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Aron Pinker, “On the meaning of קשת נוהשא”
On the meaning of חשת נחשס

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1. The phrase חשת נחשס in 2Sam 22:35 = Ps 18:35 and Job 20:24 has been routinely translated “bronze or brass bow.” So did at least the Versions and the standard English translations (KJV, NKJV, NASB, RSV, Webster, Young, Derby, ASV, NJPS). Some Jewish medieval commentators take חשת נחשס as “bronze bow” (Abarbanel) and some consider חשת נחשס a metaphor for strength, i.e. “strong bow, hard to pull bow” (Rashi, Kimchi, Ralbag).

2. Certainly, the phrase חשת נחשס cannot mean “a bow made of brass or bronze.” Neither of these materials is practical for construction of the bow’s body, which has to be light and pliable. For the same reason the phrase cannot mean “brass or bronze plated bow” or “arc composite bound and/or inlaid with bronze.” Metal plating of the body, even of ornamental kind, would undermine its pliability, increase its weight, and hamper aiming without adding any advantages. Perhaps, some ceremonial bows or bows used for votive purposes were of this kind. However, neither a metal bow nor a metal plated bow that was used for warfare has ever been found in any archeological excavations, though it would have had a better chance for preservation than the wood based bow.

3. The phrase חשת נחשס cannot mean “strong bow, hard to pull bow” either. Iron and bronze are often used in the Hebrew Bible as symbols of strength (Job 40:18, Deut 33:25, Jer 15:12, Am 1:3), however, it is difficult to see how a metaphor based on a known impracticality of making brass or bronze bows could convey a meaningful concept of unusual strength. It seems prudent to reject both “bronze or brass bow” and “strong bow, hard to pull bow, or solid bow” as suitable interpretations for חשת נחשס. What is then the meaning of חשת נחשס?

4. Dahood interpreted the חשת נחשס of Ps 18:35 as “the miraculous bow,” taking חשת נחשס in the sense of “practice divination, to charm, enchant,” and translated
   1. Who trained my hands for battle
   2. Lowered the miraculous bow into my hand.

5. He related it to the episode of the bow (allegedly miraculous) crafted by the artisan god Kothar in the Aqhat legend (2 Aqht v 9-13) for the hunt-goddess Anath. In Dahood’s view the concept of the “marvelous bow” of Ps 18:35 = 2Sam 22, however, must be distinguished from the homonymous and much contested “bronze bow” of the passage in Job 20:24. One may well doubt that an alien concept as a “charmed bow” would find such positive billing in this pious Davidic psalm (Deut
One may also wonder whether קֻנַת נַחֵשׁ, which appears to be a *terminus technicus*, should be translated entirely differently in essentially two of its only biblical occurrences. Similarly, Driver’s attempt to consider “bow” in Job 20:24 synecdoche for “arrow” should be rejected, since it does not provide a reasonable sense in 2Sam 22:35 = Ps 18:35. Driver’s approach leads him to the strange conclusion that the translation “bow of steel” for קֻנַת נַחֵשׁ in 2Sam 22:35 = Ps 18:35 “though wrong, at any rate has the merit of making sense.”

Bruno suggested that קֻנַת נַחֵשׁ does not mean in Ps 18:35 “copper” but is the Niphal of the root זִחָה, “make haste,” though such a form is not attested in the Hebrew Bible. Bruno’s suggestion is not only alien to Biblical Hebrew, a ‘quick bow’ does not even exist in archery. Tournay and Schwab understand קֻנַת נַחֵשׁ as referring to a bow that can shoot bronze-tipped arrows (l’arc qui lance la flèche d’airaine). However, there is no evidence that such a distinction between bows existed in those time. Moreover, nowhere in the Hebrew Bible is the material of the arrowhead specified and accordingly the arrow designated, though bronze-tipped arrows existed. Schmuttermayr, suggests deleting קֻנַת נַחֵשׁ in 2Sam 22:35 = Ps 18:35. This would improve the rhythm and concur with the L-recension of the Septuagint for 2 Samuel. However, Schmuttermayr’s reasons for the deletion are not compelling and the occurrence in Job 20:24 clearly speaks against it.

