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Fluency Can Bias Masked Priming of Binary Judgments: Evidence From an All-Nonword Task

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Using a novel all-nonword task ("Does the target have more vowels than consonants?"), new evidence is provided showing that processing fluency can bias masked priming of binary judgments. Two experiments revealed masked repetition priming for "yes" nonwords (e.g., NUISO) but not for "no" nonwords (e.g., RULON). This pattern is considered evidence that the greater ease of target processing induced by repetition primes was attributed to the target being a member of the response category associated with shorter RTs, namely the "yes" response category. This pattern of nonword priming effects reinforces Bodner and Masson's (1997) key claims: (a) a fluency-attribution process can influence masked priming, and (b) therefore, the masked-priming paradigm does not isolate lexical processes.

Keywords: fluency bias, lexical decision, masked priming, nonword priming

Responses to targets can be facilitated by brief masked primes of which participants are unaware. Consistent with a lexical basis for priming (e.g., Forster & Davis, 1984), masked repetition (vs. unrelated) primes typically facilitate lexical decisions for words but not for nonwords (e.g., Forster, 1998). Building on earlier work, Bodner and Masson (1997) argued that masked priming for nonwords might be obscured in the lexical-decision task by a fluency bias, whereby an increase in processing speed on repetition trials might be attributed to the target being a word, creating a bias that works against making correct responses to nonwords (e.g., Balota & Chumbley, 1984; Feustel, Shiffrin, & Salasoo, 1983).

Processing fluency has been shown to affect a variety of binary judgments (e.g., Jacoby, 1983; Jacoby & Dallas, 1981; Whittlesea, 1993; Whittlesea, Jacoby, & Girard, 1990). When the processing of a stimulus is experienced as fluent, observers seek to attribute that fluency to a source. In a recognition task, fluency is often attributed to prior study. For example, masked repetition priming of targets elevates recognition claims (Jacoby & Whitehouse, 1989; Rajaram, 1993). Fluency can be attributed to other task-salient sources too, ranging from visual clarity (Jacoby, Allan, Collins, & Larwill, 1988) to fame (Jacoby, Woloshyn, & Kelley, 1989).

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Bodner and Masson (1997) obtained robust priming for nonwords in the lexical-decision task by presenting targets in *mIxEdcAsE* format. They took nonword priming as support for a memory-based account of priming originally proposed by Whittlesea and Jacoby (1990). Specifically, on their memory-recruitment account (see Bodner & Masson, 2014, for a review), the processing applied to masked primes is encoded into a new memory trace that can be retrieved to assist with processing of the target. The overlap in prime and target processing on repetition-prime trials should facilitate responses to both words and nonwords unless a fluency bias works against nonword priming. Bodner and Masson argued that presenting targets in mixed-case format decreases processing fluency while increasing reliance on the processing applied to the prime (see Whittlesea & Jacoby, 1990). The conjunction of these two outcomes was argued to reveal nonword priming.

This explanation for nonword priming—and the general claim that fluency can bias masked priming—has since been challenged (see Kinoshita & Norris, 2011). For example, Davis, Kim, and Forster (2008) suggested that mixed-case format might lead targets to be processed on a letter-by-letter basis by opening letter entries, which would promote priming for words and nonwords alike. Consistent with this possibility, Davis et al. did not find nonword priming in a backward lexical-decision task in which uppercase targets were used, but had to be processed from right to left (e.g., DAOR for word target ROAD).

In Norris and Kinoshita's (2008) Bayesian Reader account, masked priming reflects the conflation of brief, masked primes with their visible targets. This conflation is combined with information about a target's likelihood based on prior experiences or "priors" to optimize responding in a given task. Norris and Kinoshita tested this account using a novel same–different judgment paradigm. Before each masked priming trial a referent item was shown in plain view. Participants had to decide whether the target matched the referent (same trials) or not (different trials). Priming occurred for words and nonwords on same trials but neither showed priming on different trials. Importantly, then, the Bayesian

Reader account does not predict nonword priming in the standard masked-priming paradigm where a nonword prior is not established via the presentation of a referent nonword at the start of the trial.

