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The Kings, the City and the House of David on the Mesha Stele in Light of New Imaging Techniques

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Abstract. *Thanks to new imaging techniques applied to the Mesha stele and its squeezes, the decipherment of this major inscription is significantly improved. In this essay, I present three case studies, in lines 4, 12 and 31 respectively. In line 4, the reading "kings" is to be preferred; in line 12, the reading "city" is confirmed; in line 31, the mention of the "house of David" remains hypothetical but is the most probable reading. With the Tel Dan inscription, the Mesha stele might be the earliest historical witness of a ruler named David who, in the ninth century BCE, was remembered as the founder of a Judahite dynasty.*

Résumé. *Grâce aux nouvelles techniques d'imagerie numérique appliquées à la stèle de Mésha et à ses estampages, le déchiffrement de cette inscription majeure est considérablement amélioré. Dans cet essai, je présente trois études de cas aux lignes 4, 12 et 31 respectivement. À la ligne 4, la lecture « rois » doit être retenue ; à la ligne 12, la lecture « ville » est confirmée ; à la ligne 31, la mention de la « maison de David » demeure hypothétique mais reste la lecture la plus probable. Avec l'inscription de Tel Dan, la stèle de Mésha pourrait ainsi constituer le plus ancien témoin historique d'un certain souverain nommé David qui, au IXe siècle avant Jésus-Christ, était perçu comme le fondateur d'une dynastie judaïte.*

Keywords. *Mesha, Moab, RTI, Bible – 2 Kings, David*

Introduction[1]

In 1868, Frederick Augustus Klein, an Alsatian missionary, heard about a stele in Dhiban, east of the Jordan river—a toponym whose

[1] This essay is based on the first part of a paper presented on 29 November 2018 at an international conference at the French Research Center in Jerusalem celebrating the 150th anniversary of the discovery of the Mesha stele.

modern name is reminiscent of Dibon, a Moabite city in the Hebrew Bible.[2] The stone soon draws a lot of attention and several Westerners try to secure it. Charles Clermont-Ganneau is able to obtain a squeeze as early as 1869 and offers a preliminary publication in 1870.[3] The story of the Moabite stone is fascinating and features numerous twists and plot-turns, scholarly competition, political races, and even suspicions of forgery.[4] More than 150 years after its discovery, it still prompts discussions on such issues as palaeography, grammar, vocabulary, discourse and, of course, biblical and historical insights.

In this paper, I would like to focus on the Mesha stele's decipherment, which is quite challenging due to its poor condition and fragmentary state. It is possible, nonetheless, to improve its reading using new imaging techniques, especially Polynomial Texture Mapping (PTM). This digital imaging technique was developed in the early twenty-first century to capture the reflectance characteristics of a surface.[5] Such an approach, known as Reflectance Transformation Imaging (RTI), is the digital heir of a technique that is well known to epigraphists: by changing the angle of lighting, details of a relief become more or less visible. Raking light, especially, proves effective when studying incised inscriptions, but its orientation must be changed depending on the angle of a given stroke. This can easily be achieved if (1) the artefact is at hand and (2) adequate lighting equipment is readily available. But such ideal conditions are not always possible; and when they are, it is worth taking a series of pictures to document the effect produced by various lighting angles.

[2] Num 21:30; 32:3, 34; 33:45-46; Josh 13:9, 17; Isa 15:2; Jer 48:18, 22; Neh 11:25.

[3] Charles Clermont-Ganneau, *La stèle de Dhiban, ou stèle de Mesa, roi de Moab, 896 avant J. C. : lettres à M. le Cte de Vogüé* (Paris: Librairie polytechnique / Librairie académique, 1870).

[4] The issue was still debated more than seventy years after the discovery, see e.g. Avraham Shalom Yahuda, "The Story of a Forgery and the Mēša Inscription," *The Jewish Quarterly Review* 35.2 (1944): 139–64.

[5] Tom Malzbender, Dan Gelb, and Hans Wolters, "Polynomial Texture Maps," in *Proceedings of the 28th Annual Conference on Computer Graphics and Interactive Techniques – SIGGRAPH '01* (New York: ACM Press, 2001), 519–28.

That is where computer science comes into play. By combining such a series of pictures, it is possible to produce a virtual model of the artefact. The resulting PTM file can be read by RTI software[6] that generates an image based on a given lighting angle. As a matter of fact, it is even possible to simulate multiple lighting angles or virtually increase the reflectance of the artefact's surface. All of these operations could be computed on the basis of a high-resolution 3D scan of the artefact, but the equipment required to produce such a scan has, until recently, been quite expensive and cumbersome. I am quite confident that the latest generations of smartphones' 3D capabilities will lead to the development of new imaging techniques for the study of ancient artefacts. But, in the meantime, let us see how RTI can help in deciphering the Mesha stele.

In the summer of 2015, Marilyn Lundberg, Bruce Zuckerman, Heather Parker, André Lemaire and I conducted RTI on the Mesha stele and its squeezes in Paris, at the Louvre and the Academy of Inscriptions and Fine Letters. Marilyn Lundberg and Bruce Zuckerman were among the first scholars to use RTI for Semitic epigraphy and it was a pleasure to collaborate with them on this project. As the reader will see below, the resulting images confirm this technique's usefulness to decipher the Moabite stone. When it comes to squeezes, another technique may sometimes prove more efficient: instead of changing the lighting angle above or around the artefact, a light source may be placed behind the squeeze so as to reveal its varying thickness. Deeper incisions on the stone will produce a thicker squeeze and thus absorb more light. Epigraphists and papyrologists are familiar with such backlighting technique, and the advent of digital photography has made it possible to produce a high-resolution backlit image of the squeeze in the Louvre. In 2018, Isabel Bonora of the Louvre worked with photographer Philippe Fuzeau to produce such a picture. How does it compare to RTI? Can these new digital images really improve the reading of the

[6] Such as RTIViewer, a free and open-source multi-platform software, available at http://culturalheritageimaging.org. For Semitic epigraphy, see also the InscriptiFact Digital Image Library at http://inscriptifact.com, which embeds an RTI viewer.

Mesha inscription? Let us test these new imaging techniques on three highly debated readings.

Aggressors or Kings in Line 4?