The only possible meaning that has not been suggested for קֻנַת נַחֵשׁ is “snake-like, serpentine.” The shape formed by a moving snake corresponds admirably to the shape of the wooden body of a double-convex bow. The meaning “snake-like bow” would be quite natural for the double-convex bow in the agricultural society of David’s time. There is ample archeological evidence for rather early use of the double-convex bow. Double-convex bows have been depicted on Egyptian artifacts (cylinder seal, Hunters’ Slate Palette) from the 4th millennium BCE. Keel, in his study of symbolism in the biblical world brings a number of illustrations of the double convex bow. For instance, Pharaoh is instructed by his gods in the use of the double convex bow18, the double convex bows of Pharaoh’s enemies are trampled19, etc.

Because in the “snake-like bow” the cord was very close (almost flush) to the point-of-grip of the bow it allowed full extension of the cord-pulling arm and imparting to the arrow great momentum, and consequently great range. Its relatively small size gave much aiming flexibility and convenient portability. However, it was not easy to hold steady the “snake-like bow” when aiming, since the grip was at an apex of a convexity rather then concavity (as in a single arc bow). Consequently, some extra training and guidance (גָּדַל [2Sam 22], or the alternative form נְחֵשׁ [Ps 18]) was required for controlling the “snake-like bow” when it was aimed. The unusual snake-like shape of the bow’s body required finding suitable wood and a process of shaping making the production of such bows expensive. Yadin estimates that the double-convex bow was used in Egypt and Israel for a long time. Eventually the double-convex bow was replaced by the composite bow. It is not clear whether the double-convex bow was used in David’s time. Perhaps the texts in which
occurs are of an earlier period in which the snake-like bow was still used, or this bow was used in David’s day, or it was nostalgically referred to in poetic works.

9. The derivation of נחשׁ “snake-like” from נחשׁ “snake” finds support in the occurrence of נחשׁ for the bronze serpent in 2Kgs 18:4. It has been suggested that נחשׁ, נחשׁ, נחשׁ, נחשׁ, נחשׁ, with נחשׁ = “snake.” Thus the forms נחשׁ and נחשׁ from נחשׁ (“snake”) would appear possible. Similarly derived forms would be אלף “tame, cattle-like” (Mic 7:5) from אלף “cattle” (Deut 7:15), or ארז “cedar-like, strong” (Ez 27:24) from ארז “cedar” (Ez 17:23).

10. Finally, the interpretation of נחשׁ as “snake-like bow” is contextually meaningful in all of its occurrences in the Hebrew Bible. The texts of 2Sam 22:35 and Ps 18:35 differ only in the archaic נחשׁ of נחשׁ (Ps 18:35), and can be treated as being the same. As to the meaning of נחשׁ/נחשׁ, some find that the Versions support a reading נחשׁ/נחשׁ and a meaning similar to it. If no emendations are admitted still the root of נחשׁ is at issue. It has been suggested that its root is נחשׁ “break,” נחשׁ “descend, land,” or נחשׁ “set.” These roots led to the following meanings for נחשׁ/נחשׁ, “You made” (Septuagint on Ps 18, Vulgate), “seizes, takes hold” (Targum), “strengthens” (Peshitta), “You laid, You lowered” (Ibn Ezra, Ralbag, Young), “is broken” (Septuagint on 2Sam 22, Kimchi, KJV, Webster), “can bend” (Rashi, NKJV, NJPS, RSV, NASB, Darby, ASV). BDB note that according to most commentators נחשׁ means “cause to descend = press down.” Unfortunately, neither of the suggested meanings for נחשׁ/נחשׁ is an adequate parallel for מלתמך “teach, instruct.” Couroyer suggested that נחשׁ/נחשׁ refers to the stringing of the cord of the bow, which was a difficult exercise, and that it is a good equivalent of רדר. In that case it would be an entirely new meaning for נחשׁ/נחשׁ without any etymological support from cognate languages. Reider assumed that נחשׁ/נחשׁ is cognate with the Arabic ﻥﻪﺎ, whose primary meaning is “to hew, to sculpt, to fashion out of hard material.” Reider finds this expression as very apt, since it emphasizes both the strength and pliability of the arms. Yet one would be hard pressed to find a basis for parallelism between “train” and “fashion,” or a cogent need for “brass arms” in battle.