Perea, Gomez, and Fraga (2010) examined a second reason why masked priming might be underestimated for nonwords in the lexical-decision task: Nonwords are always mapped to the "no" (vs. "yes") response. They reasoned that nonword priming might be larger in a nonword-based go/no-go task (i.e., respond "yes" to nonwords; withhold responses to words). Contrary to the sublexical letter-level account described above, using uppercase targets they obtained small but significant nonword priming effects that were similar in size in this novel task and in a standard lexical-decision task (i.e., respond "no" to nonwords; respond "yes" to words). Perea et al. concluded that response mappings in the lexical-decision task do not work against nonword priming. However, they assessed priming for "yes" versus "no" responses to nonwords using different tasks. Moreover, fluency experienced on a lexical-decision trial might typically be attributed to the target being the more efficiently processed target type (i.e., a word, rather than a nonword). If so, a fluency bias against nonword priming will be present whenever words are one of the two target types, which is as true of the nonword-based go/no-go task as the standard lexical-decision task.

Experiment 1

To provide a definitive test of a fluency bias, we created a novel binary-judgment task that used only nonword stimuli. Participants decided whether each five-letter target contained more vowels than consonants. Nonwords with more vowels (i.e., "yes" nonwords) were expected to be more fluently processed than nonwords with fewer vowels (i.e., "no" nonwords), as evidenced by shorter response times (RTs). If fluency from repetition priming is attributed to the more fluent response category, then a fluency bias should yield priming for "yes" nonwords but not for "no" nonwords. This bias was not expected to produce negative repetition priming for "no" nonwords because the overlap in prime and target processing should work to facilitate target classification, at least according to the memory-recruitment account (Bodner & Masson, 1997). On the lexical account, priming should be absent for both "yes" and "no" nonwords given that neither reside in a mental lexicon. On the Bayesian Reader account, nonword priming should again be absent because a nonword prior has not been established for the prime to update. Finally, on a sublexical account, our use of uppercase targets should not induce a letter-by-letter strategy, but if it does, then this account predicts equivalent priming for "yes" and "no" nonwords.

Method

Participants. University of Calgary undergraduates participated for course credit, 70 in a first experiment and 40 in a replication. The key findings did not differ across data sets so they were pooled.

Materials and design. The critical stimuli were 200 five-letter nonword strings (see Appendix A). The 100 "yes" nonwords contained three to four vowels and the 100 "no" nonwords contained one to two vowels. Unrelated primes shared the same number of vowels as their targets, thus primes were always predictive of the correct target response. Half of the targets of each type were assigned repetition primes and half unrelated primes; this assignment was counterbalanced across participants. Additional practice targets (10 per type) with unrelated primes were selected using these criteria.

Procedure. Stimuli were presented in black 12-point courier font on a white background on a Macintosh computer using software that synchronized with the monitor's 16.7-Hz refresh cycle. Participants were not informed about the primes. Each trial consisted of a 495-ms mask (a row of uppercase Xs), followed by a 45-ms lowercase prime, then an uppercase target that remained visible until a response. Each stimulus appeared at the center of the monitor. Participants were asked to read each target silently and then indicate as quickly and accurately as possible whether it had more vowels than consonants by pressing the "/" or "z" key, which were mapped to "yes" or "no" responses in a counterbalanced fashion. Feedback appeared for 1 s if no response occurred within 1.5 s ("Too Slow") or if an error occurred ("Incorrect Response"). A 1-s intertrial interval then occurred. After 20 randomized practice trials and 200 randomized critical trials, participants were questioned to assess their subjective prime awareness.

Results and Discussion

Only four participants (3.6%) reported prime awareness. Following Bodner and Johnson (2009), trials with RTs below 300 ms (0.33%) or above 1,850 ms (0.90%) were omitted. The significance level was .05. Figure 1 plots the mean RTs on correct trials,

