The armour of the common soldier in the late middle ages.
Harnischrödel as sources for the history of urban martial culture

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Abstract – The designation Harnischrödel (rolls of armour) lumps together different kinds of urban inventories. They list the names of citizens and inhabitants together with the armour they owned, were compelled to acquire within their civic obligations, or were obliged to lend to able-bodied men. This contribution systematically introduces Harnischrödel of the 14th and 15th c. as important sources for the history of urban martial culture. On the basis of lists preserved in the archives of Swiss towns, it concentrates on information pertaining to the type and quality of an average urban soldier's gear. Although the results of this analysis are only preliminary – at this point, it is not possible to produce methodologically sound statistics –, the value of the lists as sources is readily evident, as only a smattering of the once massive quantity of actual objects has survived down to the present time.

Keywords – armour, common soldier, source, methodology, urban martial culture, town, middle ages.

I. INTRODUCTION

The designation *Harnischrödel* ("rolls[1] of armour") lumps together different kinds of urban inventories. They list the names of citizens and inhabitants together with the armour they owned, were compelled to acquire within their civic obligations, or were obliged to lend to able-bodied men.

Harnischrödel resulted from the need to assess the military resources of the town and its territory available in times of acute military danger. They therefore were not produced on a regular basis, but occasionally, and were not necessarily preserved once the immediate necessity was over. However, *Harnischrödel* (or differently termed lists with the same purposes), dating from the 14th and 15th c., do occur in sufficient number and are today extant within archives of towns within a sufficiently wide geographical range that they can be described and analysed as a group of typical late medieval urban documents.

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[1] Like the word "roll", the Middle High German word *rödel* derives from the latin word *rotulus*. In contrast to the English rolls, however, the lists discussed here were typically written on oblong sheets of paper that were folded in the middle, thus forming a slim booklet (see figure 1 and 2).
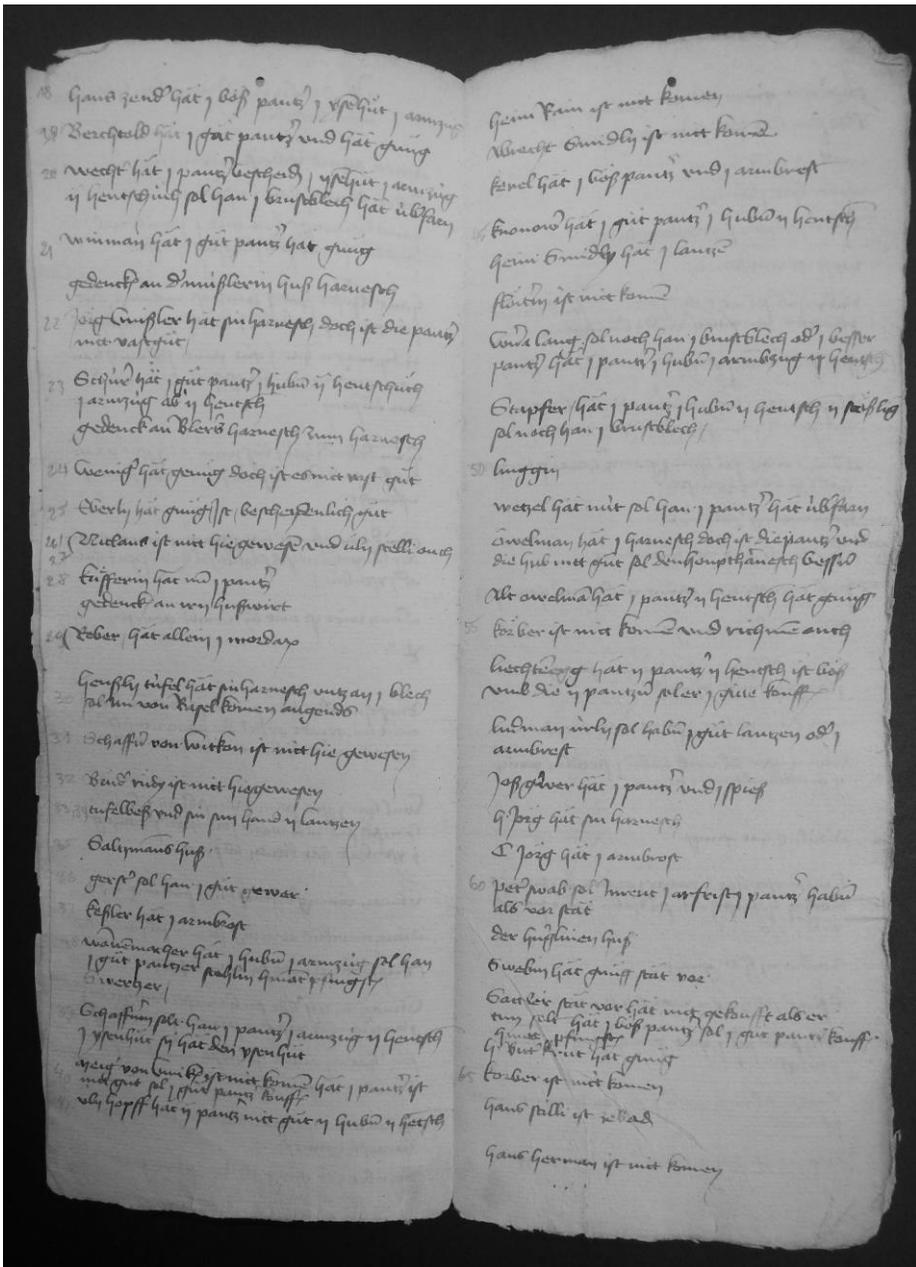
Fig 1: Brugg, Stadtarchiv, 156a, p. 4-5: Harnischrödel *of 2 December 1437*
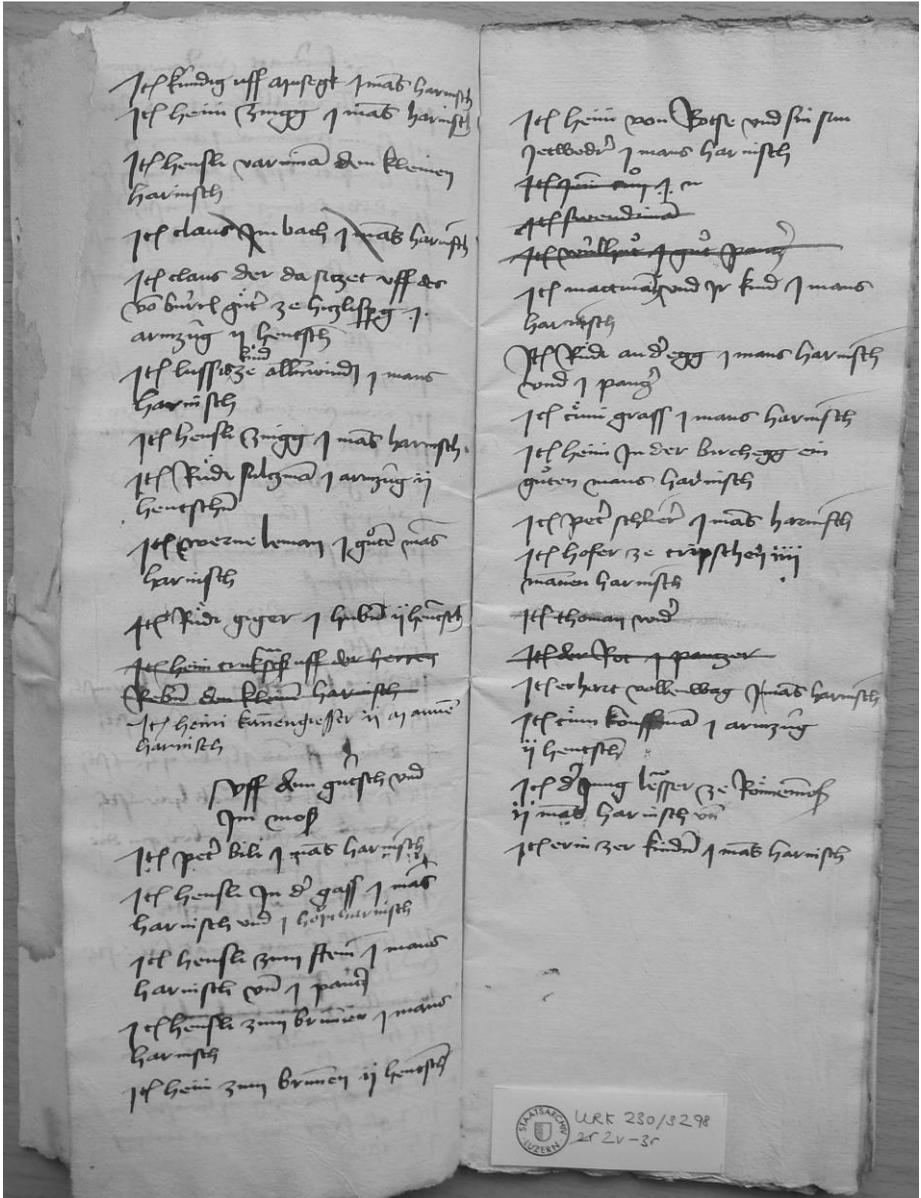
Fig 2: Luzern, Staatsarchiv, URK 230/3298: 2v-3r: Harnischrödel *of 23 January 1443*

