

A NOTE ON THE QUANTITATIVE ANALYSIS OF ḤADITH

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Abstract

Hiroyuki Yanagihashi observes how recent developments make the quantitative analysis of ḥadīths a “promising” endeavor. The question then becomes: why and how the text of certain ḥadīths, taken literally, appear to contradict established Sunnī legal doctrine? The logical presumption is that either traditionists transmitted the jurisprudence of ancient legal systems that were eventually replaced by later-derived fiqh rulings or they reformulated the ḥadīths in the process of transmission to develop the rulings underlying those later legal systems. By way of example, and to investigate these possibilities, Yanagihashi proposes quantitative analysis to trace variations within the texts of two prominent ḥadīths over the course of more than a century. His analysis yields conclusions that corroborate other work in ḥadīth-related studies from recent years (e.g., those of Behnam Sadeghi on a larger scale in his “Traveling Tradition Test,” and Intisar Rabb with respect to a select ḥadīth in her evaluation of the doubt canon, and others): an increase in textual variation does not necessarily correspond to a change in legal doctrine; the number of variants can increase over time, even after the compilation of Sunnī Islam’s six canonical ḥadīth collections. His methods represent and propose new directions for quantitative analysis at the intersection of ḥadīth and law in early Islamic history.

Nowadays, it is easy to deal with a large quantity of data on a personal computer, which makes a quantitative analysis of *ḥadīth* promising. In fact, it is not rare that an unexpected outcome is obtained from a quantitative analysis. In this essay, I apply this methodology to the question of whether traditionists retained or developed a legal system in parallel with the *fiqh* system represented by that of the four Sunnī schools of law, to show its utility and caveats.

We know that according to Sunnīs the Prophetic Sunna is the second source of Islamic law. However, many researchers of Islamic law must have felt from time to time that this is not always the case. There are many *ḥadīths* which, at least taken literally, contradict positive solutions adopted by jurists. (Conversely, in many cases jurists invoke *ḥadīths* that are not recorded in *ḥadīth* collections, as well.) Suffice it to cite an example. According to a *ḥadīth* (*ḥadīth* 1) recorded in al-Bukhārī's *Ṣaḥīḥ*, 'Amr b. al-Sharīd, a Successor living in Taif, narrated:

Al-Miswar b. Makhrama came and put his hand on my shoulder. I went to see Sa'd [b. Abī Waqqāṣ] with him. Abū Rāfi' said to al-Miswar, "Don't you tell this man to buy from me my house which is in my yard?" Sa'd said, "I will not pay more than four hundred either in cash or in installments. Abū Rāfi' said, "I was offered five hundred in cash, but I refused. If I had not heard the Prophet saying, 'A neighbor is more entitled to his nearness,' I would not sell it to you."¹

No less than fifty-three *ḥadīths* referring to the same event are recorded in nineteen works including al-Bukhārī's *Ṣaḥīḥ* (two *ḥadīths* to the same effect are recorded there) and the *Sunans* of Abū Dāwūd, Ibn Mājah, and al-Nasā'ī. According to the opinion unanimously held by Sunnīs, if one of the co-owners of an undivided immovable property sold his share to a third party, the other co-owners can exercise the

1 Abū 'Abd Allāh Muḥammad b. Ismā'īl b. Ibrāhīm b. al-Mughīra al-Bukhārī, *al-Jāmi' al-musnad al-ṣaḥīḥ al-mukhtaṣar min umūr rasūl Allāh ṣallā Allāh 'alay-hi wa-sallama wa-sunani-hi wa-ayyāmi-hi*, ed. Muḥammad Zuhayr b. Nāṣir al-Nāṣir, Cairo: Dār Ṭawq al-Najāt, 1422 A.H., 9:27, no. 6977.