11. It seems more logical to assume that נחשׁ/נחשׁ is the Qal perfect 2 ms. of נחשׁ “lead, guide” (Ex 15:13, Ps 77:21). This assumption requires only a revocalization of the MT yet provides a good parallel to מלתמך “teach, instruct” as well as good sense for the hemistich. Because it was difficult to keep steady the “snake-like bow” when aiming, David ascribed his prowess with this bow to God’s guidance, saying “He trains my hands for battle, and guides a snake-like bow [in] my arms.” This sense for נחשׁ/נחשׁ may not be altogether that far from what Driver suggested: derive נחשׁ/נחשׁ in the sense of the Arabic ﻥﺎﺣ ﻥا “aim, direct.”
The understanding of קשת נחושה in Job 20:24 suffered from an incorrectly perceived synonymous parallelism in which קשת, חרב, ותחלפה are related to קשת and חרב, חרב, ותחלופה. This parallelism convinced commentators that קשת must be a metal (bronze or brass). However, while קשת is a relation of likes (weapons and weapon(s)), חרב, חרב, ותחלופה is a relation of likes only in sharing the sense “go through.” The two are, however, opposites with respect to where the “going through” takes place. In the case of it is near-by, while in the case of it is at a distance. Consequently, the relation || is not uniform for the paired elements. To restore uniformity in the parallelism it is necessary to view it as consisting of an antithetic parallelism in which קשת נחושה and חרב, חרב, ותחלופה. In the relation קשת נחושה, קשת נחוסה, חרב, חרב, ותחלופה and קשת נחוסה, חרב, חרב, ותחלופה short-range weapons (containing metals) are related to long-range weapons (not containing metals). The conclusion from Job 20:24 must be that קשת נחושה was a far-reaching weapon, as the “snake-like bow” with its arrows was. The verse is telling that anyone who will escape the metal weapons (axes, maces, swords, etc.) of close quarters combat, would be pierced through by the long-range weapons as the snake-like bow. Zophar the Naamathite describes the effectiveness of God’s anger in standard military terms “fleeing from metal (close quarters) weapons he is pierced by [an arrow of] a snake–like bow (long range weapon).” In this interpretation it is assumed that the phrase “[an arrow of]” is an ellipsis (cf. Isa 41:2).

In conclusion, interpreting the technical military term קשת נחוסה as “snake-like bow” provides a contextually meaningful and uniform sense for its occurrences in the Hebrew Bible.

References
1. קשת נחוסה is missing in 2Sam 22:35 of the Lucianic recension of the Septuagint, probably on account of the meter.
2. KJV and Webster have “bow of steel,” which is corrected to “bow of bronze” in NKJV. It is inconceivable that קשת, חרב means “of steel.” Steel, an alloy of carbon and iron (the metallic element, not the finished product), contains 0.2 to 1.5 percent of carbon. The production of steel requires the removal of the impurities in iron ore, often through the application of greater heat than ancient furnaces could produce. Several processes for accomplishing “decarburizing,” removal of carbon from cast iron were used in China beginning in the Han dynasty (206 BCE - 220 CE). An important technique in steel production is “quenching,” heating the metal and then rapidly lowering its temperature again by plunging it into water. The result is a dramatic increase in the strength of the metal, which can be increased yet further by repeating the process. The earliest quench-hardened steel that we know about dates from about 1200 BCE or so. But steel was too difficult to produce dependably to come into wide use at that point. The medieval crossbow was made of steel. It is interesting to note that the RSV translates קשת נחוסה “bow of bronze” in 2Sam 22:35 = Ps 18:35 but “bronze arrow” in Job 20:24, reflecting the inadequacy of the standard translation. Some Jewish medieval commentators seemingly read קשת נחושה [ץ,ץ] (Rashi, Ralbag).
3. Pope, M.H. *Job*. AB 15. New York: Doubleday (1986) 153. Pope uses in his translation “bronze bow” nominally. He says “The meaning here is simply that if the wicked escape one disaster, an equal or worse one will befall him.” However, he does not offer a meaning for קשת חסרת per se.