Historians have occasionally used some of these lists for demographic purposes or in order to obtain information on the fighting power of a specific town.[2] Nevertheless, most of these rolls remain so far unpublished, and no attempts have ever been made to ascertain the number, spatial and temporal distribution of the surviving lists, to identify common traits and differences, and to discuss the proceedings leading up to the creation of the lists in the first place. These methodological steps can, at this instance, only be outlined, but would be prerequisite to a more thorough analysis of such lists, especially when relating urban social stratigraphy to armour ownership.

This contribution is the first to systematically present *Harnischrödel* as important sources for the history of urban martial culture. On the basis of lists preserved in archives of Swiss towns, the main purpose here will be to assess the type and quality of an average urban soldier's combat gear. Although the results of this analysis are only preliminary – particularily because it is not yet possible to produce methodologically sound statistics –, the value of these extensive lists as sources is readily apparent in comparison to the now only fragmentary remaining quantity of actual objects passed down to the present time. Questions of the legal basis for the possession of armour by citizens and subjects, social stratigraphy, armour production and markets, or the identity of the people using the armour (in contrast to the people owning it) will not be addressed at this point.

II. OCCASIONS AND PROCEEDINGS

"The minor council and major council have decided to enforce legislation on the *Harnischrödel*, as a *Harnisch* was enjoined on each person, to wit, that each person should have the armour allocated. It is ordered that everybody should have [armour] before Whitsuntide. People who have already been ordered to have armour and still do not have it, are ordered to have it before Shrovetide, on pain of a penalty of 2 lb each time this order is neglected. Item: Armour brought here in order to be sold should by assessed by Iberg and Hartman Furter. Stout and good armour may be sold. If the armour is not stout and good, the person wanting to sell it shall swear to export it from our town and territory and not to sell it in our town and districts."[3]

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[2] Demography (of the town of Brugg): Stercken, *Städte der Herrschaft*, p. 149; fighting power: Weber, *Luzerner Waffenverzeichnisse*, p. 193-4. A general description of the *Harnischrödel* was presented by Meyer, *Hirsebrei*, p. 354-6.