Line 4 is rather well preserved; here is Clermont-Ganneau's initial reading:[7]

4. שע.כי.השעני.מכל.השלכן.וכי.הראני.בכל.שנאי|ע[מר]

His reading may be translated thus:

4. *(sal-)vation*, for he saved me from all the aggressors and made me see all my haters. *O[mr-](i)*

The fifth word, השלכן, is "difficult to decipher" according to Clermont-Ganneau.[8] He understands it as a substantive from the root שלך "to throw" and translates it as "aggressors" (p. 7) or "peril, attack, stroke" (p. 29). His reading is followed by several scholars,

[7] Clermont-Ganneau, *La stèle de Dhiban*, 5.
[8] Clermont-Ganneau, *La stèle de Dhiban*, 28.

including Nöldeke,[9] Dussaud,[10] Segert,[11] Donner and Röllig,[12] Gibson,[13] Dahood,[14] Jackson and Dearman,[15] or, recently, Gaß.[16] The word is usually translated "assailants" or "assaults," though Segert and Dahood suggest the meaning "cormorants." Other scholars, however, recognized that this reading was problematic and tried to find a solution. As early as 1870, Nöldeke considered reading המלכן "the kings" instead, but rejected this solution in favor of the *lectio difficilior* השלכן.[17] Hitzig did not seem to share the same concerns and, the same year, adopted המלכן, which he considered to be an "improvement."[18] He was quickly followed by a number of scholars, such as Smend and Socin[19] or Lidzbarski.[20] This alternative reading

[9] Theodor Nöldeke, *Die Inschrift des Königs Mesa von Moab (9. Jahrhundert vor Christus)* (Kiel: Schwers'sche Buchhandlung, 1870), 4.

[10] René Dussaud, *Les monuments palestiniens et judaïques (Moab, Judée, Philistie, Samarie, Galilée)*, Musée du Louvre, département des antiquités orientales (Paris: Ernest Leroux, 1912), 5.

[11] Stanislav Segert, "Die Sprache Der Moabitischen Königsinschrift," *Archiv Orientální* 29 (1961): 244.

[12] Herbert Donner and Wolfgang Röllig, *Kanaanäische und aramäische Inschriften, Band I, Texte* (Wiesbaden: Harrassowitz, 1962), 33.

[13] John C. L. Gibson, *Textbook of Syrian Semitic Inscriptions, Volume 1, Hebrew and Moabite Inscriptions* (Oxford: Clarendon Press, 1971), 74.

[14] Mitchell Dahood, "The Moabite Stone and Northwest Semitic Philology," in *The Archaeology of Jordan and Other Studies Presented to Siegfried H. Horn*, ed. Lawrence T. Geraty and Larry G. Herr (Berrien Springs, Michigan: Andrews University Press, 1986), 430.

[15] Kent P. Jackson and J. Andrew Dearman, "The Text of the Meshaʿ Inscription," in *Studies in the Mesha Inscription and Moab*, ed. J. Andrew Dearman, Archaeology and Biblical Studies 02 (Atlanta, Ga: Scholars Press, 1989), 94.

[16] Erasmus Gaß, *Die Moabiter — Geschichte und Kultur eines ostjordanischen Volkes im 1. Jahrtausend v. Chr*, Abhandlungen des Deutschen Palästina-Vereins 38 (Wiesbaden: Harrassowitz, 2009), 8.

[17] Nöldeke, *Die Inschrift des Königs Mesa von Moab*, 9.

[18] Ferdinand Hitzig, *Die Inschrift des Mesha, Königes von Moab* (Mohr: Heidelberg, 1870), 13, 20.

[19] Rudolf Smend and Albert Socin, *Die Inschrift des Königs Mesa von Moab* (Freiburg: Mohr, 1886), 12.

[20] Mark Lidzbarski, *Handbuch der nordsemitischen Epigraphik, I. Text* (Weimar: Emil Felber, 1898), 415.

is still maintained today by Lemaire[21] and Aḥituv.[22] More specifically, Lemaire recently argued that the size and orientation of the letter corresponds to the head of a מ rather than a ש, and that the scribe simply forgot to inscribe the descender.[23]

I used RTI to decipher this letter and identify various strokes. Using the right settings, I was able to shed light on a long stroke located between the ה that precedes and what is usually read as ש (see Figure 1).

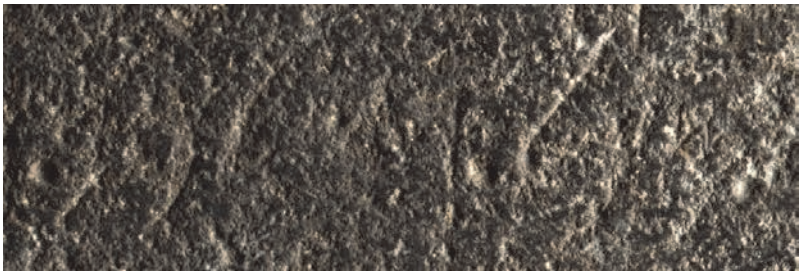

Figure 1. RTI photograph of the Mesha inscription in the Louvre Museum (AO 5066), middle of line 4. (© West Semitic Research / Michael Langlois)

Using specular enhancement, the stroke becomes even easier to read (see Figure 2).

[21] André Lemaire, "La stèle de Mésha et l'histoire de l'ancien Israël," in *Storia e tradizioni di Israele: scritti in onore di J. Alberto Soggin*, ed. Daniele Garrone and Felice Israel (Brescia: Paideia, 1991), 143–69.

[22] Shmuel Aḥituv, *Echoes from the Past. Hebrew and Cognate Inscriptions from the Biblical Period* (Jerusalem: Carta, 2008), 392.

[23] André Lemaire, "La stèle de Mésha : Enjeux épigraphiques et historiques" (presented at the conference *La stèle de Mésha 150 ans après la découverte*, Centre de recherche français à Jérusalem, 29 November 2018).