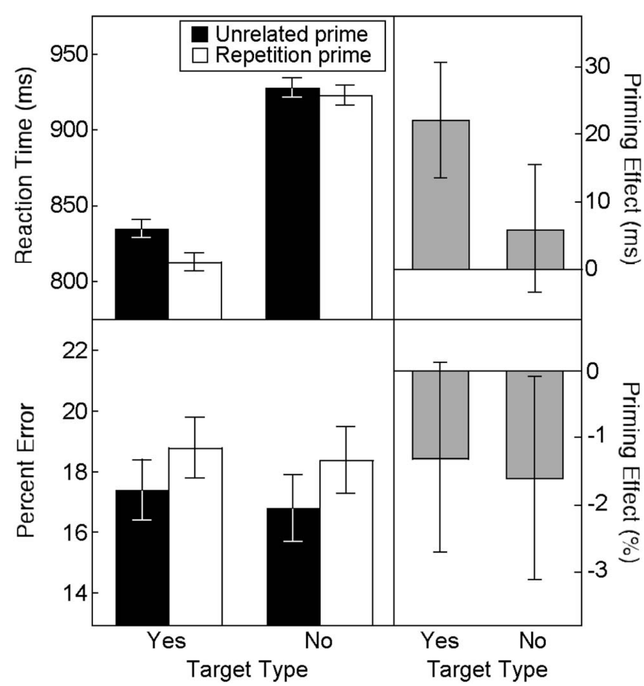

Figure 1. Experiment 1: Mean response times (RTs) and error rates as a function of prime type for each type of nonword target. Error bars for RTs and error rates are 95% within-subjects confidence intervals for comparing pairs of means across prime type. Error bars for priming effects are 95% confidence intervals for comparing priming effects against zero.

and the error rates, for "yes" and "no" nonwords by prime type. Each dependent measure was analyzed using a 2 (priming: unrelated vs. repetition) × 2 (target type: yes vs. no) analysis of variance.

In the RTs there was an overall priming effect, $F(1, 109) = 19.43$, $MSE = 1{,}099$, $p < .01$, that interacted with nonword type, $F(1, 109) = 6.34$, $MSE = 1{,}203$, $p < .05$. Responses were also much faster for "yes" than "no" nonwords overall (824 ms vs. 926 ms), $F(1, 109) = 261.71$, $MSE = 4{,}343$, $p < .01$, consistent with "yes" nonwords being the more fluent response category. Most importantly, and consistent with the fluency bias described by the memory-recruitment account, follow-up tests showed that priming was significant for "yes" nonwords (22 ms), $F(1, 109) = 26.56$, $MSE = 1{,}027$, $p < .01$, but not for "no" nonwords (6 ms), $F(1, 109) = 1.36$, $MSE = 1{,}276$, $p = .25$. The lexical, sublexical, and Bayesian Reader accounts do not predict this pattern. By analogy, this pattern suggests that masked repetition priming in the lexical-decision task likely also biases decisions toward the more fluent response option, namely "yes" (word) decisions, thus undermining nonword priming in this task. Consistent with this possibility, masked priming effects for words and nonwords are more similar when the target format (Bodner & Masson, 1997) or task (Masson & Isaak, 1999) de-emphasize a reliance on fluency.

The error rate was similar for "yes" and "no" nonwords, $F < 1$, $p = .53$. Unexpectedly, however, participants made more errors on repetition (vs. unrelated) trials (18.6% vs. 17.1%), $F(1, 109) = 6.39$, $MSE = 37.5$, $p < .01$. Critically, however, this negative priming effect did not interact with target type, $F < 1$, $p = .75$. Nonetheless, repetition priming yielded faster responses but more errors, indicating a speed–accuracy trade-off for "yes" nonwords. Experiment 2 was conducted in an effort to replicate the priming pattern in RTs without the complication of a speed–accuracy trade-off.

Experiment 2

A new set of nonwords was used in Experiment 2, both to establish generality and to provide better stimulus control than in Experiment 1. Here both "yes" and "no" nonwords were built from the same sets of letters and were matched for letter frequencies.

Method

We tested 30 additional participants from the same pool as in Experiment 1. New 5-letter "yes" and "no" nonword strings were constructed from five vowels (E, A, I, O, U) and the five most-common consonants (R, T, N, S, L). For each set, 10 practice and 100 critical targets/unrelated-prime pairs were generated as in Experiment 1 (see Appendix B). Prime assignment followed Experiment 1. The "yes" nonwords contained 3 vowels and the "no" nonwords contained 2 vowels; their mean letter frequencies were equated (35.2 vs. 35.2), and their forward bigram frequencies did not differ significantly (888 vs. 1001), $F(1, 198) = 1.22$, $MSE = 530{,}070$, $p = .27$, but the "yes" nonwords had more syllables (1.97 vs. 1.84), $F(1, 198) = 7.49$, $MSE = .11$, $p < .01$. The procedure matched Experiment 1 except the prime duration was 60 ms.