[3] SSRQ III,1,2, Nr. 312: January 23, 1443 <https://www.ssrq-sds-fds.ch/online/LU_I_2/index.html#p_277> [accessed 10 June 2017]: *"*Ret und C [Hundert] sind jn ein komen, dz si dem harnisch rodel, nach dem und iederman ist harnisch geleit, wellent nach gàn, dz iederman sol den harnisch haben, der jm geleit ist. – und sol man jederman gebieten ze haben hinnent ze Pfingsten, – wer aber, dz jeman vorhin were harnisch geleit, den er noch nict hett, dz man denen gebiete, jnn ze habend hinnen ze Fasnacht, alles by ij lib. àn gnad, als dik es übersehen wurd. / Jtem ouch was jeman harnischs her bringt ze verkòffen, den soellent Jberg und Hartman Furter besehen. Und wz werschaft und guot harnisch ist, dc mag den einer verkouffen. Wz aber nit werschaft und guot

On January 23, 1443, the government of the town of Lucerne in central Switzerland ordered its inhabitants to acquire armour as allocated on the basis of their fiscal capacity. In addition, the town councils appointed two of their members to acquire only quality armour for the town's use. It enforced measures to impede the acquisition of insufficient or weak armour by its subjects prescribing that insufficient armour should be sold only outside the town's jurisdiction. Both statutes aimed at strengthening the defensive capacity of the Luzern territorial state. They refer to similiar legislation going back to 1414, when the councils ordered that every citizen and every head of a household under Luzern rule should own defensive armour.[4]

Luzern's scribe Johannes Etterlin reproduced the council's resolution at the top of a two part inventory list.[5] It details people owning armour in two small parts of the Lucerne territory, *ze Lutermatt und Meggenhorn* on the one hand, in two quarters in the town, *uff dem Gútsch und im Moss*, on the other hand.[6] The list is probably only a fragment of a once much more complete inventory of all households in town and territory.

The 1443 fragment was produced in a moment of heightened military tension. Like two earlier lists, of 1437 and 1442, and lists from the small town of Brugg situated on the north-east corner of Bern's territory,[7] it relates to war preparations in the context of the "Old Zurich War" (a list of the analysed *Harnischrödel* is in Appendix A). Since 1437, a territorial struggle between Zürich and Schwyz had engulfed most of eastern and central Switzerland. Skirmishes were fought in 1439. They quickly turned into protracted war. In 1440 a shaky truce was reached, however in winter of 1442/43, war preparations started again, and in May 1443 open war resumed and reached its peak in a series of bloody battles. A preliminary peace in 1446 was finally confirmed in 1450 with a far-reaching packet of agreements.[8]

Unrelated to these events in the east, war was brewing in the west of today's Switzerland between the towns of Bern (allied with the duchy of Savoy) and neighbouring Fribourg. War eventually broke out in 1447.[9] *Harnischrödel* in Fribourg (1443, 1444) were probably produced in this context. (North of the Rhine, the quarrel between noble lords and

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harnisch ist, da sol der schweren, der jnn feil hatt, usser ùnser statt und gebieten ze fueren und den jn ùnser statt noch emptern nit ze verkòffen." (= StALU URK 230/3428).

[4] Glauser / Sigrist, *Luzerner Pfarreien*, p. 13-15.

[5] SSRQ III,1,2, p. 277, note 1.

[6] On the historical topography of Luzern see: Liebenau, *Das alte Luzern*.

[7] Banholzer, *Geschichte der Stadt Brugg*, p. 20-24 (on Brugg during the Old Zurich War) and p. 147-148 (on the *Harnischrödel* and the type of armour mentioned).

[8] Illi, "Alter Zürichkrieg"; Niederstätter, *Der Alte Zürichkrieg*; Niederhäuser / Sieber (eds.): *Bruderkrieg*.

[9] Bern's wars in the mid-15th c. and its role in the Old Zurich War are discussed in: Zahnd, *Heinrich IV. von Bubenberg*, from the Savoy point-of-view: Biolzi, *Guerre*.

towns reached a peak in the so-called *Städtekrieg* of 1449/50, producing large amounts of urban sources, including inventories of weapons. They are, however, outside the geographical scope of this investigation.)[10]

About half of the surviving lists date from the very belligerent period of the mid-15th century. The first lists so far discovered were, however, already written 100 years earlier, in Luzern in 1349 and 1353. The Luzern government might have been provoked to establish an overview of households and armour due to the demographic upheavals in the wake of the Black Death that hit the town and the surrounding countryside both in spring and in fall of 1349.[11] However, since 1351, Luzern was also involved in belligerent actions against its Habsburg overlord, and the second list is in all likelihood connected to them. Another list (of 1393) from the small Habsburg town of Aarburg (the list was seized by the Bernese when they captured the Habsburg territory in 1415) was probably produced in view of the still unsolved war between Habsburg and the lands of Uri, Schwyz, and Unterwalden.

Similarily, a list of the armour provided by the wealthy citizens of the Habsburg town of Winterthur on the basis of their fiscal capacity, and noted down in the town's main administrative book, was part of the Habsburgs' war preparations against urban and rural communal forces south of Lake Constance. This latter list was amended in December of the same year, after the battle of the Stoss on June 17, 1405. Appenzell's defeat of the Habsburg army there had a major impact on Winterthur's population. Instead of men, women and children were thereupon listed as owners of armour, married women were designated as widows, and the overall number of armour was heavily reduced.[12] In a contemporary letter, the Appenzeller are said to have seized about 250 *Panzer* (mail-coats, see below) and were recovering still more from people who had drowned. A chronicle lists among the dead 95 "good people" from Winterthur, "who wore their armour".[13]

It is unclear exactly how long the *Harnischrödel* were the main basis for urban military organization, and how long they continued to be actively used. The lists seem to thin out by the 1460s, with a few exceptions, such as the Zürich government establishing in 1585 a detailed list of the milita, and the available armour and arms in their territory.[14]

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[10] See, however, Zeilinger, *Lebensformen*, esp. 47-50, 58-63, 68-72.

[11] Schnyder, *Pest*, p. 102-103.

[12] See Appendix 2 in: Hauser, *Winterthur*, p. 112-122.

[13] Hauser, *Winterthur*, p. 25: (from a letter possibly from St. Gallen to Schwyz): "Also hant die von Appenzell wol 1000 man laussen ziehen in ir letzi vnd hant si da angriffen vnd vil erschlagen, daz si ietzo hant of 2 1/2 hundert panzern an der bütung vnd findent all tag mê; so sint ir vil ertrunken." The quote from the so-called Klingenberger Chronik ibid.: "Es verluren von Wintertur aber redlich lüt die iren harnasch truogent 95 manen. Die selb statt verlur aller swarlichost."