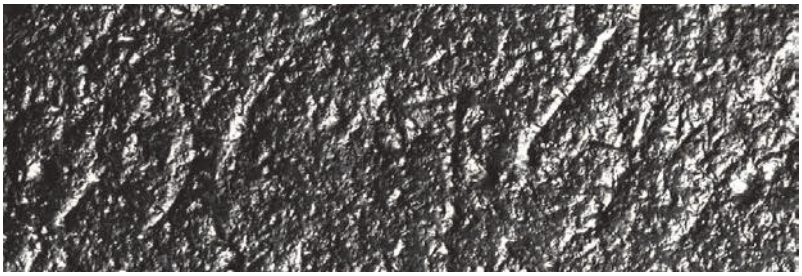

Figure 2. RTI photograph of the Mesha inscription, middle of line 4, after specular enhancement. (© West Semitic Research / Michael Langlois)

The stroke barely joins the so-called ש, and it is tempting to read it as a ג or ר, or perhaps even as a small (additional) ה. But the script is otherwise spacious, and the letter would somehow have to be crammed in between. If we suppose, instead, that this stroke does not preserve yet another letter but is to be connected to the previous or the next, it can either be the left stroke of a preceding ח or the descender of a following מ. ח is unlikely, as (1) the two vertical strokes would not be parallel and (2) there seems to be traces of three horizontal strokes, whereas other occurrences of ח on the stele only have two. There remains the option of reading מ, but this is not without problems: the descender seems quite far from the head, going backward, and quite short. A look at the previous מ, however, may partially account for this phenomenon. There, too, the descender seems almost detached from the head; but a closer look reveals a backward (perhaps rounded) shoulder turning into a concave descender. Though the two shapes are quite different, this ductus could explain why our enigmatic stroke seems detached from the head and slanted backwards. The resulting form is an abnormal מ, but this solution, as seen on a digitally-generated drawing (see Figure 3), seems less problematic than reading two small letters.



Figure 3. Digital drawing of the proposed reading, middle of line 4 of the Mesha inscription. (© West Semitic Research / Michael Langlois)

Nöldeke's hesitation to read מ is not completely dissipated, but arguments based on the absence of a descender are now obsolete and the new evidence points towards המלכן "the kings" as the best reading.

What is "for Kemosh" in Line 12?

The decipherment of line 12 has raised major discussions. Here is Clermont-Ganneau's original reading of this line:

12. הקר.רית.לכמש.ולמאב|ואשב.משם.את ואׄ[ס]

His reading may be translated thus:

12. the city *a spectacle/satiation* for Kemosh and for Moab. And I took from there the ... and I

Clermont-Ganneau could not decipher the end of the line, but was otherwise quite confident about his reading. The second word, רית, was understood as a defective form or ראית which, thanks to a parallel in Qoh 5:10, may be translated as "spectacle."[24] This reading was followed by most scholars, including Nöldeke,[25] Hitzig,[26]

[24] Clermont-Ganneau, *La stèle de Dhiban*, 33.
[25] Nöldeke, *Die Inschrift des Königs Mesa von Moab*, 4.
[26] Hitzig, *Die Inschrift des Mesha*, 13.

Smend and Socin,[27] etc. Without questioning the decipherment itself, Halévy suggested that the form might be due to a weakening of ע and read רעית "grazing, satisfying, satisfaction" as a ritual term.[28] Albright likewise offered another origin for the word, deriving it from √RWY and translating it "satiation."[29] Ryckmans too offered a new explanation: on the basis of several parallels in Minaean inscriptions, the term should, according to him, be translated "offering."[30] He was notably followed by Donner and Röllig,[31] Segert,[32] and Beeston.[33] The latter further discusses the seemingly problematic use of this term in reference to Moab, which is not a deity: such a conquest is for the benefit of the national deity and the people, an expression found in a Sabaic inscription.

A few years later, however, Lemaire found another solution: instead of ריתּ, the word may be read היתּ, from the well-known verb "to be."[34] He thus translates the phrase: "the city belonged to Kemosh and to Moab." He has since been followed by several scholars, including Aḥituv[35] and Gaß.[36] But this reading was recently rejected by Schade who, in 2005, examined the stele and its squeeze in the Louvre Museum.[37] He concluded that "*r* is easily readable" on the squeeze and that "*ryt* is the proper reading of the word."

[27] Smend and Socin, *Die Inschrift des Königs Mesa von Moab*, 12.

[28] Joseph Halévy, "L'inscription de Mêšaʿ, roi de Moab. Remarques philologiques et historiques (Suite)," *Revue sémitique d'épigraphie et d'histoire ancienne* 8.4 (1900): 289.

[29] William F. Albright, "Two Little Understood Amarna Letters from the Middle Jordan Valley," *Bulletin of the American Schools of Oriental Research* 89 (1943): 16 n. 55.

[30] Gonzague Ryckmans, "He Oude Arabië en de Bijbel," *Jaarbericht van het vooraziatisch-egyptisch genootschap Ex Oriente Lux* 14 (1955–1956): 81.

[31] Donner and Röllig, *Kanaanäische und aramäische Inschriften, Band I, Texte*, 169, 175.

[32] Segert, "Die Sprache Der Moabitischen Königsinschrift," 244.

[33] A. F. L. Beeston, "Mesha and Ataroth," *Journal of the Royal Asiatic Society of Great Britain and Ireland* 2 (1985): 143–44.

[34] André Lemaire, "Notes d'épigraphie nord-ouest sémitique," *Syria* 64.3/4 (1987): 206–7.

[35] Aḥituv, *Echoes from the Past*, 392, 405.

[36] Gaß, *Die Moabiter*, 8, 25–26.

[37] Aaron Schade, "New Photographs Supporting the Reading *Ryt* in Line 12 of the Mesha Inscription," *Israel Exploration Journal* 55 (2005): 205–8.

Lemaire immediately responded that Schade probably read the wrong strokes: he confused traces below the line with letter strokes, which are actually higher, aligned with other letters.[38] Lemaire examined the stone and the squeeze and concluded that "the reading *r* is not convincing" and that "a *h* is legible." Lemaire was followed by An, who concluded that reading רית is "untenable."[39] Yet, Zevit remained unconvinced and recently attempted to explain רית as a religious phenomenon associated with bloodletting.[40]

Let us have a new look at this problem using RTI. With optimized settings and additional image enhancement, the text appears quite clearly (see Figure 4).



Figure 4. RTI photograph of the Mesha inscription, beginning of line 12.
(© West Semitic Research / Michael Langlois)

On the right-hand side, after ק and ר, the bottom of a straight descender can be seen below the crack, but the top is missing. The

[38] André Lemaire, "New Photographs and *Ryt* or *Hyt* in the Mesha Inscription, Line 12," *Israel Exploration Journal* 57 (2007): 204–7.

[39] Hannah S. An, "Some Additional Epigraphic Comments on the Mesha Stele: The Case for Reading *Hyt* in Line 12," *Maarav* 17.2 (2010): 172.