Results and Discussion

No participants reported prime awareness. Trials with RTs below 300 ms (0.53%) or above 1,850 ms (0.81%) were again omitted. Figure 2 provides the means, which were analyzed as in Experiment 1. Responses were again faster for "yes" than "no" nonwords (759 ms vs. 832 ms), $F(1, 29) = 61.98$, $MSE = 2{,}634$, $p < .01$, verifying that "yes" was the more fluent response option. The marginal priming effect, $F(1, 29) = 3.66$, $MSE = 1{,}143$, $p = .07$, was qualified by a significant interaction with target type, $F(1, 29) = 5.18$, $MSE = 875$, $p < .05$. Replicating Experiment 1, priming was significant for "yes" nonwords (24 ms), $F(1, 29) = 13.57$, $MSE = 642$, $p < .01$, but not for "no" nonwords (−1 ms), $F < 1$, $p = .96$. There were fewer errors for "yes" than "no" responses (12.7% vs. 17.4%), $F(1, 29) = 8.93$, $MSE = 72.2$, $p < .01$, and, importantly, the error rates on repetition and unrelated trials were similar (14.9% vs. 15.2%), $F < 1$, $p = .80$ (the interaction was $F < 1$, $p = .35$). Thus, the priming pattern in the RTs was the same whether a speed–accuracy trade-off was present (Experiment 1) or absent (Experiment 2).

General Discussion

A "wordless" vowel-judgment task revealed new evidence that a fluency bias can modulate masked repetition priming for nonwords (cf. Perea et al., 2010). We obtained nonword priming for the faster and hence more fluent "yes" targets (i.e., nonwords with more vowels than consonants), but not for the slower and hence less fluent "no" targets (i.e., nonwords with fewer vowels than

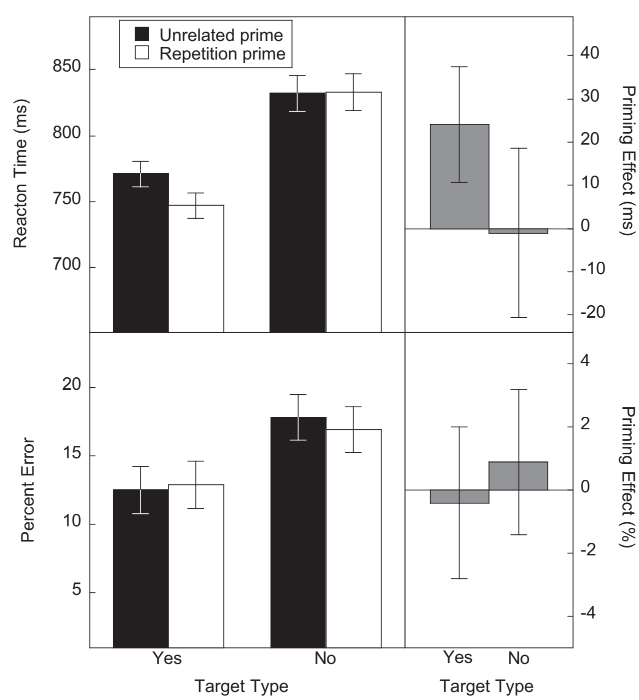

Figure 2. Experiment 2: Mean response times (RTs) and error rates as a function of prime type for each type of nonword target. Error bars for RTs and error rates are 95% within-subjects confidence intervals for comparing pairs of means across prime type. Error bars for priming effects are 95% confidence intervals for comparing priming effects against zero.

consonants). Our finding that fluency can bias participants toward the more fluent response option raises the possibility that priming in the lexical-decision task may be overestimated for words ("yes" targets) and underestimated for nonwords ("no" targets)—in turn exaggerating evidence for a lexical account of priming (Forster & Davis, 1984).

