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy> [accessed: 21/03/2021].

also to have their belongings estimated, since they rightly regarded them as experts in assessing and apportioning, we may say that the *stimatori* had a crucial role in contributing to define the boundaries and operational guidelines of the market of cast-offs. When supervising these particular consumption dispositions during everyday transactions, they operated, *de facto*, like agents of circular economy.

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