[14] Schneider, *Beiträge*, p. 93-94, Appendix 2.

The petering out of *Harnischrödel* before the intensive military phase of the Burgundian and Swabian Wars might indicate a general change in military and administrative organisation and might be connected to the rise of the urban arsenal as center of weapon keeping and distribution. Some circumstantial evidence supports this connection, although a definitive conclusion will await further investigation.

III. THE URBAN SOLDIER'S GEAR

The *Harnischrödel* tend to list only armour, even if an occasional staff-weapon is included. A few inventories list crossbows and crossbowmen, thus testifying to the importance of this branch of service. In Bern, individual crossbow inventories recorded by the appointed official are preserved. It is noticeable that swords and knives are never recorded, probably because these blade-weapons were considered as personal equipment. This present contribution will concentrate solely on defensive armour.

The lists contain a number of words for different parts of medieval armour. It is a major challenge to establish clearly the actual meaning of these words, especially because terms tend to resist the course of time better than the objects they are applied to. There are also indications that the terminology is not consistent between the different towns (see Appendix B). The following analysis will therefore present the urban soldier's gear as it appears in the *Harnischrödel* in three steps: First, it will present the nouns that designate armour. In a second step, it will discuss characteristics pertaining to the quality of the armour owned by members of the population, by examining adjectives and other linguistic qualifiers. Thirdly, it will discuss the workmanship and longevity of the armour listed in these late medieval urban inventories.

III.1. Types of armour

The general word used for armour is *Harnisch*. It designates both the entirety of a full body armour and the objects serving for body protection.[15]

As a collective, *Harnisch* is used, for example, in a statute of the commune of Walchwil, a rural village in the jurisdiction of the town of Zug. The members of the cooperative decided that armour should be classified as immovables and therefore as unalienable part of the household, enumerating *Panzer*, different types of helmets, arm gear "and whatever is *Harnisch* and is called *Harnisch*".[16] In both the countryside and the town, legislation defined armour that had to be put to common use as bound to the household rather than to the person. It could not be taxed (a privilege often acquired by citizens in the course of the 14th c.), was not part of the community of property of

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[15] See the entry *Harnisch* in Idiotikon 2, col. 1609-1612.

[16] *UB Zug*, Nr. 293, 1398, April 21: Harnischbrief von Walchwil: "…*harnesch, so wir han, waz dz ist, es sigen pantzer, huben, kessel huette, harschen armzúg, und waz harnesch ist und harnesch heisset*".

married couples, and had to be sold together with the house or farmstead where it was recorded as belonging to.[17]

Definition of a complete suit of arms is given, for example, in a individual contract the town of Bern made with one of its richest citizens on April 23, 1444[18]: Anna von Krauchthal agreed to pay for her civic duties by buying "*sechs mann harneschs volkommer werschaft, nemlich pantzer, tschaladen, armzúg und hentschen*" and to hand them over to the government for further use. According to this itemization, *Harnisch* consists of the protective gear for the upper body and neck, the arms, and the hands as well as the head. The Bernese government obviously was keen on acquiring high quality armour as the contract designates the helmet explicitly with the word *tschalade* (derived from the Italian *celata*). The contract does not mention any protective gear for legs and feet, and it can therefore be assumed that these suits of armour were intended for well-armed foot soldiers. As a general rule, a "full" urban *Harnisch* consisted of protection for head, upper body, arms and hands, but not for legs and feet. The exact composition of a full armour (*ganzer Harnisch*) is of course subject to change, depending on technical developments as well as on specific requirements for each group of the society. It is telling that *Harnisch* can also be used in a collective fiscal sense as the wealth of taxpayers is expressed in multiples of *ganzer Harnisch* or *arma totum*.[19] On the basis of this evidence, absolute definitions that can be found in older literature have to be reappraised.[20]

Panzer was the main object for protecting the torso. It could mean either chain-mail or steel cuirasse, depending, no doubt, on the period in question.[21] The two makings can be distinguished only when the list provides specifications: A Luzern *Rödel* of 1437 that lists armour lent by the owner to another person (in the form: "X has lent Y one *pantzer*, 2 *hentschen*, 1 *armzüg*") describes the *Panzer* in more detail, not doubt in order to permit a certain identification of the piece and therefore to document its true ownership. Among the 16 *Panzer*, 4 are *guot stechlin* and one just *stechlin* (i.e. made from (good) steel), one is furnished with *fürwellen ringen* and another is described as *furwil* (*wellen* means to forge rounded pieces, the two terms might refer to chain-mail). Finally, one *Panzer* is called *weschfelin* (an unknown word, maybe from *waschen* / to polish?). Of the eight remaining *Panzer*, two are considered "good", the rest is not specified further. In these lists, *Panzer* is usually part of the *Harnisch* even if it might refer to the armour in its entirety. In the

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[17] A number of examples in Weber, *Waffenverzeichnisse* and *SSRQ* online.

[18] StaBE F. Burgdorf, 1444, April 23.

[19] Weber, *Luzerner Waffenverzeichnisse*, p. 190-192. On the equivalent of *ganzer harnisch* and *arma totum* ibid, p. 200.

[20] For example, Schneider, *Beiträge*, p. 46-49. Schneider also claims (p. 46) that the Swiss did not have sophisticated armour, but prefered to wage their battles with their offensive arms alone: "*Diese [the offensive weapon] entsprach viel eher dem Offensivgeist, der die eidgenössischen Heere beseelte.*"

[21] *Idiotikon* 4, col. 1407-1408.