[40] Ziony Zevit, "Mesha's *RYT* in the Context of Moabite and Israelite Bloodletting," in *Puzzling out the Past: Studies in Northwest Semitic Languages and Literatures in Honor of Bruce Zuckerman*, ed. Marilyn J. Lundberg, Steven Fine, and Wayne T. Pitard, Culture and History of the Ancient Near East 55 (Leiden: Brill, 2012), 235–38.

upper diagonal stroke has been restored when the stone was reconstructed, and should not be taken into account. After the crack, י and ת are well preserved. As for the head of our enigmatic letter, it is partly lost and partly damaged. Fortunately, a squeeze was made before the stone was blown up. Let us have a look at the new digital photograph that was made using backlighting (see Figure 5).

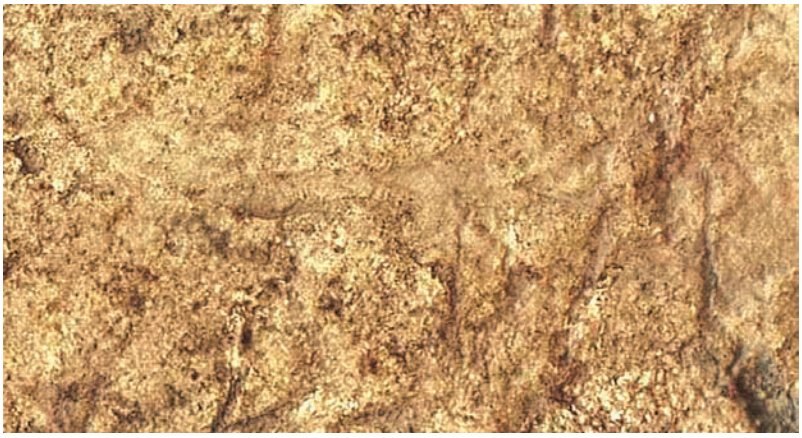

Figure 5. Digital photograph of the squeeze of the Mesha stele in the Louvre Museum (AO 5019) with backlighting and further digital enhancement, beginning of line 12. (© Musée du Louvre / Philippe Fuzeau / Michael Langlois)

On the right-hand side, ק and ר are quite readable, but the following letters are less visible than they are on the stone itself using RTI. The upper diagonal stroke of our mystery letter seems visible—hence its restoration on the stone—but other traces are compatible with both ר and ה, without a clear winner. So, let us now attempt RTI on the squeeze itself. I optimized lighting settings and added further digital enhancement in order to reveal diagonal strokes (see Figure 6).

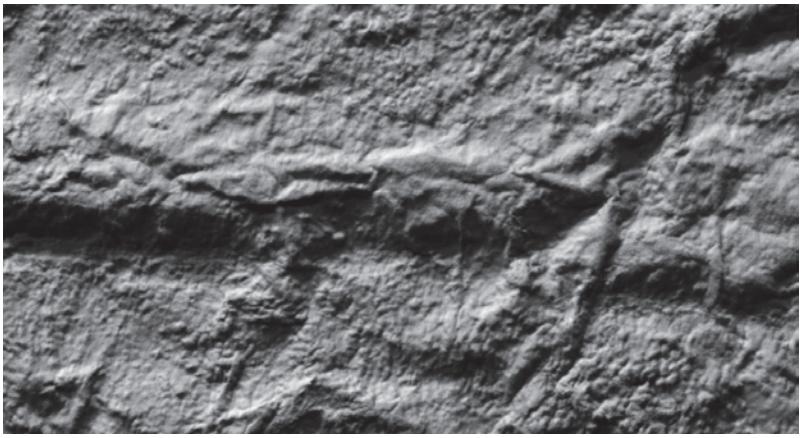

Figure 6. RTI photograph of the squeeze of the Mesha stele in the Louvre Museum, beginning of line 12, after specular enhancement. (© West Semitic Research / Michael Langlois)

The upper diagonal stroke is well preserved, and joins the shaft at its top. But the real interest of this image is that is reveals two additional parallel strokes, thus confirming that the letter is indeed ה and not ר. I can now confidently offer a digital drawing of the proposed reading (see Figure 7).



Figure 7. Digital drawing of the proposed reading, beginning of line 12 of the Mesha inscription. (© West Semitic Research / Michael Langlois)

With this new evidence, the beginning of line 12 must be read הקר.הית.לכמש, "the city was ‹given› to Kemosh," thereby confirming that the Moabite noun קר "city" is feminine despite its plural קרן (cf. line 29), as is the case with its Hebrew counterpart עִיר (plural עָרִים).

Is David Mentioned in Line 31?

As a last example, let us look at what is, perhaps, the most famous and controversial reading on the Mesha stele: the possible mention of the "house of David" in line 31. Here is Clermont-Ganneau's original reading of this line:[41]

31. הארץ|וחורנן.ישב.בה.ב ו

His reading may be translated thus:

31. ... the land. And Horonaim, he dwelt in it *with...*

The end of the line is difficult to decipher; after בה, Smend and Socin read בן.דֹן.ודדן.אמר, which can be translated "the son of Dedan and Dedan said."[42] Nordlander read בנֹי.חֹור[י.]אשר "the sons of Hor[i,]which," with a mention of Horites found in Gen 14:6 and other passages of the Hebrew Bible.[43] Lidzbarski initially proposed to read בנ־־ ודּ־־אמר[44] but later preferred to interpret the traces of the second letter as ת instead of נ, with enough room for another letter before ו. After ו, he likewise changed his initial reading, from ד to ק.[45] Halévy too read ק rather than ד because he saw what he

[41] Clermont-Ganneau, *La stèle de Dhiban*, 6.

[42] Smend and Socin, *Die Inschrift des Königs Mesa von Moab*, 12, 15.

[43] K. G. Amandus Nordlander, *Die Inschrift des Königs Mesa von Moab* (Leipzig: W. Drugulin, 1896), 54, 60, 62.

[44] Lidzbarski, *Handbuch der nordsemitischen Epigraphik, I. Text*, 416.