Proponents of a lexical account sometimes attribute nonword priming to a sublexical letter-level process (e.g., Davis et al., 2008), but such a process should have yielded priming for both "yes" and "no" nonwords. The current pattern of nonword priming thus challenges a purely lexical or sublexical account of priming (Forster & Davis, 1984) but is consistent with the memory-recruitment account (Bodner & Masson, 1997), although the latter account has its shortcomings (see Bodner & Masson, 2014). Finally, although the Bayesian Reader account (e.g., Norris & Kinoshita, 2008) predicts masked nonword priming under some conditions, it does not predict it when a nonword referent is not presented prior to each masked priming trial.

If fluency simply biases "yes" responses, then reversing the task instructions might reverse the priming pattern for the two classes of targets. That is, a *nonlexical-decision task* might yield more priming for nonwords than words, and a *consonant-judgment task* might yield more priming for nonwords with more (vs. fewer) consonants than vowels. On the other hand, reversing the task instructions would not likely change which target type is more fluently processed (i.e., nonwords with more vs. fewer vowels). If fluency is attributed to the more fluent target type, as we have suggested, then the priming pattern is unlikely to reverse. Indeed, people have strong natural tendencies in their treatment of binary response options (e.g., Proctor & Cho, 2006). Informally we have also found that participants given "reversed" task instructions tend to "unreverse them" to foreground the easier, better-known target type (i.e., words, vowels).

Our findings can be reconciled with the lexical, sublexical, or Bayesian Reader accounts of masked priming by acknowledging that processing fluency influences participants' binary responses. For example, in the Bayesian Reader account, conflations of perceptual processing of masked repetition prime/target pairs could be processed more fluently than conflations of unrelated prime/target pairs. In other words, the occurrence of a fluency bias does not adjudicate between accounts of the processes that generate priming or that guide the execution of binary responses. Instead, it reaffirms that cognitive operations generate experiences of processing fluency that may work to exaggerate some priming effects while masking others.

Résumé

Grâce à une tâche novatrice réalisée au moyen de pseudo-mots seulement (« Est-ce que la cible contient plus de voyelles que de consonnes ? »), de nouvelles preuves sont présentées pour montrer que la facilité du traitement peut influencer l'amorçage masqué de jugements binaires. Deux expériences ont révélé l'amorçage de répétition masqué pour les pseudo-mots « oui » (par ex., NUISO), mais pas pour les pseudo-mots « non » (par ex., RULON). Ces résultats sont considérés comme une preuve que la plus grande facilité de traitement de la cible suscitée par la répétition d'amorces était attribuée au fait que la cible faisait partie de la catégorie de réponses associées aux temps de réaction les plus courts, à savoir la catégorie de réponses « oui ». Cette tendance des effets de l'amorçage de pseudo-mots va dans le sens des principales conclusions de Bodner et Masson (1997) : a) un processus d'attribution lié à la facilité peut influencer l'amorçage masqué; b) ainsi, le paradigme de l'amorçage masqué n'isole pas les processus lexicaux.

Mots-clés : biais de la facilité, décision lexicale, amorçage masqué, pseudo-mots amorces.

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Appendix A

Experiment 1 Stimuli

Yes TARGETs and Unrelated Primes

Practice. APOOD ineeq, AIRYP oysas, AFEAQ ohaoz, HEVYA bacoo, PERAI suloy, IPEAD aroog, AADIR oepav, CROEY squay, DEAZY coova, BOLOA tafei