4. Cross, F.M. and Freedman, D.N. “A royal song of thanksgiving: 2 Sam 22 = Ps 18a.” *JBL* 72 no 1 (1953) 31. The authors consider the MT of 2Sam 22:35 = Ps 18:35 as making no suitable sense. Using Ps 144:1 they reconstruct 2Sam 22:35 = Ps 18:35 into מַלְמָד דָיְיָה לְכֹלְכֵּרָב or מַלְמָדִים יָרִיעִים הָנָּרֶשׁ לְחות לְמַגִּי שׁעָשֵׂה תְנִית וֶרֶשֶׁת מַרְחָשֶׁה. Translating קשת חסרת by “arc composite bound and/or inlaid with bronze.” Such latitude with the MT is prima facie suspect, and in the current instance unwarranted.


6. Couroyer, B. “L’arc d’airain.” *RB* 72 (1965) 513. Couroyer suggests for קשת חסרת the sense “solid” or “robust.” He says, “Il me semble donc plus vraisemblable que l’arc d’airain est un arc spécial, un arc composé, donc très fort, destiné à lancer des projectiles à pointe de bronze plus pénétrants que les autres. Ces arcs très coûteux, moins en raison des matériaux dont ils sont faits que du temps {cinq à dix ans) requis pour leur fabrication étaient des armes assez rares, partant très recherchées, et dont seuls les chefs et peut-être certains tireurs d’élite étaient munis. Ainsi s’expliquerait la rareté de la mention de cet arc d’airain dans la Bible.”

7. Pinker, A. “The Lord’s Bow in Habakkuk 3,9a.” *Bib* 84 (2003) 417-420. Pinker suggests that enigmatic ישבשת דמלות קשת חסרת in Hab 3:9a is symbolically the Lord’s composite bow made of seven strips. Such a bow would be an exaggeration of the practical composite bow, which had only a few strips. Since a bronze bow would be utterly impractical it is impossible to accept Barrois’ characterization “L’arc d’airain de IISam., xxii, 35, ou de Job, xx, 24, n’est sans doute qu’une hyperbole poétique sans valeur documentaire” (Barrois, G. A. *Manuel d'archéologie biblique* II. Paris: A. Picard (1953) 104).

8. Caquot, A. *La Divination*, I. Paris: Presses universitaires de France (1968) 85 note 1. Caquot says, “the verb כָּשַׁר is employed for a divination that is not condemned in Gen 44:5, 15 and 1Kgs 20:33; one notes that the scene in Gen 44 happens to an Egyptian, that of 1Kgs 20 to an Aramean.” One may well wonder whether David’s bow had such a function.


10. Tur-Sinai, N.H. *Ha-Lashon ve-Haseper*, vol II. Jerusalem: Bialik Inst. (1959) 205. Tur-Sinai notes that in Arabic *nhus* means “luckless, cursed.” He suggests this sense also for the biblical קשת חסרת (Gen 30:23, Num 23:23). If this sense were adopted, then קשת חסרת would mean “luckless bow, cursed bow,” rather than “the miraculous bow.” The episode in 2Kgs 13:15-17 is the closest the Hebrew Bible comes to some unusual bow. However, no divination or charm is involved, and it is the arrow that is given a special name. See Barrick, W. Boyd. “Elisha and the magic bow; a note on 2 Kings 13,15-17.” *VT* 35 (1985) 355-363. Barrick suggests that 2Kgs 13:16 refers to a stringing operation depicted in an Assyrian relief from the mid-7th century BCE. The magico-symbolic
element in the episode is the actual bow shot and Elisha’s pronouncement in v. 17b. It is the shot of the bow that has magic potency not the bow itself.


12. Driver, G. R. “Problems in the Hebrew Text of Job.” In VTSup III (1960) 82. Driver says, “I have here rendered יִשְׂכָּל ‘bow’ by ‘arrow’ for the obvious reason that a bow of brass is an impossible weapon; for brass is neither flexible nor resilient. Only a god’s bow might be auralus ‘gilded’ or aureus ‘golden’, while bows of bronze were but votive offerings or weapons in the hands of statues; these were no ordinary weapons.”