[45] Mark Lidzbarski, *Ephemeris für semitische Epigraphik. Erster Band: 1900-1902* (Giessen: J. Ricker'sche Verlagsbuchhandlung, 1902), 9; Mark Lidzbarski, *Altsemitische Texte. Erstes Heft: Kanaanäische Inschriften (Moabitisch, Althebräisch, Phönizisch, Punisch)* (Giessen: Alfred Töpelmann, 1907), 9.

considered to be a characteristic descender;[46] as for the second letter, he agreed that ת is better than נ but preferred ש, which was also considered by Lidzbarski and allows for a reconstruction [קדר]ו.בשם "Basam and Qedar" (cp. Gen 25:13). Most scholars followed one of those options: Dussaud read אש.וד.בת,[47] Donner and Röllig read אשׁ[..]תּ֯וֹקְ,[48] Gibson read ב֯֯וק֯֯אשׁ֯,[49] as did Jackson and Dearman.[50]

In 1992, Lemaire submitted for publication an edition of the Mesha stele in which he read בתּ[ד?]וד "the house/dynasty of [Da]vid" at the end of l. 31.[51] He explained that these letters had already been read by previous scholars, and that the syntagm matched biblical parallels. This hypothesis found additional support in 1993 when an almost exact syntagm (ביתדוד) appeared on a newly discovered inscription from Tel Dan.[52] Independently, Naʾaman[53] proposed in 1994 to read בת [ד]וד[ה] "the House of DWDH," whereas Puech[54] offered the same reconstruction as Lemaire. This reading was soon adopted by other scholars, such as Rainey,[55] Routledge,[56]

[46] Halévy, "L'inscription de Mêšaᶜ, roi de Moab (suite et fin)," 295.

[47] Dussaud, *Les monuments palestiniens et judaïques*, 5.

[48] Donner and Röllig, *Kanaanäische und aramäische Inschriften, Band I, Texte*, 33.

[49] Gibson, *TSSI 1*, 75.

[50] Jackson and Dearman, "The Text of the Meshaᶜ Inscription," 95.

[51] André Lemaire, "La dynastie davidique (*BYT DWD*) dans deux inscriptions ouest-sémitiques du IXᵉ s. av. J.-C.," *SEL* 11 (1994): 18. See also André Lemaire, "'House of David' Restored in Moabite Inscription," *Biblical Archaeology Review* 20.3 (1994): 30–37.

[52] Avraham Biran and Joseph Naveh, "An Aramaic Inscription of the First Temple Period from Tel Dan / בתובת ארמית מתקופת בית ראשון מתל דן," *Qadmoniot* 26.3–4 (1993): 77; Avraham Biran and Joseph Naveh, "An Aramaic Stele Fragment from Tel Dan," *Israel Exploration Journal* 43.2–3 (1993): 87, 90, 93.

[53] Nadav Naʾaman, "The Campaign of Mesha against Horonaim," *Biblische Notizen* 73 (1994): 27–30.

[54] Émile Puech, "La stèle araméenne de Dan : Bar Hadad II et la coalition des Omrides et de la maison de David," *Revue Biblique* 101.2 (1994): 227 n. 31.

[55] Anson F. Rainey, "The 'House of David' and the House of the Deconstructionists," *Biblical Archaeology Review* 20.6 (1994): 47.

[56] Bruce Routledge, "The Politics of Mesha: Segmented Identities and State Formation in Iron Age Moab," *Journal of the Economic and Social History of the Orient* 43.3 (2000): 249.

Donner and Röllig,[57] Aḥituv,[58] Gaß,[59] Weippert[60] and Korpel.[61] In 2019, however, Finkelstein, Na'aman and Römer published an article in which they argue that ו is preceded by a vertical stroke, which is used as sentence divider in the Mesha inscription.[62] They do not see any trace of letter between ב and this sentence divider but propose to reconstruct לק so as to read the name of the biblical king Balak.

Let us now try and examine this section using new imaging techniques. By optimizing lighting settings, some of the letters are easier to read (see Figure 8). They appear even more clearly using specular enhancement (see Figure 9).

[57] Herbert Donner and Wolfgang Röllig, *Kanaanäische und aramäische Inschriften, Band 1*, 5., erweiterte und überarbeitete Auflage. (Wiesbaden: Harrassowitz, 2002), 42.

[58] Aḥituv, *Echoes from the Past*, 393, 395, 417.

[59] Gaß, *Die Moabiter*, 10, 48.

[60] Manfred Weippert, *Historisches Textbuch zum Alten Testament*, Grundrisse zum Alten Testament 10 (Göttingen: Vandenhoeck & Ruprecht, 2010), 248.

[61] Marjo Korpel, "The Ariel of His David," *Biblische Notizen* 177 (2018): 62.

[62] Israel Finkelstein, Nadav Na'aman, and Thomas Römer, "Restoring Line 31 in the Mesha Stele: The 'House of David' or Biblical Balak?," *Tel Aviv* 46.1 (2019): 6.



Figure 8. RTI photograph of the Mesha inscription, end of line 31. (© West Semitic Research / Michael Langlois)

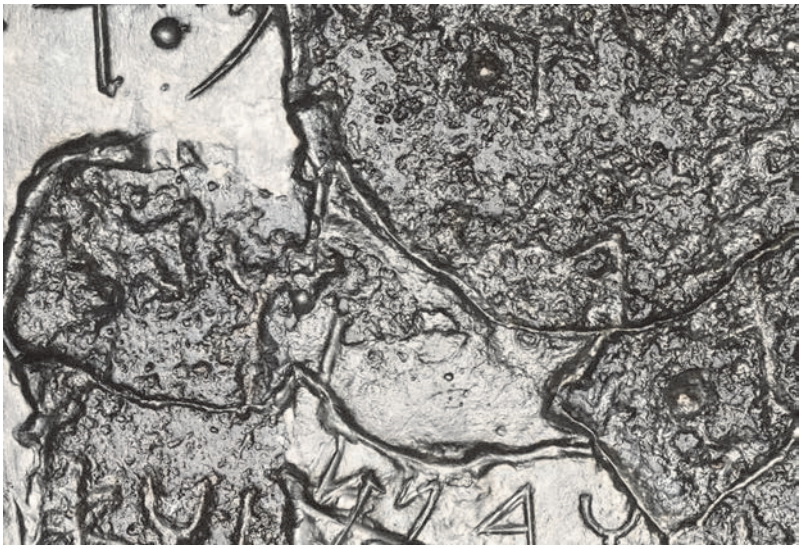

Figure 9. RTI photograph of the Mesha inscription, end of line 31, after specular enhancement. (© West Semitic Research / Michael Langlois)

On the right-hand side, ה is complete, with the top of its head above the crack. It is followed by the usual large dot as word separator. The following letter has a triangular head above the crack, with a descender that disappears after the break; at this stage, ב or ר are possible. The third letter is barely visible, and it is unclear whether the large recesses are due to engraving, as other strokes are much thinner. If this is the case, the traces are best read as ת or נ, though כ or ש are not impossible.[63] The lower part of the letter is lost below the break. The text resumes on the left-hand side, right after the break, with a clear ו. The vertical stroke that precedes, and which Finkelstein, Naʾaman and Römer understood as sentence divider, is actually not on the stone itself but in the reconstructed part; its possible presence on the original stone must therefore be assessed on the squeeze, which will be examined below.