Critical. EWERA inony, SAIRY pooba, TOUME hooly, ANIFE ohabo, SEERA foaby, SEERO vaimy, OUTHY ayrla, AXAME orifa, OTOUS aquid, FAUCE toiky, TOADE poila, COUNA goely, TOINE poeba, YARBY aeplu, BOODU kaipe, TOMIU nafea, PEATU ziipa, ULEER atoom, AANEK uulaz, IPOIF arood, ZAUXE moita, COGAA habii, ZIZEE wofay, AEDAL yonir, BEAZA soore, OABLE yomre, OUSEP aitoh, EKALY orolo, RISAI sewey, AMOCY onixi, SHAEI gloue, MATYA fuwoe, QEAPE soudy, WAGOI qinee, INENE ekove, EAYRI aaido, AHEYS ofout, YANDI aitca, ARUET bioge, YOORE aeita, GRIIO plouy, FOESY doena, EITCA yobwo, DOUBI paene, BLEEE spooo, SILYA haruy, AALON eecut, AREEF ebuut, AUNKA oylvi, OERUF aiteq, OHILA edaru, BUYLE hanto, UHIEV ozuuk, ARUYA yoike, ARAPO edozu, AGIYA osoue, HIEAT gyoev, HOOXY tieme, TOVAA hazeo, OLEEN emyot, OUSHA aarvy, CEEAN pyail, OOSQE yerto, EAQUI ainua, ATICE efiqo, OESER yunim, EASHI oissy, MERAY titoo, OCKYA essue, AULKY iilta, AHALA orowo, YEVEW aisos, ARICY emona, PALIE korai, JOULA kaizo, TOROY palai, PEAJO taoda, OOLIQ eafem, JREYA pleio, AWEAM ocaib, ARFIE aggoy, SURAY wikee, AVOIQ eheab, ROYAR veoel, ARAUM usoip, UIDIT artov, AECAT oomiw, AILOM oekel, UWISU epely, AWUIZ ibeez, YEAQR ouyrt, OLIIK utuep, AREBE owisa, ANOUT olaar, BUESY coome, ARAES ipeod, POREE damay, ZAIVY foowa, OHOVE asate, KOWEY saice

No TARGETs and Unrelated Primes

Practice. STRIE krloo, LORPE gerqo, ILGUZ impyr, TRETI glilu, DOVNY fapsi, QUEWP soalk, ELENF ywuck, CRPUE tchay, SOVET fazez, ALIND oreft

Critical. AFLLE ackri, BROOP zlaid, FRAMY plora, GADAP soqud, WATIH rodaz, ZUILT poerd, HEVID woneh, KLEAP crail, WRABE priqe, PEAMS tairk, DRENK treld, JENDO razpa, CUSAT migen, GOEWN quigg, PENOC nazer, ZORSA pelmu, ORRTY affla, SALFU karne, CIMUB gatax, CLORN plabr, XOUNT baifs, STEAN vloux, KEARN voulf, VOWER sapat, FLACE vrahy, SLORY ghabe, SMIRE freqy, MIPOR qunga, BARZI hosha, PLAVE fripa, FRIEF pruar, DOOSU maige, PRAIN dreas, HILUT rocar, SELIL zunas, SCREF clnem, PANDY tarfa, GLOUP sneab, ERRON artas, SMONE vlisa, WRONE flela, THAIM spood, GOSTE yusta, VADKU rusco, WOOTH miirz, SRUNY chuto, SIFAF nomag, QUECK haips, WALTY pisha, TENSY mindo, LEWRA gasty, WOSTE sarfy, BULGA dirpe, SAFIT fiper, OPEDA fline, GRABE bluky, OCKAN aggyt, ROIST courg, PLARY troxi, CHERK swoyr, ERROT aflin, SOGER busip, ERBOM uttel, SPLEE krhou, PELOM rekir, DROOM fluer, ORBER alkin, SODRY ladba, TAIRK goirk, STANY whexa, DUZZY lerpa, CONDA miffo, PABER tosah, STOME brado, LOUND buirt, DIGUT canop, THEEL flaip, TARLS belth, SARIT horaf, WHIME gresi, BORTS delft, TIFLE pirko, CHAIT groun, BENCE dalpy, TIDER disot, BEALT touhl, SALGO benty, CLORD bramy, JURGE fabre, SWAIP froot, TRIVE chany, SLURE flaka, ANSTE irfla, CLEWN plomp, PLENA whide, TAHIN rotir, GLUND plord, GLOUN frait, WISTE gorph, BELBY miffo

(*Appendices continue*)

Appendix B

Experiment 2 Stimuli

Yes TARGETs and Unrelated Primes

Practice. SAIRU loeta, NAITU seuri, ULSIE ertoa, NUAIR loies, AURIT oelun, OTELU irase, NULIE taroi, SOUTE laino, LUEIT saoen, RELOU notai