Brugg list of 1442, for example, a certain Cuoni Beck "*hat ein pantzer und anders das zuo eim mansharnisch gehört*" ("has a *pantzer* and other things that belong to the full armour").[22]

In Luzern's oldest *Harnischrödel*, from 1349/1353, the most numerous item is called *currit* or *currisia*. Using a chronological argument, the editor of this source (in accordance with the then leading specialist for medieval armour in Switzerland), stated that *currisia* meant a long shirt made of leather worn over the chain-mail.[23] However, in this particular list, far fewer *Panzer* than *currisia* are mentioned, and the two items never appear in the same hands. The only solution I can imagine is that a large number of people did not own a chain-mail but only a protective gear made out of leather, and that *panzer* meant either chain-mail plus leather jacket or the chain-mail alone. *Ganzer harnisch* or *arma totum* would then comprise *currisia*, chain mail, helmet, and probably arm protection (although this latter is not mentioned in this particular list). A helmet is mentioned in this list only once: A woman called Bermendera owns a *currisia* with a *Göller* and a *Beckenhaube*.[24] The editor of the list identified the word *Göller* as "breast protection made out of leather", a meaning attested without further explanation also in the Swiss Dialect Lexikon. Usually, however, the word (from lat. *collarium*) means neck gear.[25]

The next most numerous items, overall, are *armzúg* and *hentschuoch*. To own protective gear for arms and hands seems to have been a minimum requirement for urban households. They are never specified further, although in each of the two lists made in 1437 and 1442, a pair of *stössling*, the gear for the lower arm, is separately listed.

Whereas the two early Luzern *Rödel* do not, with this one exception, mention helmets, all other lists do. If the officials just wanted to tell the citizens to acquire any kind of helmet, they used the general word *houptharnisch* (i.e. "armour of the head"). The list made in Brugg in 1393 enumerates *Huben*, i.e. *Beckenhauben* / bascinets. A certain Kristan Rot owned "*2 blos huben*" and "*1 huben mit einr behenke*". The scribe added that the latter was originally owned by a certain Saltzman.[26] This allows at least the interpretation that most of the *Huben* in this list were *bloss*, "naked", i.e. that they came without the added chain-mail protecting cheeks and neck. A *hube* without noseband is mentioned in 1442 in Brugg. In 1437, both in Brugg and Luzern, *tschaladen* (sallets) make an appearance, as well as a *huntzkapp* (a bascinet with pointed visor or "hounscull") in Luzern. The *ysenhut* (kettle hat) is also mentioned in 1437 and 1442 in Brugg.

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[22] StadtA Brugg 156b, p. 8.

[23] QW II/3, p. 247, note 2.

[24] The editor of the lists identifies *Göller* with "Brustpanzer aus Leder". If this designation is correct for the mid-14th c., Bermendera owned two pieces of armour made out of leather, and a bascinet. QW II/3, p. 247, note 3.

[25] Idiotikon 2, col. 217-219.

[26] Boner, *Urkunden*, Nr. 26, p. 26.

Rarely included, among the many mentions of full armour and *panzer*, are pieces for the protection of neck and breast. To a certain extent, the terms used reflect technical differences. *Göller* was a neckpiece made of leather whereas *kragen* might or might not refer to this simple material. The terms *brustblech* or *blech* however clearly indicate beaten metal. Only the 1349/53 list of Luzern that integrates crossbows also mentions a large number of *tarzen*, the shields of the crossbowmen.

In accordance with their function, the *Harnischrödel* attest to the existence of armour in every household. A quantification of individual pieces of armour is, however, very difficult: the lists pose a number of methodological problems (beyond the simple difficulty of the often not particularily neat handwriting). The lists integrate several individual administrative steps that appear, in the *Rödel*, as different layers of notes, deletions, etc. or as partial (but not entirely congruent) duplications. Names appear twice, for example, sometimes with indications that they might refer to the same person, or are noted without matching armour. These and other problems are familiar to every scholar of the middle ages, but detrimental to sound statistics. The main challenge, however, is to connect armour ownership to armour use: the lists with rented armour preserved in the Swiss material show very clearly that not just entire sets but also individual arm pieces, helmets, and gauntlets were assembled to furnish adequate gear for the able-bodied men who were compelled to fight for the town (either as part of their legal duty as citizens or as paid men). The sheer ratio of *full armour* vs. pieces of armour that could be deduced from the list can therefore not be used as an indicator of a town's overall militarization of the citizenry. The practice of collecting and renting armour has to be examined separately and in context with a town's total military efforts. It will be a subject of further investigation.

III.2. Quality of the armour and duration of use

A number of *Rödel* provide information on the quality of the simple armour owned by the towns' inhabitants. Quality control can be shown by examining the Brugg list of 1437 more closely. Some of the lists from Luzern, on the other hand, can be used to discuss how long pieces of armour were in use, and how old they might have been at the moment they were shown to the inspectors.

The writer of the Brugg *Rödel* of 1437 (and of 1442, but this list is much more problematic from a methodological point of view and will therefore not be taken into account) first checked whether the person had the required pieces and noted if the armour was complete, what state of the pieces were in, and whether and what the person had to buy in order to complete his or her armour. We also learn that a number of people were not home when the officials called, that one man did own his armour but kept it in a different house, and other details.

In order to give an impression of the overall quality, the 1437 list will serve as random sample: Of the 196 people listed (among them 9 women who are either listed by name or as houseowners), 17 people did not show up or were not at home when they were

supposed to be. 76 of the remaining 179 people checked had "enough" or "enough for now". The rest was ordered to add specific pieces ("Heini Guoter shall in addition have a helmet, otherwise he has enough"; "Wannenmacher has one *hube*, one *armzüg*, he shall have one good *panzer* before Pentecost") or to replace their insufficient armour altogether.

The quality of the armour is obviously checked against an idea what "good" armour looks like. The very differentiated way in which 14 sets of "insufficient" armour are judged is telling: with the words *nüt wert* (worth nothing), *bös* (bad, broken), *nitt gut* (not good), *nit vast guet* (not very good), *bescheiden* (modest), *bescheidenlich guet* (modestly good), the inspectors range the armour within an (unwritten) framework of quality control. In accordance to the individual way the armour is judged, the officials then ordered the owners to remedy deficiencies, either by completely replacing the armour ("Meiger from Cuniken … has 1 *panzer* that is not good, he shall buy 1 good *panzer*") or by repairing it ("Owelman has 1 *harnesch*, but the *panzer* and the *hub* are not good. He shall repair the helmet"). The material value inherent even in broken objects is apparent when a certain Hechteregg who owns two *bös panzer* is ordered to acquire one good mail coat in exchange for these two broken ones.