right to pre-emption (*ḥaqq al-shufʿa*) to repurchase the share by paying the buyer the same amount that the latter spent, i.e., the price and any associated expenses. The right is established also in other circumstances according to some jurists, as suggested by this *ḥadīth*. The four Sunnī schools of law unanimously assert that the pre-emption right is established only after the object has been sold, and do not require the one who intends to sell an immovable property or his share to offer a sale to the pre-emptors or to inform him of his intention to sell his share. This is to say, their opinion contradicts this *ḥadīth*.²

This is not an isolated case. There are many legal *ḥadīths* whose content contradicts the corresponding *fiqh* rule, as noted. The question then arises why traditionists recorded such *ḥadīths*. Many researchers may be inclined to infer that traditionists made it a rule to transmit *ḥadīths* to subsequent generations that they deemed to be authentic or at least that they did not deem to be inauthentic, even if those *ḥadīths* were actually abandoned or disregarded by jurists. This inference implies that traditionists, or those among them who were versed in jurisprudence, retained and transmitted *ḥadīths* inspired by ancient legal systems that were eventually overshadowed by the *fiqh* of the four Sunnī schools of law. However, we can conceive of another scenario, that is, traditionists did not only retain the ancient legal systems, but also developed their own legal systems.

To verify whether traditionists passed on *ḥadīths* inspired by an ancient legal system or they developed their own legal system(s) up to a certain period, let us examine the changes over time in the number of variants of two groups of *ḥadīths* recorded in fourteen works including the six canonical *ḥadīth* collections and Mālik's *Muwattaʿa*, i.e., those related to pre-emption and those related to several prohibited transactions such as *muzābana*, *muhāqala*, etc.³ (Let us call these Groups 1 and 2, respec-

2 Al-Shāfiʿī attempts to harmonize the opinion of the jurists with this *ḥadīth*. Abū ʿAbd Allāh Muḥammad b. Idrīs al-Shāfiʿī, *Ikhtilāf al-ḥadīth*, ed. Muḥammad Aḥmad ʿAbd al-ʿAzīz, Beirut: Dār al-Kutub al-ʿIlmiyya, 1406/1986, 535—536.

3 *Muzābana* denotes buying something whose measure, weight, and number are unknown for something (of the same kind) whose measure, weight, or number is known, whether it is wheat, dates, or whatever food, or goods of wheat,

tively). Ninety-one *ḥadīths* belonging to Group 1 are divided into seven sub-groups each of which comprises a number of *ḥadīths* that seem to have derived from the same original *ḥadīth*, judging from their *isnāds* and *matns*. In contrast, it is difficult to classify over three hundred *ḥadīths* belonging to Group 2, for most of them are composite *ḥadīths*, into which two or more *ḥadīths* of different origins were incorporated.

The problem is determining the *matn* that a *ḥadīth* had during a particular period of time. One method is to identify it with the one contained in a *ḥadīth* whose *isnād* ends with a transmitter (i.e., the teacher who passed on this *ḥadīth* to the author of a text recording that *ḥadīth*) who died during that period. For example, according to a *ḥadīth* (*ḥadīth* 2) recorded in al-Shāfi'ī's *Umm* which has the *isnād* Sufyān b. 'Uyayna ← al-Zuhrī ← Sālim b. 'Abd Allāh, Ibn 'Umar narrated, "The Prophet forbade the sale of dates before they became mature."⁴ It is not certain that this narration ascribed to Ibn 'Umar was identical with the original *matn* of this *ḥadīth*, but it is almost certain that this was the *matn* (variant) that Sufyān b. 'Uyayna related to al-Shāfi'ī, although we cannot exclude the possibility that the latter changed what he heard from his teacher. Thus, the year 198/814, when Sufyān died, is the *terminus ante quem* of its generation, i.e., the date by which this *matn* must have been put into circulation. But let it be identified with the date on which this *matn* (variant) was put into circulation, for the sake of analysis.