Critical. LOUSI reato, OILUS eorat, LOUNI tiesa, OULIN ietas, LASOU tunie, SOULA nietu, NUISO loena, SINOU nelao, OUILT iears, LITOU rasie, AULSI oetru, LAUSI teoru, IRLOU osnea, UROIL aseon, OURSI ielna, SOURI niela, ALOUT usien, TOULA neisu, OINTU aeslo, TOUNI laose, AUINS eoalt, USAIN oteal, AUITS ioelr, SUITA roeli, OURNI easlu, RINOU sulae, AIRLU outne, LAURI noetu, ANTOU orlie, TANOU lorie, OUELS aiurn, SOULE nairu, OURAN ietol, RANOU tolie, ROUTA leiso, UTARO isole, LOUEN reiat, OELUN earit, OUENS aiolt, SENOU tolai, AILOS eurit, SLOIA triue, LAUSE toina, SLEAU ntaoi, SUNIE leroa, UNISE erola, EUITS oaurl, SITUE luroa, ORUES aloit, SEROU tilao, LIERU sauno, URILE onasu, NOUTE railu, OUNTE airlu, OTAIL ineur, TOILA niure, ANUSE eliro, EAUNS oeilt, OASTI aurne, TOASI naure, EAUST ouinl, SEATU nouli, AIROL outes, RAILO touse, TOURE sailu, UTORE isalu, EURNI oaste, UNIRE ateso, OINTA ausle, TOINA lause, AUTEN oiral, TAUEN roial, ANOIR otuel, OARIN uolet, ORTAI ilsue, TROIA slieu, LONIE surao, OLIEN usaor, EISON aulet, ONISE etula, ALISE onuta, EILAS aunot, ELROI insau, LORIE nasui, EOIRS oaunt, ROISE nauto, OATLE eursi, TOELA reisu, TOEIN liaus, TOINE liusa, AINES outal, ENAIS atoul, SEATI loiru, TASIE riluo, EINOR ausel, ERION alues, ARLEI isnou, OTEAN aruis, TENAI salou, ORTAE unsoi

No TARGETs and Unrelated Primes

Practice. OARLS eistn, SORNI rutla, ALTNO ursli, ERLUT antol, ROSIT lenar, SURTE nolsa, ASTIN erlos, OARNS eiltr, LAIRN touls, SARTO tenlu

Critical. SLUNI treso, LORUS tanil, SURLI ranto, TUSON ralet, AULST iornl, TALUS liron, RULON tesar, ULNOR esrat, TRULO sneri, LORUT rines, RULSA setno, SULAR netos, SNURI trale, SURNI talre, LUNTA torle, ALNUT etrol, STUNA lriso, SANUT losir, RONTU nalse, UNTRO elsna, RALTU tosni, TRULA ntiso, SRATU lnose, TAURS soenl, LUENS toarl, SLUNE ltora, EULST oisnr, SUTEL niros, LORIS tanul, ROLIS natul, ELURS otinl, LURSE tinlo, LATOS renul, OALTS uernl, LASIN nurat, LISAN narut, SUTEN nalir, NUTES ralin, NORLI ratse, RINLO tersa, LUREN tonis, ULNER otsin, LORIT sanul, TRILO lnusa, SNURE trano, URENS anort, RASIL tenur, SLARI nretu, STONA truse, TOANS ruest, ANTIL osler, TANLI losre, NORAL tusin, RALON sinut, LORAT silur, TARLO rulsi, TORIN salet, TROIN slaet, RUTEN lisar, TRUNE slira, IRALT oners, LARTI renso, RAITS touln, RATSI tolnu, ESNIL urtas, LENIS sutar, SILET lorun, SITLE lonru, NARTI sulne, RITAN lenus, SERIL rotun, SLERI rnotu, NESTO ransi, SOTEN nisar, LEATS roiln, SELTA norli, LERNO rutsa, ORNEL atsur, OLERT isuln, TROLE nlisu, ALSER ontul, SLERA tnulo, IRSEN anlit, SNIER ltain, ENTAL orsut, TELAN sotur, ASTEN irlos, SNATE rsilo, NETRO taslu, TOREN sulat, ARSEN oltir, SERAN tilor, TERLA nostu, TREAL nsout, RENIT nosal, TIREN lanos, SATER nisul, SETRA nusli, NARTE lonsi, TRENA snilo

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