The letter that follows ו features a triangular head and no descender, which is indicative of ד. It is followed by a large dot indicating the end of the word. This divider has apparently escaped the eye of a number of scholars, since it is incompatible with such aforementioned readings as בן.דדן.ודד (Smend and Socin), בנו.חור[י.] (Nordlander), בשם.ו[קדר] (Halévy), or בת [ד]וד[ה] (Naʾaman). It was, however, partially visible on Dussaud's plate, and appears more clearly now thanks to RTI. Though it is slightly damaged on the left-hand side, its position, diameter, depth and perfectly circular shape cannot be coincidental. Its reading is thus secure.

Since part of the stone is missing, let us look at the squeeze (see Figure 10).

[63] The reconstruction of ל is less likely, as the ascender would probably be more visible above the line, rather than eroded as suggested by Finkelstein, Naʾaman, and Römer, "Restoring Line 31 in the Mesha Stele," 6. A faint diagonal trace is visible where one would except such an ascender, but it is slightly offset and seems raw rather than due to engraving; I doubt that it preserves the top of a ל.

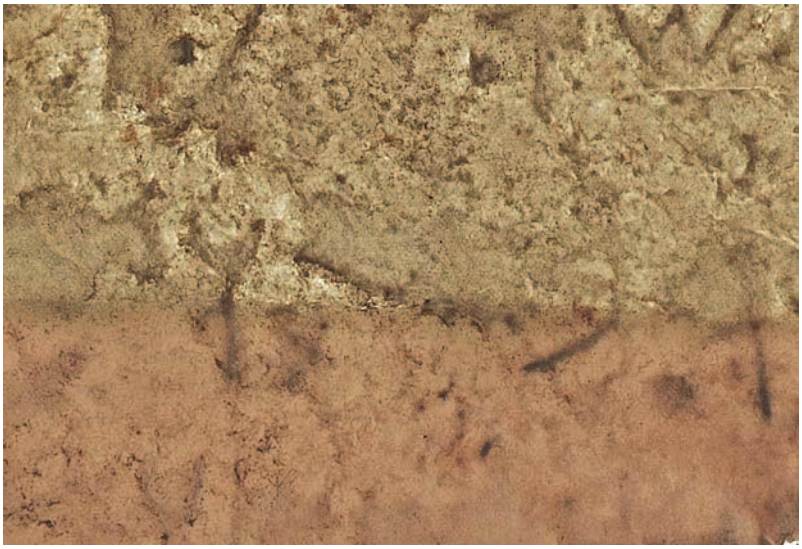

Figure 10. Digital photograph of the squeeze of the Mesha stele in the Louvre Museum with backlighting and further digital enhancement, end of line 31. (© Musée du Louvre / Philippe Fuzeau / Michael Langlois)

The squeeze is not in very good condition and a long horizontal fold complicates our task. On the right-hand side, the ה and dot are quite visible. The following letter exhibits a slanted descender more visible than the head, whose triangular shape was already observed on the stone itself. Combining the two documents, reading ב is now secure. The following letter has apparently left no imprint; there are darker traces along the fold, but they could be due to the folding rather than any engraving on the stone. This is a recurring problem with backlit images: darker areas are indicative of a thicker squeeze but do not necessarily correspond to the inscription's engraving. Other factors may account for such thickness: varying pressure when making the squeeze, folding and stretching of the squeeze after it has dried (or, in this case, even before it dried), and so on.

One should note, however, that there is no descender below the fold, which reduces the likelihood of reading נ or כ, as suggested above. The fourth letter, on the other hand, seems to feature a triangular head quite visible before ו. It could be ב, ד, or ר. Below the fold, darker traces could reveal the end of a descender, but it seems

too slanted for ר and does not feature the elbow characteristic of ב. Moreover, there are other traces on its left, in the shape of a triangle; it's almost as though there were a small ב below the baseline. Since a scribal correction or addition is unlikely, these traces are probably due to the conditions in which the squeeze was made and conserved. Let us, therefore, check these suspicious pseudo-strokes with RTI (see Figure 11).



Figure 11. RTI photograph of the squeeze of the Mesha stele in the Louvre Museum, end of line 31. (© West Semitic Research / Michael Langlois)

What looked like a miniature ב on the backlight photograph does not appear on RTI, no matter the rendering settings: the pseudo-descender is visible but hollow rather than embossed as would be expected for engraving—compare other strokes such as the shaft of ו that follows or the descender of ב on the right-hand side. Back-lit images do not distinguish between these two phenomena, which may lead to such confusion. This further weakens the possibility of reading an abnormal ב before ו.[64] The triangular head above the

[64] This pseudo-descender might be responsible for the "vertical stroke" seen by Finkelstein, Na'aman and Römer on the reconstructed part of the stele. Even if

fold is, however, visible with RTI. As a matter of fact, the right stroke was absent from the backlit photograph but is quite discernible here, and its angle is indicative of a ד.

The third letter, between ב and ד, remains unclear. No descender seems visible, and traces above the fold are less discernible than on the stone itself. Another squeeze of this area is conserved at the French Academy of Inscriptions and Fine Letters, where Clermont-Ganneau's archives are stored. We thus photographed it using RTI, and I virtually added it on top of the other squeeze (see Figure 12). The reading can further be improved using specular enhancement (see Figure 13).