This method poses a practical problem, that of defining

date kernels, herbs, safflower, cotton, flax, silk, etc. Mālik b. Anas b. Mālik b. Abī 'Āmir b. 'Amr b. al-Ḥārith, *Kitāb al-Muwatta'*, recension of Yahyā b. Yahyā al-Laythī, ed. Bashshār 'Awwād Ma'rūf (Beirut: Dār al-Gharb al-Islāmī, 1997), 2:150, no. 1831. *Muḥāqala* is variously defined. To mention two major opinions, according to one opinion, it is defined as a share-cropping contract, i.e., "giving land in exchange for a share of what is produced by the land, say a third or a fourth." Abū 'Umar Yūsuf b. 'Abd Allāh b. Muḥammad b. 'Abd al-Barr al-Namarī al-Andalusī, *al-Tamhīd li-mā fī al-Muwatta' min al-ma'ānī wa-al-asānīd*, eds. Muṣṭafā b. Aḥmad al-'Alawī and Muḥammad 'Abd al-Kabīr al-Bakrī, 26 vols. (Rabat: al-Shu'ūn al-Islāmiyya, 1387-1412/1967-1992), 2:318-19. According to another, it is defined as "selling spikes of wheat for threshed wheat." Ibid., 2:313-14.

4 Abū 'Abd Allāh Muḥammad b. Idrīs al-Shāfi'ī, *al-Umm*, ed. Muḥammad Zuhrī al-Najjār, 8 vols. (Beirut: Dār al-Ma'rifa, 1393/1973), 3:47.

a variant. Let us define it as a *matn* that contains a particular set of constitutive elements that are juristically meaningful. To take the example of the above-cited *ḥadīth* 1, the phrases contained in Abū Rāfi‘’s statement “my house which is in my yard” (as distinct “my house” without further qualification, as in many other similar *ḥadīths*) and the statement of the Prophet that “A neighbor is more entitled to his nearness” are such elements, but not the phrase that “al-Miswar b. Makhrama came and put his hand on my shoulder,” among others. As a suggestion, eight *ḥadīths* including *ḥadīth* 1 are recorded in various works that share exactly the same set of elements, that is, this variant comprises eight *ḥadīths*.

Figure 1 represents the changes over time in the number of variants of *ḥadīths* belonging to Group 1 ($N_v(1, Y)$) and that of variants of *ḥadīths* belonging to Group 2 ($N_v(2, Y)$) for the period from 150/767-768 to 260/874-875. (I start from 150, for few *ḥadīths* have an *isnād* ending with a transmitter who died before 150, for the extant earliest sources that record a substantive number of *ḥadīths* are the *Muwatta‘* of Mālik (93-179/711-795) and the *Āthār* of Abū Yūsuf (b. 113/731-732; d. 182/798).) This figure indicates that $N_v(1, Y)$ did not cease to slowly grow until 250 A.H., and that $N_v(2, Y)$ constantly increased, the pace at which it grew being higher from 190 onwards than before. It follows, phenomenally, that traditionists continued to reformulate *ḥadīths* at least during the period from 150 to 250.

Verifying whether this was actually the case is beyond the reach of this essay. Suffice it here to refer to two points. First, there are cases in which the earliest work that records a *ḥadīth* belonging to a particular variant was composed much later than the period in which the legal opinion underlying that variant was put forward. For example, according to a *ḥadīth* recorded in the *Sunan* of Ibn Mājah (d. 273/886), the Prophet stated, “The right of pre-emption is like loosening the knot (that restraints the camel).”⁵ A longer variant of this *ḥadīth* recorded in the *Kāmil*

5 Abū ‘Abd Allāh Muḥammad ibn Yazīd b. Mājah al-Qazwīnī, *Sunan al-Ḥāfiẓ Abī ‘Abd Allāh Muḥammad ibn Yazīd al-Qazwīnī ibn Mājah*, ed. Muḥammad Fu‘ād ‘Abd al-Bāqī, 2 vols. (Beirut: Dār al-Fikr, n.d.), 2:835, no. 2500.