Overall, the Brugg list shows officials clearly struggling to obtain sufficient arming of the town's defensive forces. The need to have armour in the household and the insufficiency of this kind of organisation became evident when, on July 30, 1442, Brugg was taken in a surprise attack by about 400 men of the Zürich-Habsburg coalition. In the early morning hours, the doors had been opened to them because one of their leaders, the local noble Thomas von Falkenstein, had pretended being on the way to a peace congress. In the ensuing strife, 12 men from Brugg were killed. The town was plundered and burnt, and lost its banner, treasure, and archive.[27]

The Brugg list indicates that a number of households kept pieces of armour clearly no longer suited for their original purpose. Although the precise age of a specific piece in the moment of its use – or control – cannot be determined, the *Rödel* encompass a plethora of information on armour that was handed down from earlier generations. The 1393 *Harnischrödel* of the small town of Aarburg, and the Habsburg department of the same name, for example, gives a lot of detail on former owners. Among others, a certain Ruedi owned an entire *harnisch*, including a *panzer* that had belonged to his brother in law, Heinzi Nebiker. A Henseli Nebiker, clearly a relative of this Heinzi, had a *panzer* who had belonged to his grandfather (*eni*, this word might also mean great-grandfather). The son of Uolli Toeri, the brother of Henni Schnider, the heirs of the deceased Berschi Erler, and the wife of a certain Klaus Paratti all own armour that was acquired by the members of an earlier generation. In other *Rödel* – for example in the 1437 rent list from

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[27] Banholzer, *Brugg*, p. 22-23.

Luzern –, children who are explicitly qualified as minors are listed among the owners of armour,[28] another indication of the importance of armour as part of the inheritance.

It can be safely assumed that the pieces of armour worn by urban soldiers compelled to fight for their towns were usually objects of mass production. Though their protective function was obvious, they shared only few representative traits with the individually tailored armour of the medieval knight: The *Eisenhut* or *Hube* of the average citizen, handed down from the father, or lent out by the widow next door, cannot be a match to a Lorenz Helmschied helmet for emperor Maximilian. And whereas masterworks and experimental armour produced for a noble lord could be of interest to many future generations – as memorial, technical, or esthetical objects –, and therefore found their way to *Waffenkammern* and modern museums, the ironmongery of the urban soldier was very rarely saved for more than a couple of generations. The metal was eventually worth more than the object worn down by use and old age: the broken armour went back to the smithy where the iron was recycled.[29]

Material and makemanship considerations were not the only limitations upon the preservation of urban armour over time. The defining trait of medieval urban armour ownership itself also shifted notably. Up to the end of the 15th century, armour was personally owned, kept, and taken care of. The first urban arsenals serving as central places for acquiring, repairing, keeping and distributing armour actually appear in the Swiss lands in the course of the 15th century. However, even the oldest preserved inventories indicate that by this time, the arsenals' main purpose was to keep and maintain fire arms (especially canons) and crossbows.[30] The number of pieces of protective armour kept in stock was too small for a general distribution and was obviously meant as a reserve. Only in the course of the 16th and 17th c. did the towns within the Swiss Confederation build up important stocks of arms and armour that then in turn became the basis of the first historical museums in the 19th c.

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[28] StaLU URK 229/3257: "Item Hanns Mache, vogt des von Uotzingern kinden het glichen 1 stechlin guot pantzer Weltin Meiger, die ist der kinden." ("Item Hanns Mache, warden of Utzinger's children, has lent Welti Meiger 1 good steel *pantzer,* which belongs to the children.")

[29] StadtA Brugg, A 156.a: "Rutzmüller hat sin ding, doch hand wir mit im geredt, er söll die pantzer vertuschen, an 1 guet pantzer hab er nüt gnueg." ("Rutzmüller has his stuff, but we have prompted him to exchange the *pantzer*, as he does not have enough without one good *pantzer*.) Ibid. "Hechteregg hat 2 pantzer 2 hentschen, ist boess, umb die 2 pantzer sol er 1 gúte kouffen." ("Hechteregg has 2 *pantzer*, 2 gauntlets, [they are] broken. For the 2 *pantzer* he shall buy one good one.") Ibid. "Wagner vorm Tor sol han 1 guot pantzer und 1 brustblech hinant Pfingsten, mag sin pantzer, so er hat, verkouffen." ("Wagner vorm Tor shall have 1 good *pantzer* and one *brustblech* by Pentecoste, and he may sell the *pantzer* he has.") There are virtually no studies on the economically important trade with scrap metal and especially with old armour. As an introduction, see: Tschudin, *Wiederverwertung*; Reith, *Recycling*. Sprandel's important study *Das Eisengewerbe im Mittelalter* does not take into account metal recycling.

[30] Gessler, *Basler Zeughausinventar*.

IV. CONCLUSION

Harnischrödel recorded the fighting gear used by the average weapon bearer rather than the knight, and inventoried mass produced armour without much of the idiosyncrasies exhibited in the individually tailored, personal armour of professional warriors. *Harnischrödel*, therefore, mainly present simple defensive armour owned by average people, and give insights into questions ranging from the actual materiality of the armour to patterns of urban administration, and from the practices of buying, exchanging, and lending armour to the difficulties of distinguishing urban mercenaries from the citizen soldier.