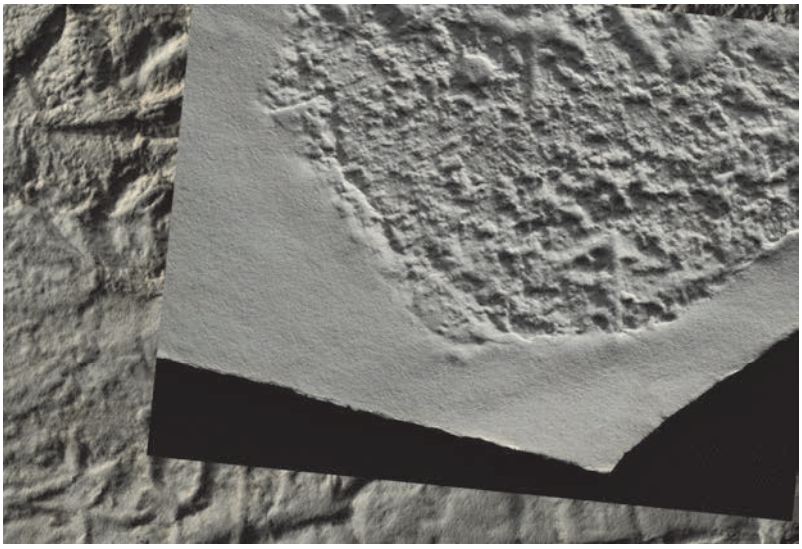

Figure 12. Top layer: RTI photograph of the squeeze of the Mesha stele at the French Academy of Inscriptions and Fine Letters, end of line 31. (© West Semitic Research / Michael Langlois)

such a stroke were present, it would not be a sentence divider, otherwise the new sentence would start with an unintelligible two-letter word וד followed by a word divider. Unfortunately, Finkelstein, Na'aman and Römer have not seen this word divider (for which see above).

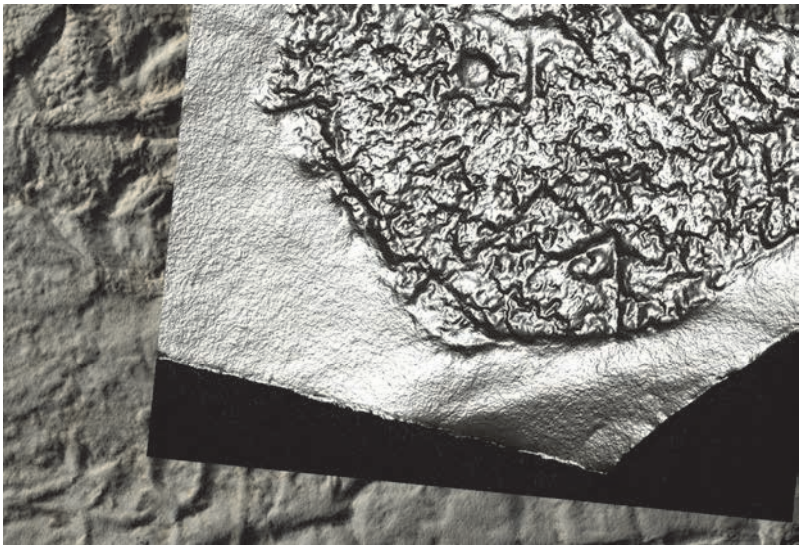

Figure 13. Top layer: RTI photograph of the squeeze of the Mesha stele at the French Academy of Inscriptions and Fine Letters, end of line 31, after specular enhancement. (© West Semitic Research / Michael Langlois)

The two recesses observed on the stone itself are present and seem less thick, which may indicate that they are deeper than initially thought and could well be due to engraving. Moreover, they cross each other and seem to continue further, which would confirm that the letter should be read as ת. Even though this decipherment remains uncertain, it seems to be the best way to account for the evidence at our disposal.

At the end of this study, let us try and combine these observations in order to reconstruct the text. First, I combined the various images at my disposal, giving priority to the stone itself, whose pieces I realigned thanks to the squeeze. Second, I filled the missing parts with the squeeze (see Figure 14). Finally, I produced a digital drawing of this section (see Figure 15).

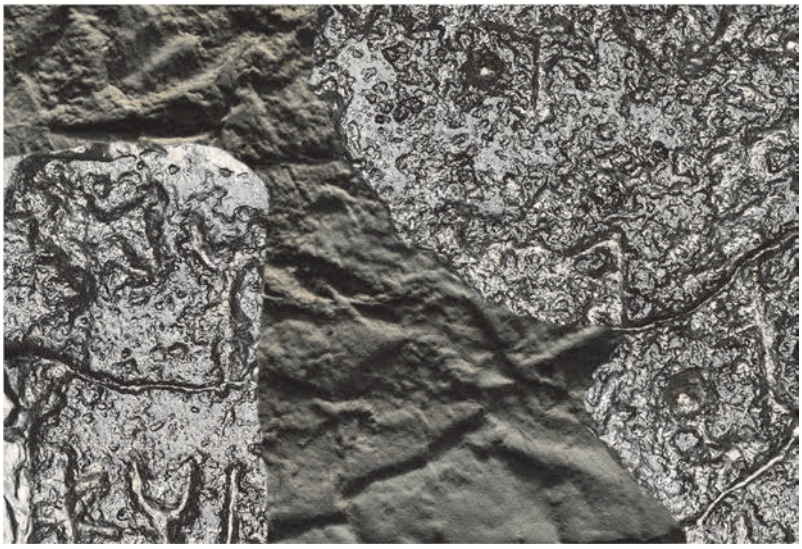

Figure 14. Digital combination of RTI photographs of the Mesha stele and squeeze in the Louvre Museum, end of line 31, after specular enhancement and realignment. (© West Semitic Research / Michael Langlois)

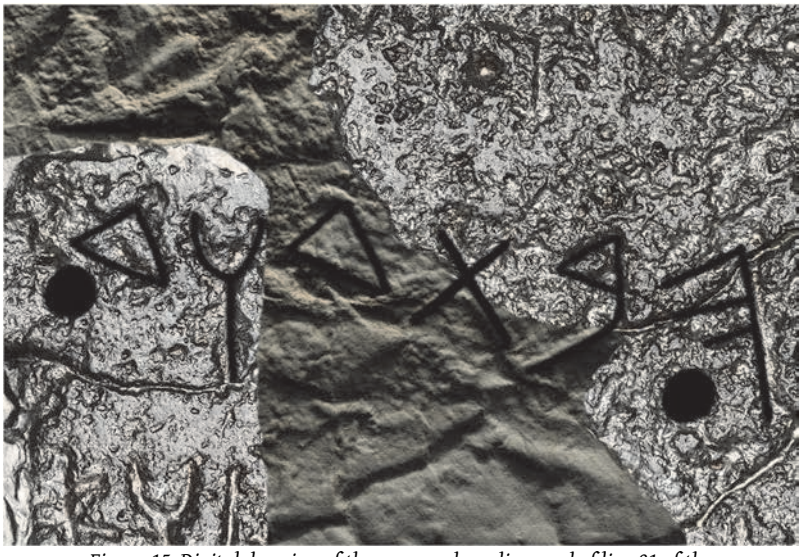

Figure 15. Digital drawing of the proposed reading, end of line 31 of the Mesha inscription. (© West Semitic Research / Michael Langlois)

Between the two clear word dividers, the best reading seems to be בתדוד. The reading offered for each letter was already proposed by the first generation of scholars working on the Mesha stele: Clermont-Ganneau read the ב and the ו, Smend and Socin read ד after the ו, as did Lidzbarski, who also suggested reading ת after ב. However, it is Lemaire who first proposed to read the whole sequence as בתדוד. My own decipherment, based on new imaging techniques, strengthens this hypothesis. It also excludes Naʾaman's similar reading of בת דודה or his newer reading of בלק|וד with Finkelstein and Römer, none of which takes into account the presence of a word divider after ד—notwithstanding the erroneous identification of a sentence divider before ו in the latter reading.