fi ḍu‘afā’ al-rijāl of Ibn ‘Adī (d. 365/975-976) reads that the Prophet said, “The right of pre-emption is established neither for an absentee nor for a minor nor if a co-owner exercises it before another co-owner. The right of pre-emption is akin to loosening the knot (that restrains the camel).”⁶ The two *ḥadīths* are inspired by the idea that it is necessary to restrain the exercise of pre-emption right, for it can be harmful to the buyer. This idea is attributed to Ibrāhīm al-Nakha‘ī (Kufa, d. 97/715-716) and ‘Uthmān b. Sulaymān al-Battī (Basra, d. 143/760-761), but Ibn Mājah’s *Sunan* is the first writing that records a *ḥadīth* inspired by this idea. Generally speaking, growth in the number of variants does not necessarily mean a corresponding legal development.

Secondly, the rapid growth in $N_v(2, Y)$ is due primarily to a combination or an extraction of existing *matns*. For example, *ḥadīth* no. 14294 recorded in Ibn Ḥanbal’s *Musnad* reads that the Prophet forbade *muḥāqala*, *muzābana*, *mukhābara*, *mu‘āwama*, and *thunyā*.⁷ Ibn ‘Ulayya (d. 193/808-9) is the first transmitter who related a variant that refers to the prohibition of all of these five transactions to an author (Ibn Ḥanbal in this case) who recorded this variant, while variants referring to two to four among these transactions are related by earlier transmitters. Apparently, this *ḥadīth* is a composite *ḥadīth* in which existing *ḥadīths* were combined and was not generated by a change in legal doctrine. Conversely, Ibn Māja received *ḥadīth* no. 2455 (*isnād*: Muḥammad b. Yaḥyā←Muṭar-rif b. ‘Abd Allāh←Mālik←Dāwūd b. al-Ḥuṣayn←Abū Sufyān), which reads that Abū Sa‘īd al-Khudrī narrated, “The Messenger of God forbade *muḥāqala*. *Muḥāqala* is a lease of land.”⁸ This *matn* seems to have been extracted from a *ḥadīth* re-

6 Abū Aḥmad ‘Abd Allāh b. ‘Adī al-Jurjānī, *al-Kāmil fi ḍu‘afā’ al-rijāl*, ed. Lajnat al-Mukhtaṣṣin bi-Ishrād al-Nāshir, 7 vols. (Beirut: Dār al-Fikr, n.d.), 6:180, cf. Abū Bakr Aḥmad ibn al-Ḥuṣayn ibn ‘Alī al-Bayhaqī, *al-Sunan al-kubrā*, 10 vols. (Beirut: Dār al-fikr, n.d.), 6:108, nos. 11368-369.

7 Aḥmad b. Muḥammad b. Ḥanbal, *al-Musnad*, ed. Aḥmad b. Muḥammad Shākir, 20 vols. (Cairo: Dār al-Ḥadīth, 1416/1995), 11:425, no. 14294.

8 Ibn Mājah, *Sunan*, 3:517, no. 2455. *Mukhābara* is a kind of share-cropping contract. This name is often said to have derived from Khaybar, where a share cropping contract was concluded between the Prophet and the Jews who

corded in Mālik's *Muwaṭṭa'* (*isnād*: Mālik←Dāwūd b. al-Ḥuṣayn←Abū Sufyān), which reads that Abū Sa'īd narrated, "The Messenger of God forbade *muzābana* and *muḥāqala*. *Muzābana* is selling ripe dates for dried dates while they were still on the trees. *Muḥāqala* is lease of land in exchange for wheat."⁹ Apparently, many variants referring to one or more of these prohibited transactions were generated by combining or extracting from existing *ḥadīths*. This is why $N_v(2, Y)$ grew rapidly.