The type and quality of the armour analysed here do not imply a very optimistic interpretation of the actual fighting capacity of the average citizen. The lists are too unequally spread to allow a serial analysis that would, for example, account for general trends in the number of pieces of armour each household owned, or their overall quality. However, they show that the possession of defensive armour was a general reality for town inhabitants, including the poorest members of the society. In fact, the *Rödel* are good indicators of social stratigraphy[31]. The Winterthur list of 1405 pertains only to citizens who were rich enough to be taxed, and their wealth was expressed in *Harnisch* and its multiples. In Luzern and Brugg, however, the lists derive from inspections of all households, thus covering all strata of society. The poorest members either had no weapons at all or a single spear, warhammer or halbert, but no defensive armour. Those a bit more affluent were the households that kept gauntlets, armpieces or the occasional helmet. Here, different words indicate different types and qualities of helmets, from the simple *Hube* to the slightly more complex *Eisenhut* to the high end *tschalade*. Households which owned a *Panzer*, especially in connection with gauntlets and armpieces, are likely to be counted in the middle class, whereas ownership of one or more complete *Harnische* indicates a middle to upper middle class position. Of course, a "full man's armour" could have been handed down through the generations, indicating the social status of a former generation that was later lost. The simple fact that armour is at least worth its metal, however, undermines this argument to a certain extent: a poor family needing money would have sold grandfather's *Panzer* long before having to present its armour to the scrutinizing eyes of the town's officials.

Harnischrödel are not easily deciphered sources. However, especially in view of the lack of objects that would reflect the once general presence of armour in a medieval town, they contain a plethora of information. This first attempt at an overview shows their potential for helping develop a fuller appreciation of the gear of the common medieval urban soldier. A next step will be to systematically link legal prescriptions, social dynamics, and economic logics to weapon possession and military use for a integrated history of martial culture in late medieval towns.

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[31] On weapon ownership as social indicator see the pioneering study of Tlusty, *Martial Ethics*.

V. BIBLIOGRAPHY

V.1. Primary Sources

V.1.1. Unprinted Sources

Bern, Staatsarchiv [StaBE]:

   AV 1379 (UP 22), Nr. 8 (Inventory of distributed crossbows, 1497).

   AV 1380 (UP 22bis), Nr. 98 (*Harnischrödel* Stadt und Amt Aarburg, 1393, 22. Januar)

   F. Burgdorf, 23.04.1444 (Receipt for Anna von Krauchthal for acquisition and delivery of six suits of armour).

Brugg, Stadtarchiv [StadtA Brugg]

   A 156.a (*Harnischrödel* 1437)

   A 156.b (*Harnischrödel* 1442)

Luzern, Staatsarchiv [StaLU]

   URK 226/3133 (*Harnischrödel* 1349/1353).

   URK 229/3257 (*List of rented suits and pieces of armour*, 1437, 12. April)

   URK 230/3293 (*Harnischrödel* 1442, 15. November)

   URK 230/3298 (*Harnischrödel* 1443, 23. Januar)

   URK 271/4789 (*Harnischrödel* ca. 1458).

   URK 271/4791 (*Harnischrödel* 1461, 21. Mai)

V.1.2. Printed sources

Boner, Georg, ed., *Die Urkunden von Stadt und Amt Aarburg* (Aarau: Sauerländer, 1965).

Gessler, E[duard] A[chilles], 'Ein Basler Zeughausinventar von 1415' *Anzeiger für schweizerische Altertumskunde*, NF 12 (1910), 229–34.

Gruber, Eugen, Ilten, A., Zambach, Ernst, ed. *Urkundenbuch von Stadt und Amt Zug vom Eintritt in den Bund bis zum Ausgang des Mittelalters*, vol. 1: 1352-1490 (s.l: s.n., 1964). [UB Zug]

Kläui, Paul, ed., *Quellenwerk zur Entstehung der Schweizerischen Eidgenossenschaft. Abt. 2. Urbare und Rödel bis zum Jahre 1400. Bd. 3: Rödel von Luzern (Kloster im Hof und Stadt), Muri und Rathausen und der Herren von Rinach, Nachträge* (Aarau: Sauerländer, 1951). [QW II/3]

Wanner, Konrad, ed., *Sammlung Schweizerischer Rechtsquellen, III. Abteilung: Die Rechtsquellen des Kantons Luzern, Erster Teil: Stadtrechte, Band 2: Stadt und Territorialstaat Luzern: Satzungen und andere normative Quellen (1426–1460)* (Basel: Schwabe, 2004) [SSRQ III,1,2]

Weber, Peter Xaver, 'Die Luzerner Waffenverzeichnisse der Jahre 1349 und 1353', in *Der Geschichtsfreund*, 68 (1913), 187–244.

V.2. Secondary literature

Banholzer, Max, *Geschichte der Stadt Brugg im 15. und 16. Jahrhundert* (Aarau: Sauerländer, 1961).

Biolzi, Roberto, *"avec le fer et la flamme": la guerre entre la Savoie et Fribourg (1447/48)* (Lausanne: Université de Lausanne-Section d'histoire, 2009).

Gessler, E[duard] A[chilles], 'Die Basler Zeughausinventare vom Ende des 16. bis zum Ende des 17. Jahrhunderts' in *Anzeiger für schweizerische Altertumskunde*, NF, 14 (1912), 357–60.

Gessler, E[duard] A[chilles], *Basler Wehr- und Waffenwesen im 16. Jahrhundert* (Basel: in Kommission bei Helbing und Lichtenhahn, 1938).

Glauser, Fritz, Sigrist, Jean Jacques, *Die Luzerner Pfarreien und Landvogteien. Ausbildung der Landeshoheit, Verlauf der Landvogteigrenzen, Beschreibung der Pfarreien* (Luzern / München: Rex-Verlag, 1977).

Hauser, Kaspar, *Winterthur zur Zeit des Appenzellerkrieges* (Winterthur: Buchdruckerei Winterthur vorm. G. Binkert, 1899).

Illi, Martin, "Alter Zürichkrieg", *Historisches Lexikon der Schweiz online* <http://www.hls-dhs-dss.ch/textes/d/D8877.php> [Version 04/05/2015].

Liebenau, Theodor von, *Das alte Luzern*, introduction by Kuno Müller (Luzern: Eugen Haag, 1937).

Meyer, Werner, *Hirsebrei und Hellebarde. Auf den Spuren des mittelalterlichen Lebens in der Schweiz* (Zürich: Buchclub Ex Libris, 1987).