16. Schmuttermayr, 145-146. More recently McCarter revived this approach (McCarter, P. K. *II Samuel.* AB 9. New York: Doubleday (1984) 459-60). The occurrence of the lectio brevior in one recension of the Septuagint and just in 2 Sam is not compelling. Schmuttermayr finds it plausible that the word דָּשָׁן is a later addition to the text of 2 Sam 22:35 = Ps 18:35 under the influence of Job 20:24. This seems rather unlikely. The term דָּשָׁן would then be a hapax legomenon. Why would any scribe proliferate an unclear term?


20. Bardi, U. “Reverse Engineering the Bow: A Simple Static Model.” Revised Aug. 2001. www.unifi.it/unifi/surfchem/solid/bardi/archery/modelingbows/. The performance and ease of shooting a bow is determined to a great degree by the relation of force to elongation (draw length). In all traditional bows this relation is nearly linear. The effective range of a bow is approximately 175 meter, and it is deadly at 50-60 meter. The double-convex bow allowed maximum elongation.


24. The linguistic utility of having in Hebrew an adjective derived from חיות = “snake” is highlighted by the fact that in some languages adjectives and verbs are derived from it (English, French, etc.). The New Hebrew word עקפים = “winding” is derived from a hapax legomenon (Isa 27:1).

25. Schmuttermayr, 141. See also BHS.

26. One manuscript has חיות in 2Sam 22:35 (cf. 1Sam 2:4) and one manuscript has חיות in Ps 18:35. It is interesting to note that this difference in חיות affects the translation of the second hemistich in 2Sam 22:35 = Ps 18:35 by the Septuagint and the Targum, but not the Peshitta and Vulgate.


28. Schmuttermayr, 140-146. Schmuttermayr enumerates the various meanings that have been assigned to חיות and חיות.

29. BDB, 639.


32. It is possible that the NEB’s translation of חיות by “aim” aims in the same direction. Cf. Driver (1960) 83 note 5. Driver notes that in 2Sam 22:35 = Ps 18:35 the verb is not חיות but חיות with the Qal meaning “led, guided” and the Piel meaning “directed, aimed.”

33. Driver, G. R. “Hebrew Notes.” VT 1 (1951) 248. Driver claims that the meaning “direct” for חיות would also make good sense in Ps 38:3. Emerton notes that Michaelis derived the meaning of חיות from the same Arabic root as Driver, defining it by “contendere ad aliquem, vel virum, vel locum.” In Isa 7:2 Michaelis took חיות as “march.” Cf. Emerton, J.A. “Notes on Jeremiah 12 9.” ZAW 81 (1969) 189.

34. Tur-Sinai, 121-2, note 27. Tur-Sinai suggests the reading חיות חיות “cleave him” (Job 39:3), resulting from a metathesis of ה and ה. This would seem an inappropriate term for the action of an arrow. Indeed, it can be conjectured that the author intentionally selected חיות to indicate both the reach and effect of the arrow with respect to the escapees. Apparently, חיות is also intended to suggest both wounding by sword and escape. Consequently, the MT should be retained without any change of meaning (cf. Jud 5:26).

35. Driver (1960), 81. Driver says, “In verse 24 ‘he shall flee’ is not parallel to ‘it shall strike him through’ and cannot be right; the context suggests that ויברהו ‘he shall be wounded’ ought to be vocalized יבר鹰 ‘he shall be wounded’ on the assumption of a Heb. ויברה ‘wounded’ = Arab. בורה ‘bruised’, whence ברה(n) ‘blow of a sword’ is derived.”

36. Pope, LII. Pope says, “It is difficult to find a clear case of antithetic parallelism in the Book of Job. Certainly iii 3 is not to be classed as such (so Terrien, S. The Book of Job. Introduction and Exegesis. Interpreter’s Bible III (1954) 894a), since no contrast is intended between the day of birth and the night of conception—both alike are damned.” Perhaps Job 20:24 is such a case.

37. I am grateful to Rabbi A. Haramati and Prof. S. Shneider for their helpful comments.