Therefore, it is premature to draw some definite conclusion from this figure. It should be complemented by a close examination of individual *ḥadīths*. It is not rare that an unexpected outcome is obtained from a quantitative analysis, as noted. I did not expect that the pace at which the number of variants of *ḥadīths* belonging to Group 2 would increase during the period from 200 to 260, i.e., the lifetime of the authors of the six canonical *ḥadīth* collections, as shown by Figure 1. I expected that the pace would have slowed down, for the authors compiled *ḥadīth* collections because they believed that the *matns* they received from their teachers were definite and should not be reformulated, that is to say, they compiled *ḥadīth* collections to fix the *matns*. The quantitative approach is revealing in this sense, but the meaning of its outcome is not always immediately evident.

inhabited there. Ibn 'Abd al-Barr, *Tamhīd*, 2:321; cf. William J. Donaldson, *Sharecropping in the Yemen* (Leiden, Boston, Köln: Brill, 2000), 36; Shihāb al-Dīn Abū al-Faḍl Aḥmad b. Ḥajar al-'Asqalānī, *Fath al-bārī sharḥ Ṣaḥīḥ al-Bukhārī*, eds. 'Abd al-'Azīz ibn 'Abd Allāh ibn Bāz and Muḥammad Fu'ād 'Abd al-Bāqī, 13 vols. (Beirut: Dār al-Ma'rifa, n.d.), 5:14. *Mu'āwama* denotes a sale of date palms for several years, i.e., for limited years. Muslim b. al-Ḥajjāj al-Qushayrī al-Naysābūrī, *Ṣaḥīḥ Muslim*, ed. Muḥammad Fu'ād 'Abd al-Bāqī, 5 vols. (Beirut: Dār Iḥyā' al-Turāth al-'Arabī, n.d.), 3:1175, no. 1536 (85). *Thunyā* in this *ḥadīth* seems to refer to a sale with a clause conferring on the seller the right to repurchase the object. Cf. Abū al-Walīd Muḥammad b. Aḥmad b. Rushd al-Jadd, *al-Muqaddamāt al-mumahhadāt*, eds. Muḥammad Ḥajjī and Sa'īd Aḥmad A'rāb, 3 vols. (Beirut: Dār al-Gharb al-Islāmī, 1408/1988), 2:64-65

9 Mālik b. Anas, *al-Muwaṭṭa'*, *recension of Yaḥyā b. Yaḥyā al-Laythī*, 2:149, no. 1828.

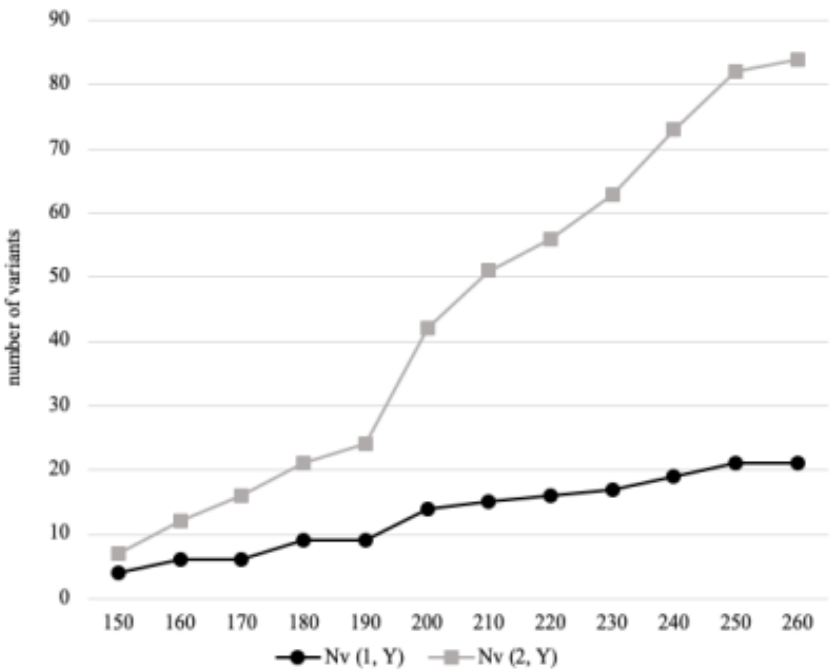


FIGURE 1. CHANGES IN THE NUMBER OF VARIANTS OVER TIME