Indeed, the וד ending leaves little lexical choice beside names such as אזתוד "Azatiwada" (KAI 26) or ארוד "Arwad" (Ezek 27:8). The initial ב could thus be a preposition followed by a four-letter name ending in וד. Taking into account the traces observed above, תדוד or נדוד are good candidates (with a preference for תדוד) but these names are, to my knowledge, unattested. The sequence of five letters is thus better interpreted as a compound of בת, "house" or "daughter" (or, alternatively, בן "son") followed by דוד "pot," "beloved," "paternal uncle," or "Daw‹i›d," which is also favored by the context (cf. דודה at the end of l. 12).

The backlit photograph of the squeeze (see Figure 10) offers no evidence that there was a word divider between those two words.[65] As a matter of fact, the only known parallel in contemporary inscriptions—ביתדוד in the Aramaic Tel Dan stele—lacks a word divider.[66] If, then, בתדוד or בנדוד is one word, it may be a proper name such as "Bathdaw‹i›d," "Bendaw‹i›d" or "Bethdaw‹i›d," meaning "the daughter/son/house of the beloved/uncle/Daw‹i›d." The latter, "Bethdaw‹i›d," is favored by its occurrence on the Tel Dan stele, spelled ביתדוד with a י indicating that the first component is "house" rather than "daughter."

[65] Cp. Puech, who reconstructs ".בת.דוד." with three word dividers in "La stèle araméenne de Dan," 227 n. 31.

[66] Biran and Naveh, "An Aramaic Stele Fragment from Tel Dan," 87–90, 93.

If this name is a toponym, the sentence could mean something like "And Hawranen dwelt in it, ‹that is,› Bethdaw‹i›d."[67] If it is an anthroponym or a theonym, the sentence may be translated "And Hawranen, Bethdaw‹i›d dwelt in it." This interpretation better fits the context of the inscription. The existence of a theonym Bethdaw‹i›d and its mention here are possible, though quite hypothetical;[68] there is, however, another solution: contemporary parallels show that a dynasty or a kingdom may be referred to by the name of its founder using the syntagm "house of PN." [69] Bethdaw‹i›d could thus be a metonymic name designating a dynasty founded by a certain King Daw‹i›d.[70] If it functions as the subject of ישב "he dwelt," rather than in apposition to בה, Bethdaw‹i›d would thus refer to one or several rulers of this Davidic dynasty who occupied Hawranen. The alternative reading בנדוד "Bendaw‹i›d" seems slightly less probable, as explained above, but is nonetheless possible and would likewise designate a Davidic ruler.

Of course, such mention of the house or son of David does not solve issues related to the historicity of various biblical traditions regarding David, his kingdom and his dynasty. Those fascinating questions are beyond the scope of the present essay but they do

[67] The mention of ביתדוד in the Tel Dan inscription is thus understood as a toponym—perhaps the name of a region—by Frederick H. Cryer, "On the Recently-Discovered 'House of David' Inscription," *Scandinavian Journal of the Old Testament* 8.1 (1994): 16–18. ביתדוד is likewise interpreted as the name of a temple by Ernst Axel Knauf, Albert de Pury, and Thomas Römer, "**BaytDawīd* ou **BaytDōd* ? Une relecture de la nouvelle inscription de Tel Dan," *Biblische Notizen* 72 (1994): 67. The same interpretation is adopted for the occurrence of בתדוד in the Mesha inscription by Niels Peter Lemche and Thomas L. Thompson, "Did Biran Kill David? The Bible in the Light of Archaeology," *Journal for the Study of the Old Testament* 64 (1994): 12.

[68] A theonym Bethdaw‹i›d would be built on the same pattern as the theonym Bethel, *i.e.* Beth+DN, except that the base theonym would be Daw‹i›d instead of El. On Bethel and Daw‹i›d as theonyms, see *e.g. s.v.* "Bethel" and "Dod" in Karel van der Toorn, Bob Becking, and Pieter Willem van der Horst, eds., *Dictionary of Deities and Demons in the Bible (DDD)*, 2nd extensively rev. ed. (Leiden: Brill, 1999). But there are simpler explanations, with better parallels, as we will see.

[69] See *e.g.* Puech, "La stèle araméenne de Dan," 227 n. 30.

[70] This is also the usage of בית דוד in 1 Kgs 12:19.20.26; 13:2; 14:8; 2 Kgs 17:21; Isa 7:2.13; etc.

not contradict the fact that Bethdaw‹i›d (or alternatively Bendaw‹i›d), as a designation of one or more Davidic rulers, fits the context of the inscription well and is less hypothetical than the other explanations considered above. It will thus be adopted here.

Conclusion

A hundred and fifty years after its discovery, the Mesha stele remains one of the most important archaeological discoveries related to the Bible. Its decipherment is still debated but may now be improved using new imaging techniques. The three case studies presented in this essay demonstrate the usefulness of such tools. They also show the importance of combining various imaging techniques rather than using a single one.

Thanks to this novel methodology, which I developed and tested in this essay, new evidence confirms that המלכן "the kings" is the preferred reading in line 4, and that the beginning of line 12 must be read הקר.היתי.לכמש, "the city was ‹given› to Kemosh." At the end of line 31, the best reading—though hypothetical—is בתדוד "Bethdaw‹i›d," that is, "House of David," a metonymy referring to Davidic rulers. With the Tel Dan inscription, the Mesha stele might be the earliest historical witness of a ruler named David who, in the ninth century BCE, was remembered as the founder of a Judahite dynasty.

In the era of digital humanities, the methodology presented here calls for a renewed study of this and other inscriptions. The results will benefit research in such disciplines as epigraphy, archaeology, history and religious studies.