Niederhäuser, Peter, '"Der grösste Trauertag Alt-Winterthurs"? Winterthur und der Appenzellerkrieg', *Die Appenzellerkriege – eine Krisenzeit am Bodensee?*, ed. by Peter Niederhäuser, Alois Niederstätter (Konstanz: UvK Verlags GmbH, 2006), 129-137.

Niederhäuser, Peter, '"Durch der herschafft willen lip und guot gewaget." Winterthur im Appenzellerkrieg', *Schriften des Vereins für Geschichte des Bodensees und seiner Umgebung*, 122 (2004), 37–58.

Niederstätter, Alois, *Der Alte Zürichkrieg: Studien zum österreichisch-eidgenössischen Konflikt sowie zur Politik König Friedrichs III. in den Jahren 1440 bis 1446* (Wien: Böhlau, 1995).

Peter Niederhäuser, Christian Sieber, ed. *Ein Bruderkrieg macht Geschichte. Neue Zugänge zum Alten Zürichkrieg* (Zürich: Chronos, 2006).

Reith, Reinhold, 'Recycling im späten Mittelalter und der frühen Neuzeit – eine Materialsammlung', *Frühneuzeit-Info* 14 (2003), 47-65

Schneider, Hugo, *Beiträge zur Geschichte der zürcherischen Bewaffnung im 16. Jahrhundert* (Zürich: Schulthess u. Co., 1942).

Schnyder, *Franz, Pest- und Pestverordnungen im alten Luzern, Der Geschichtsfreund*, 87 (1932), 102-118.

Schweizerisches Idiotikon. Wörterbuch der schweizerdeutschen Sprache digital <https://www.idiotikon.ch/online-woerterbuch>.

Sprandel, Rolf, *Das Eisengewerbe im Mittelalter* (Stuttgart: Anton Hiersemann, 1968).

Stercken, Martina, *Städte der Herrschaft. Kleinstadtgenese im habsburgischen Herrschaftsraum des 13. und 14. Jahrhunderts* (Köln: Böhlau, 2006).

Tlusty, B. Ann, *The Martial Ethic in Early Modern Germany. Civic Duty and the Right of Arms* (Basingstoke: Palgrave Macmillan, 2011).

Tschudin, Peter F., "Die Wiederverwertung von Metallen im Mittelalter", *Ferrum. Nachrichten aus der Eisenbibliothek* 73 (2001), 19-24.

Zahnd, Urs Martin, "Heinrich IV. von Bubenberg und der Friedensschluss nach dem Alten Zürichkrieg", *Berner Zeitschrift für Geschichte* 74 (2012), 29-56.

Zeilinger, Gabriel, *Lebensformen im Krieg. Eine Alltags- und Erfahrungsgeschichte des süddeutschen Städtekriegs 1449/50* (Stuttgart: Franz Steiner Verlag, 2007).

VI. APPENDIX A

Harnischrödel in Swiss archives and mentioned in this article[32]

Year of creation	Place of creation	Depository	Edition
1349, after January 6 / 1353	Luzern	StaLU URK 226/3133.	Weber, *Waffenverzeichnisse*; *QW II/3* (the two editions deviate from each other in a number of details).
1393, January 22	Aarburg (Amt)	StaBE AV 1380 (=UP 22bis), Nr. 98.	Boner, *Urkunden*.
1405, June 3 / December 8	Winterthur	StAW B 2/1, fol. 2r-3v [the list from June 3 in the *Stadtbuch* was amended on December 8]	Hauser, *Winterthur*, Appendix 2.
[1419, 1433, 1443, 1444	Freiburg (CH)]	AEF Affaires militaires: several lists	*The lists could not be consulted for this article.*
1437, April 12	Luzern	StaLU URK 229/3257: List of armour lent to urban fighters	unpublished
1437, December 2	Brugg	StaABg A. 156a	unpublished
1442, September 14	Brugg	StaABG A. 156b	unpublished
1442, November 15	Luzern	StaLU URK 230/3293	unpublished
1443, January 23	Luzern	StaLU URK 230/3298	SSRQ LU I,2, Nr. 312 [only the statutes, the list itself is unpublished]
1458 (ca.)	Luzern	StaLU URK 271/4789	unpublished
1461, 21 Mai	Luzern	StaLU URK 271/4791	unpublished
1515	Brugg	StaABg A. 156f	unpublished
1585	"Beschrybung der Personen Ouch Rüstung an Wehr unnd Waaffen Inn hiernachvolgenden Inneren Vogtyen, unnd möchten dise ein anderen nachgesetzten Gemeinden zusammenzeberuffen syn."	StaZH A30/4	Synthesis in: Schneider, *Beiträge*, Appendix 2.

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[32] The archives in Bern, Zürich, and Zug were consulted with negative results. The archives in Basel, Solothurn, Freiburg (where lists certainly exist), and St. Gallen have not yet been searched. This article is part of an ongoing project on the identity and gear of the common soldier in Swiss towns.

VII. APPENDIX B

Armour terminology

Year / place	Armour	Breast / torso	Head	Arms	Hands	Miscellaneous
1349/53, Luzern	ganzer harnisch	currisia / currit pantzer	beckenhaube / hube			göller tarzen cingulum[33]
1393, Aarburg	ganzer harnisch	pantzer	hube		hentschuoch	
1405, Winterthur	ganzer / halber harnisch	pantzer	hube		hentschuoch	
1437, Luzern		pantzer	zschalad huntzkapp	armzúg	hentschen	
1437, Brugg	mansharnesch	pantzer - stechlin - furwil - mit fürwellen ringen - weschfelin	hube houptach [?] ysenhut schaladen	armzúg	hentschuch	kragen brustblech / blech stösslig[34]
1442, Brugg	mansharnisch	pantzer	hauptharnesch hube (+ «1 huben an nasband») ysenhut	armzúg	hentschuch	kragen brustblech stösslig
1443, January 23	mansharnisch	pantzer	houptharnisch hube	armzúg	hentschen	

[33] It is unclear what kind of "belt" is meant here respectively for what part of the armour the Latin word for the Roman military belt is used.

[34] Protection of the lower arm (*Idiotikon*, vol. 11, col. 1160).